Proceeding

International Conference on Lesson Study

8th HAMZANWADI ANNUAL EVENT
ICLS
INTERNATIONAL CONFERENCE ON LESSON STUDY

ISBN 978-602-98097-8-7

Publiser:stkiphamzanwadi.press

http://icls8.hamzanwadi.ac.id

ISBN:
978-602-98097-8-7

5th HAMZANWADI ANNUAL EVENT

ICLS

INTERNATIONAL CONFERENCE ON LESSON STUDY

Proceeding

International Conference on Lesson Study

" Professional Learning Community through Lesson Study for Promoting Student Learning"

14th- 16th September 2017

Lombok, West Nusa Tenggara, Indonesia

Supported by

RISTEKDIKTI

PROCEEDING

INTERNATIONAL CONFERENCE ON LESSON STUDY

"Professional Learning Community Trough Lesson Study for Promoting Student Learning"

Penerbit: Universitas Hamzanwadi
Jalan TGKH. M. Zainuddin Abdul Majid No.132 Pancor-Selong Lombok Timur
Telepon: (0376) 21394, 22359
Fax: (0376) 22954
Email: universitas@hamzanwadi.ac.id

Cetakan Pertama, September 2017

ISBN: 978-602-98097-8-7

Editor: Junaidi Marzuki, M.Ed.
Desain Cover & Lay Out: M. Marzuki, M.Pd.

PROCEEDING 8th ICLS

INTERNATIONAL CONFERENCE ON LESSON STUDY

"Professional Learning Community Trough Lesson Study for Promoting Student Learning"

Published By:

Universitas Hamzanwadi
Jln. TGKH M.Zainuddin Abdul Madjid No.132 Pancor-Selong, East Lombok, West NusaTenggara
E-mail: icls8@hamzanwadi.ac.id, website: http://icls8.hamzanwadi.ac.id

INTRODUCTION

September 11, 2017

The theme of the 8th ICLS is "Professional Learning Community through Lesson Study for promoting student learning" is appropriate to respond the current issues in education, especially the issue related to the quality improvement through teaching and learning process.

This theme is expected to assisst/contribute towards the quality improvement through the inclusivity of teaching and learning process that can be gained from many studies of researchers, practioners, workers in education professional learning, school improvement, curriiculum development and other fields that can help to promote its goals.

The ICLS is the annual meeting at Hamzanwadi University in East Lombok West Nusa Tenggara from septermber 13-16, 2017. This conference is organised by Hamzanwadi University in cooperation with Indonesian Association of Lesson Study (ICLS) and the Ministery of Research, Technology and Higher Education.

We proudly announce that we have invited some experts: Prof. Manabu Sato, Gakushuin Uni, Japa, prof. Petter Duddly (President of WALS UK), Prof. Cristin Lee (NU), Prof. Siriripaane Swanmonka - Chulalongkorn University Thailand., Carly Klein, Windesheim University of Nedherland and Prof. Sumar Hendayana, Ph.D (President of ICLS Indonesia).

We would like to say thank you to all invited speakers and participants who share their ideas to complete the agendas in this conderence, we also provide you to visit some schools as our partners in this Lesson Study.

It is a great honor for us and all commitee to be the host at the 8th ICLS 2017. Welcome to Lombok, have a nice conference and get ready to be inspired and challenged. Thank you.

Khirjan Nahdi
The vice Rector of Academic Division
Hamzanwady University

TABLE OF CONTENT

The Implementation of Lesson Study at Hamzanwadi University

Sitti Rohmi Djalilah

Hamzanwadi University

sittirohmidjalilah@yahoo.com

Abstract

The challenge for lecturers in the 21st century is more complex. Lecturers are not only preparing themselves to master the development of sophisticated technology and information, but the lecturers must also be able to prepare themselves to meet with the students who have a faster development compared to the lecturersthemselves. Considering the needs to make effortsfor gaining the expected achievement in learning, Hamzanwadi University that has responsibility to promote a good teacher candidates need to make efforts by working collaboratively with all managements to solve the existing problem. The mostcommon problem in university is that lecturers still take a more dominant position in the planning, implementing and evaluating the activity. As a result, the communication between colleagues, between lecturers and students seems unequal, and lecturers seem exclusive in designing, implementing and evaluating the learning process. Therefore, Hamzanwadi University is looking for a pattern to solve the problem mentioned and it is believed that the way to solve the problem is by implementing Lesson Study activities within the teaching and learning process.

Keywords: *Lesson Study, Learning Community*

A. Introduction

A rapid development of information and communication technology has changed human's lifestyle in a work, community, play and study. In the early 21st century, technological development has widely played an important role in all aspects of life, not least in the field of education. At the college level, lecturers and students are required to have an ability to solve the problems and challenges through a good learning process.

The 21st century is technology and knowledge era, where all information circulates in fast system through a sophisticated technology. It is also marked by some characteristics such as; (1) information is available anywhere and accessible anytime; (2) a fast computing system; (3) automation replaces routine jobs; and (4) communication can be linked widely (R & D, *Kemdikbud*, 2013). The 21st century National Education is aimed at promoting the ideals of nation, which is promoting a prosperity and happy life for Indonesian people, with an honor and equal position to other nations in the world, through the establishment of a society consisting a qualified human resources, independent, willing and able to realize the ideals of their nation (BSNP, 2010)

In developing the 21st century of learning, lecturers must be uptodate and able to follow the existing change. Lecturers can not be more dominant and become a center of learning, lecturers should be open-minded during the whole process of learning such as designing, implementing and evaluating learning process.

The main problem of Indonesia education year by year is always related to quality, both process and outcome. Based on the test results of 2015 *Program for International Student* Assessment (PISA), Indonesian students ranked at 63 out of 70 countries surveyed, as well as the *Trends International Mathematics And Science Study* (TIMMS). Improving the quality of education has became a major requirement that must be fulfilled by all parties concerned and it cannot be postponed.

Education Institution of Teacher Training (*LPTK*) has a pivotal role in improving the process and the quality of educational outcomes. An effort that can be made is by laying the 4 competencies as foundation (*Pedagogic, Personality, Social, Professional*) listed in Law No. 14 of 2005 article 10 paragraphs 1 about the types of competencies that must be owned by the educator. Therefore, *LPTK* is required to be able to develop themselves through several breakthroughs either from outside sources or from the *LPTK* itself to fulfill the mandate of the law. This is urgent to ensure that the achievement of quality improvement in education, especially the learning process required by law.

The Indonesian governmentitself has made various efforts to improve the quality of national education by issuing the law No. 14 on Teachers and Lecturers and Government Regulation No. 19 of 2005. Based on Government Regulation No. 19 of 2005 on National Education Standards, Article 19, as followed:

1. The learning process in educational unit is held interactive, inspirative, attractive, challenging way to motivate learners to participate actively. Moreover it also need to provide a sufficient space for initiation, creativity, and independence considering the talent, interest, physical and psychological development of learners.
2. In addition to the provisions in paragraph (1), during the learning process, the educators should be able to give a good example for the students.
3. Each educational unit undertakes the plan for learning, the implementation of learning, theassessment of learning outcomes, and supervision towards learning process for the implementation of effective and efficient learning.

The education institution of teacher training (*LPTK*) as a contributors of teachers has an academic responsibility to produce a qualified educator candidates. *LPTK* should be innovative in improving the quality of learning, therefore, lecturers need to be equipped with the effective learning techniques to improve the quality of teachingand learning. One way to improve the quality of learning is by promotinga collaborative and sustainable learning based on cooperation principles, and build a *learning community*such as*Lesson Study.*

B. Findings and Disscussion

Learning Quality

The long-standing view that puts learning as a process of *transfering knowledge* from lecturers to students is increasingly criticized. The position of lecturers as the only source of information does not make the students asa dynamic individuals, but rather as passive objects that their individual competence can not be developed optimally. It is not in line with the nature of education which is viewed as an effort to empower people. Powerful humans are those who can think creatively, independently and who can build themselves and their society, therefore; it needs a change in learning.

Gordon (Aunurrahman, 2011) stated that the students development is a goal of all universities and lecturers, therefore; it is a misconcept if the lecturer is responsible for delivering the material on course only. The development of students' potentials in learning process should be conducted comprehensively and integratetively. Unbalanced development of students' potential will make education become more concerned to one particular aspect of personality partiality.

The learning process that has been applied is still dominated by the learning model based on behaviorism *philosophy*, which is *teacher centered learning*, subject matter, and *assessment in paper and pencil test* each of which is based on the procedural result and concept understanding. It can be seen from the *Lesson Plan* designed by the lecturer. The strategies, methods, instruction and teaching media applied are dominated by lecturing, discussion, question & answer, and assignment. Likewise the information merely obtained from the journal lectures. Teaching and learning activities conducted during the semester is dominated by discussion, question and answer and lecturing.

The interviewresults conducted in 2013, at Physics, Biology and Mathematic students of*STKIP Hamzanwadi-Selong* found that the learning process was dominated by discussion activities, dividing the topics / sub-chapters to be compiled into papers, then presented in accordance with the predetermined number of group, and sometimes the students were assigned to make a resume if the meeting was less than a certain number of meeting needed. In addition, many students can not express their critical ideas related to the material discussed so that higher-order of thinking skills such as analyzing, hypothesizing, synthesizing and evaluating information were not honed and well trained.

The arrangement of learning material such as units plan are sometime still too general, where all subects are not well integrated, especially the prerequisite course for taking a particular course. Sato (2012) stated that some factors determine the quality of learning are: (1) the quality of the tasks assigned to the learners or the lesson plan (*RPP*); educators should provide an interesting task, if students are given a worthy task or challenges with high difficulty levels, students will be motivated and eager to learn, 2) learningin a strong relationship (dialogue and collaboration); here, the dialogue does

not mean as a communication with other parties, but when the student is alone with a challenge or subject and ultimately produces a self-thought, it also includes dialogue, and 3) the learners' spirit, cognition and the emotions; what students learn during the subject, how their motivation and spirit during the learning, where he experienced confusion and so forth.

Form of Lesson Study Learning

Lesson Study is an educational profession development model througha collaborative and sustainable learning, based on the principles of mutual helping learning to build a learning community. *Lesson study* is a model that put emphasis on analysis, collaborative and sustainable learning based on the principles of collegiality and mutual learning to build a learning community (Hendayana: 2006). By implementing *Lesson Study*, it will provide opportunities for lecturers *to learn how to teach and learn more about teaching*.

Lesson Study is a professional education model through learning activities conducted by a group of educators (teachers / lecturers) in a collaborative and continuous way to improve the quality of learning.

Based on the survey results about the implementation and impact of *Lesson Study* in 2012 and *bimtek* outcomes in 2013, it can be concluded that *Lesson Study* activities in general were able to improve the quality of learning and lecturers' competence in making planning and implementing the lesson. In addition, the benefit of *Lesson Study* has been felt by the students since many lecturers have practiced and changed their habits in teaching their students. The example for this change are including, the lecturers become more dicipline, able to use more varied media / learning tools, giving more attention to the students through group learning guidance. Nevertheless positive from *Lesson Study* activities have not been experienced by all lecturers.

Implementation of Lesson Study at Higher Education

Lesson study at Study Program Level

In 2006, *lesson study* was initially developed through the IMSTEP piloting program followed by *Strengthening In-service Teacher Training of Mathematics and Science Education at Junior* Secondary *Level* (SISTTEMS) program. The *SISTTEMS* program is basically the development of in-service teacher training through *MGMP* activities by applying *lesson study* as a continuous capacity development. After appling the program for a year, there were significant changes happened. From the teacher perspective for example, they become more confident, open, creative, innovative, and more productive in producing academic work. Meanwhile, from the lecturers' side, they conducted *collaborative research* and study related to the phenimena happened during the learning process, while the students are more excited because of mutual interaction, learning from dialogical process and collaborative learning. Therefore, LPTKs are encouraged

to apply *lesson study* so that prospective students are able to equip themselves with the maximal and qualified skill.

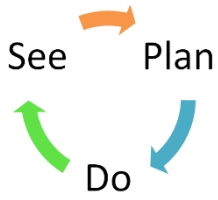
Some important reasons why *Lesson Study* became one of programs to promote a good learning in Higher Education are: ***(1) Lesson Study is an effective way that can improve the quality of learning.*** Lewis (2002) elaborated five paths that *Lesson Study* can take, namely (a) bringing the objectives of educational standards into the real situation within the classroom, (b) promoting improvements on data basis, (c) targeting the achievement for different qualities of learners that might influence learning activities , (d) creating fundamental demands for the need of learning improvement, and (e) upholding the value of educators.***(2) Lesson Study will produce professional and innovative lecturers;***the reason for this is that*Lesson Study* allows the lecturer to (a) think carefully about the learning objectives, subjectand learning process, (b) review and develop the best learning that can be developed, (c) develop knowledge for the subject (d) think deeply about the long term goals achieved by the studetns (e) designing collaborative learning, (f) carefully studying the ways and processes of students' learning and behavior, (g) developing appropriate pedagogical knowledge forstudents , and (h) see the results of their own learning through students and colleagues. Sukirman (2009) argued that through Lesson Study students will achieve a variety of individual qualities that affect learning activities called thinking intelligence and attitude (*the habits of mind and heart that are fundamental to success in school*). Thinking and attitude Intelligence that can be developed are including*persistence, cooperation, responsibility, and willingness to do hard work.*

In general, the existence of this *lesson study* has a positive impact on lecturers' professionalism in learning and teaching responsibility as a lecturer at *STKIP Hamzanwadi Selong*. In particular, the impact lesson study are: (1) The establishment of learning communities between lecturers, students, and between students with lecturers at *STKIP Hamzanwadi Selong*. (2) The improvement of students' ability in *STKIP Hamzanwadi Selong*, especially in cognitive process, affective and psychomotor aspects. (3) lecturers begin to apply some various models / methods of learning within the classroom (4) lecturer know how to arrange syllabus, SAP, learning evaluation based on material feature. (5) Collegiality among the lecturer through knowledge sharing, exchange of experience in Lesson Study activities were established. (6) The establishment of learning communities between lecturers, between students, and between students and teachers (7) Cultural change from delivery culture to science searching culture (8) The responsibility of lecturers in carrying out the learning.

Subadi (2015) suggested that improving the quality of learning can be promoted trhough *lesson study*. Active, innovative, creative learning improvement system for students with modification- lesson study based. The implementation of *lesson study* gives a good impact on lecturers' performance in learning, it is due to the discussion (Farida, 2016).

Lesson Study at Hamzanwadi University (formerly *STKIP Hamzanwadi Selong*) has been conducted since receiving the *Lesson Study*Grantfrom the General Director of Learning and Student Affairs of Ministry of Research, Technology and Higher Education (Belmawa Ristekdikti) for 3 years, from 2013-2015. In 2013 there were 4 study programs that implied lesson study: Biology Education, Mathematics Education, Physics Education, and education of Indonesian Language and Literature. In 2014, Biology Education, Mathematics Education, Physics Education still implying lesson study and widen into two other Study Programs within Hamzanwadi University (*STKIP Hamzanwadi Selong*), namely Sociology Education and Geography Education. Furthermore, in 2015, while remaining in Biology Education, Mathematics Education, Physics Education, the implementation of lesson study also went to Madrasah Aliyah *Muallimin NW Pancor* and *Madrasah Aliyah Muallimat NW Pancor* as Hamzanwadi University school partner.

The implementation of lesson *study* in some study programs and school partners of Hamzanwadi University as described previously, applied the similar stages such *Plan, Do and See.*



Picture 1: the stages in lesson study

1. Plan; at this stage lecturers with the team designed a collaborative learning, developed plans that will be carried out during the learning process such as needs and problems analysis in learning, basic competence (KD), leads the students to learn, solution for the lack of facilities, establish procedures for observation including instrument. Before being finalized, all components discovered in lesson plan are simulated (if the material requires a student to produce the product / practicum).This *Plan* is aimed producing an ***effective*** learning that might ***attract the students to learn*** and ***actively engage*** during the learning. Sato (2014) suggested that some important points during this plan are: (a) Teachers are designing the lesson by themselves, (b) LS team are designing the lesson together, (c) Fellow teachers design the subjects material together, (d) Some people prepare RPPs, doing a simulation (peer teaching) before going to the classroom.

Plan TIM LS

Mensimulasikan rencana pengajaran pada saat plan

Picture 2. Plan Process

2. Do; at this stage, the lecturers carry out the subjectand another TEAM as the observer for learning process. The focus of observation in this activity is how students learn, not how the lecturers teach. This becomes a difference when observing learning out of Lesson Study. There are several things that should be observedsuch as: a) Identifyingthe students who are potentially unable to attend

group work or attending classes, b) students interaction within the group, c) students who become a "motor" in a group work, d) the willingness of underprivileged students to ask others, e) Moments when the students do not concentrate on the subject; and, f) paying attention to the *body movement & interpersonal communication* of students in learning.

Picture 3: Do Process

At this process, it can not be denied if another possibilitieshappened outside the plan as shown in picture 3. There is a student looked blank when he see the other student express his opinion during the discussion. This will be the observation focus by the other observers. Observer should stay close with the students, the should try to approach the students if it is needed, looking at the their process, listening to what are they disscusedwith the other members within the group but not interfere the student activity during the learning (avoiding conversation). Also, the observer is not allowed to talk to other observer during the*Do* process.

3. *See*; this stage, lecturer model and observer make alearning reflection together. This activity aims to analyze the findings during the learning. The results of this reflection will be used as inputs for the next lesson plan. Reflection stage (*See*) promote to find the advantages and disadvantages of implementing learning rather than ***criticizing the way lecturers teach.***

Picture 4. *See Process*

During this *See* stage, the lecturers are demanded to share their impression during the learning, experience and some important points during the learning process, as well as to the observers. The observer conveys his or her learning experience and other findings gained during the observation. In this *See* process is guided by a moderator.

Lesson Study for PPL (Field Experience Practice) Students

In 2016, the impact of the implementation of *lesson study*at Hamzanwadi University is the rector's policy where the students demands toapplylesson study during their Field Experience Practice (PPL) as it is stipulated in the Field Experience Practices guidance

(PPL) 2016 that all students should conduct learning with *lesson study*approach at least once during their practice.

Students' Response on Lesson Study

To know wether the implementation of this lesson study was running well or not, questionnaires about lesson study was spread out to for the actors such as lecturers, teachers, and students. The resulf of this questioaires can be seen in the following table:

Lecturers and Teachers' Respons

Tabel 1. Lecturers and Teachers' response after applying Lesson Study

No	Indicator	Lecturer*	Teacher**	Teacher***
1	Lesson Study Understanding	100%	100%	100%
2	Problem Solving			
	Difficulties	49%	0%	48%
	Motivation	12%	83%	43%
	Engagement	39%	17%	9%
3	Learning Process			
	Suitable	100%	75%	78%
	Unsuitable		25%	23%
4	Learning Innovation			
	Understanding	36%	58%	35%
	Using a song	24%	8%	43%
	A simple tool	24%	8%	9%
	New Learning	14%	26%	13%
5	Lesson Study as Research Activity			
	Conducting Research	19%	17%	3%
	Not Conducting Research	81%	83%	70%
6	Learning Media			

	Suitable	94%	92%	65%
	Unstuitable	6%	8%	35%
7	Satisfaction			
	Satisfied	90%	83%	75%
	Unsatisfied	10%	17%	22%

Note:

* = 53 People

**= Year III (12 people)

***= Dessimination (23)

Commitment / Institution Policy

After implementing Lesson Study facilitated by Higher Education Grant for three consecutive years, the institution has experience in improving the learning quality in the study program and several educational units within the *YPH PPD NW* which were implementing Lesson Study , therefore the institution is committed and make some policies as follows:

1. All study program as grant recipients should promote open lesson 2 times in one semester;
2. Learning at all levels of educational unit within *YPH PPD NW* should apply a Lesson Study, accompanied by *FKIP Hamzanwadi* study program;
3. The Implementation of *Tri Dharma Perguruan Tinggi* through *PKM* program should develop LSLC in primary and secondary education.

Students Response

No	Indicator	University Student*	Senior High School Student**
1	Learning		
	a. Fun and Attractive	86%	90%
	b. Understood	79%	96%
	c. Motivated	73%	82%
	d. Collaborative	61%	92%
	e. Independent	68%	86%

No	Indicator	University Student*	Senior High School Student**
2	Media		
	a. Visual	96%	93%
	b. LKS (Worksheet)	99%	97%
3	Assessment		
	a. Objective and Transparant	92%	95%
	b. Based on Materi	94%	96%

Note

*= 409 person

**= 134 person

Conclusion

The quality of college graduates will be depend on the quality of the learning process, in addition to the existing of human resources and other facilities. Improving the quality of learning process is the main key for creating and realizing the quality of graduates. A good quality of learning is thatlearning which is carried out effectively and efficiently, involving students and lecturers actively rather than passively. This *lesson study*promotes educational profession coaching, learning assessment, collaborative, sustainable, collegiality, *mutual learning*, and community learning.

References

Annurahman. (2011). Belajar dan Pembelajaran. Bandung: Alfabeta.

BSNP.(2010). *Paradigma Pendidikan Nasional Abad XXI*. Jakarta: BSNP.

Farida, Anisatul. (2016). Implementasi Lesson Study Untuk Meningkatkan Kinerja Dosen Matematika Stmik Duta Bangsa Surakarta. *Jurnal Derivat*, 3 (2) . pp 17 – 24.

Hendayana, S., dkk. (2006). Lesson Study: suatu Strategi untuk Meningkatkan Keprofesionalan Pendidikan (Pengalaman IMSTEP-JICA). Bandung: UPI Press.

Lewis, C. 2002. *Lesson Study: A Handbook of Teacher Led Intructional Change.* Philadelphia: Research for Better Schools.

PISA 2015 results; Snapshot of performance in mathematics, reading and science. Paris. OECD.

Sato, Manabu. (2014). *Mereformasisekolah; konsep dan praktik komunitas belajar*. Tokyo: Iwanami Shoten Publisher.

Sato, Masaaki. (2012). *Dialog dan kolaborasi di sekolah menengah pertama; praktek learning community*. Jakarta & Tokyo: Pelita.

Subadi, Tjipto. 2015. Peningkatan Profesional Dosen melalui Program Perluasan Lesson Study pada Jurusan IPS MIPA dan Biologi FKIP Universitas Muhammadiyah Surakarta. Tersedia di https://publikasiilmiah.ums.ac.id/bitstream/handle/1167/7370/MODEL%20PEMBINAAN%DOSEN.pdf?sequence=1.

Sukirman. (2009). *Upaya Meningkatan Mutu Perkuliahan Pada Perguruan Tinggi Melalui Lesson Study*. Dipresentasikan dalam Seminar Nasional Aljabar, Pengajaran dan Terapannya dengan tema Kontribusi Aljabar dalam Upaya Meningkatkan Kualitas Penelitian dan Pembelajaran Matematika untuk Mencapai World Class University yang diselenggarakan oleh Jurusan Pendidikan Matematika FMIPA UNY Yogyakarta pada tanggal 31 Januari 2009.

The Implementation of Discovery Learning Model for Word Formation in Morphology Subject of Morphophonemics Material Throughopen Lesson

Agung Pramujiono[1], Tri Indrayanti[2]
PBSI FKIP Universitas PGRI Adi Buana Surabaya
agungpramujiono@unipasby.ac.id

Abstract

*Discovery Learning Model is a learning model that emphasizes the form of learning process to self-organize.Discovery learning model is said to be a learning-oriented and student-centered learning model.Word formation in the Indonesian language is one of the most common problems. This study discusses the use of discovery learning model in Morphophonemic material learning in Morphology subject.The research is employed a quantitative-qualitative method.*The q*uantitative one is used to measure learning outcomes and student activeness in learning, while the qualitative one is applied to know the learning process by using discovery learning model.The learning process using the discovery learning model is started by providing stimulus, giving text for identifying data, collecting data that has phoneme removal and phonemic addition, analyzing the phonemic disappearance and adding phonemes, analyzing the results of the analysis with the existing theory, and drawing conclusions at the end.The findings demonstrate that the learning outcomes obtained an average of 82, the implementation of learning on Morphophonemic materials using the discovery learning model show a percentage of 85, and in terms of liveliness, the students followthe Morphofonemic material learning with a percentage of 80.*
Keywords: discovery learning model, learning, morphophonemic

A. Introduction

Based on Permendikbud no 49 in 2014, National Standard of Higher Education (SN-Dikti) is a minimum criterion of learning at higher education level in universities throughout the jurisdiction of the unitary state of the Republic Indonesia. Learning itself is defined as the process of interaction between students with lecturers and learning resources in a learning environment. Based on the competency standards of graduates there are several principles of learning that include attitudes, knowledge, and skills (general and specific). While the standard of learning content includes the depth and breadth of learning materials. The characteristics of these competencies will affect the process standards. The process standards include the characteristics of the learning process, the planning of the learning process, the implementation of the learning process, and the burden of student learning. In order to support the learning objectives to be achieved and the standard process with the four criteria runs as expected, then in the learning process needs an appropriate model.

The expected competencies can be achieved by using a learning model with an approach that can improve the ability of active students. One of the models that can be applied is the discovery learning approach. This model is often said to be a model in

student-centered learning, where students are given the opportunity and freedom to try, guess, use intuition, investigate, and draw conclusions and enable educators (lecturers) to guide and help students to use the ideas, concepts, and skills they have in order to find new knowledge (Purnomo, 2011).

Antony Robbins in Trianto defines learning as a process of creating the relationship between the knowledge that has been understood and the new knowledge. Understanding learning includes elements (1) the creation of relationships, (2) things (knowledge) that have been understood, (3) things (knowledge) that is new. It can be said that learning does not start from scratch but in the form of the process of linking knowledge that someone has owned with new knowledge (Trianto, 2009).

As with learning, learning is defined as a product of sustainable interaction between development and life experience. In general, learning is said as a conscious effort from a person educator to make learners learn in order to achieve the expected goals. So it can be drawn a conclusion that learning is a two-way interaction from educators to learners in which there is a communication (transfer) intensive and directed to the target set previously (Trianto, 2009).

Learning model is one of the tools used by educators so that the learning process can run maximally. Learning model can be applied by educators in learning and make teaching and learning activities to be varied and of course this can avoid student's saturation in learning. The use of student-centered learning models can have a very positive impact compared to lecturer-centered learning.

Discovery learning model is one of the learning theory that is defined as a form of learning process that occurs if the student is not presented with the material in the final form, but is expected to organize themselves. As a form of learning strategy, discovery learning model has a principle similar to inquiry model and problem solving learning model. The difference is that in the discovery learning model, for example the problem given to learners as a problem that has been engineered by educators, while the inquiry model of the problems that are made is not the result of engineering. The steps of applying Discovery Based Learning or Discovery Learning are as follows (Nazir, 2009).

a. Stimulation

Lecturers provide stimulation to students who raises questions and arise desire to investigate themselves. Stimulation can be questions, pictures, objects, stories, phenomena, and other learning activities that lead to the preparation of finding a concept.

b. Problem statement (problem identification)

Lecturers invite students to identify issues relevant to the material presented for the stimulus. From the problem, the answer is formulated as a temporary estimate (hypothesis).

c. Data collection

Students collect relevant information to prove the hypothesis or find a concept. Data can be obtained through reading literature, observing objects, interviewing with resource persons, doing their own testing and so on.

d. Data processing (data processing)

Students process the data that has been collected. Data processing in order to direct the concept to be achieved.

e. Verification

Students perform the examination of the truth of the hypothesis related to the results of data processing. This study uses Morphology courses/subject. Morphology is one of the compulsory courses in the Prodi S-1 of Indonesian Language and Literature Education. Description of Morphology subject is a discussion of morphological classification, ie affixation (prefix, insertion, and suffix), reduplication (pure re-word, repeating sounds, pseudo-word, recalculated word), composition (compound word). Morphology subject contains of 3 (three) credits. This course is given to students of class of 2015 or semester 5. Morphology subject is conducted in 16 meetings including Midterm Test and Final Test. Morphophonemic material is one of the materials in Morphology lectures. Morphophonemic is a study of the process of sound changes or phonemic changes as a result of the morphological process, either the affixation process, the reduplication process, or the composition process. The morphophonemic process is divided into 5 (five) phases ie (1) phonemic addition, (2) phonemic imprinting, (3) phoneme changes, (4) phoneme consonant, and (5) phoneme removal (Chaer, 2015).

Research subjects in this study were students. In Indonesian Language Dictionary (KBBI), students are defined as people who study in universities. Students are said to be an enrolled student aged 18 to 25 who are enrolled in college from academics, polytechnics, high schools, institutes and universities. In this research, the subjects used are the students of Indonesian Language and Literature Education (*Pendidikan Bahasa dan Sastra Indonesia*/PBSI)University PGRI Adi Buana (UNIPA) Surabaya academic year 2015 and the object used is the result of answers/tests written by the student.

Based on the above description, the formulation of the problem in this research is (1) how is the process of applying the discovery learning model ofMorphology subject inMorphophonemic material of class Bstudent of PBSI UNIPA Surabaya? (2) whether the discovery learning model is effective on student learning result of Morphology subject in Morphophonemic material of class B student of PBSI UNIPA Surabaya?

B. *Method*

This study aims to describe the process of applying discovery learning model in Morphophonemic material of Morphology subject student class of 2015 PBSI UNIPA Surabaya and find out whether the effective discovery learning model of student learning outcomes in Morphophonemic material of grade B student of PBSI UNIPA Surabaya. Based on the above research objectives, this research includes the research of mix method (quantitative-quantitative).

Quantitative research is used to know the effectiveness of the discovery learning model on student learning outcomes, while the qualitative research is used to find out how the process of applying the discovery learning model in learning on Morphophonemic materials. The instrument used in this research is in the form of test equipment (description problem), student activity sheet, instructional lecture observation sheet. All of these instruments will be described on the results obtained. Population in this research is the student of class of 2015 Study Program of PBSI UNIPA Surabaya, which consists of three classes.

Sampling is done by simple random sampling because the population is considered homogeneous. From the simple random sampling obtained by the research subjects of class B of 2015 which amounted to twenty-five students who will be divided into five groups, each consisting of five students.

The data collection procedure in this research is done by test and observation. Observation technique is used to see human behavior (research subject), work process, natural phenomenon because the respondent is not too big that is 25 students. Indicators of effectiveness in this study is the learning outcomes obtained by students on minimum of completeness, ie 65 and student activity in both categories, and the implementation of learning in both categories.

Data analysis techniques used are qualitative descriptive and quantitative averages and percentages. Qualitative descriptive is used to know the learning process using discovery learning model on Morphology course study in Morphophonemic material, while quantitative averages and percentage. used to know the activities of students in the learning process, and know the implementation of learning in the classroom. The calculation formula can be described below.

Percentage formula. the implementation of student learning and activities (Akdon and Riduwan, 2010).

$$P = \frac{N}{Nmaks}\ x\ 100\%$$

Remarks:

P : *Calculated percentage*
N : *Scores obtained*
Nmaks : Maximum scores

The score interpretation criteria can be seen in table 1 below (Akdon and Riduwan, 2010).

Table 1. Score Interpretation Criteria

Percentage	*Category*
81 - 100	*Excellent*
61 - 80	*Good*
41 - 60	*Fair*
21- 40	*Poor*
0 -20	*Very poor*

C. *Findings and Discussions*

In the open lesson process in Morphology subject, Morphophonemic material lasts for 70 minutes starting from the opening, the learning core to the cover and reflection. In terms of open lesson, lecturers or in term of open lesson called model lecturer do learning using discovery learning model.

Open lesson is a step that must be done in implementing the Lesson Study for Learning Community (LSLC) grant from the Directorate of Learning Directorate General (DG) of *Belmawa*. This grant aims to improve the quality of learning in a collaborative & sustainable way through empowering the learning community. Through LSLC lecturers should think and design student-centered learning, help student difficulties, and how to make students understand the teaching materials easily. The philosophy of the LSLC program includes:

• Fairness: sharing goodness, respect for diversity of opinions.

• Democracy: listen to each other, everyone must live together and work together.
• Excellence: instead of comparing with others, everyone can be the best (source DG *Belmawa*).

The following will be described learning process open lesson material Morphophonemic the subject of Morphology using learning discovery learning model.

1. Lecturer gives stimulus about the material to be studied by way of questioning about word formation in Bahasa Indonesia.
2. After the students have an initial understanding, the lecturers divide the students into five groups, each group consists of five students.
3. In the implementation of open lesson, each group is observed by the designated observer.
   4. Observer has the task of observing the activities of each student in one group (five students) with reference to the prepared observation sheet.
4. The lecturer gives a text taken from Kompas daily entitled "*Waisak Menginspirasi Perdamaian*" to the five groups with answer sheets.

The lecturer gives the training work in the form of a question related to the text that has been distributed, that is identifying the use of a word undergoing Morphophonemic process (phoneme removal and phoneme addition) and explaining the process of change of the word.

5. In groups, students discuss the problem solving on word formation in pre-shared texts, students can use reference in doing the test, can be through literature book, internet, and other supporting reference. Discussion time and working for 20 minutes.
6. Observer observes in detail the students during the discussion (identifying, analyzing, and concluding). From the observer observation found several things as follows.
    a. Observer observation result, in general group of one student active. There are students who are less active in discussion activities named Winda A. She just follows the movements of friends and does not argue inthe discussion. The student donot study the material well.
    b. From the observer observation, the two groups follow all the learning carefully except Dadang. He is very silent. He has not followed the learning well.
    c. For group three, the observer observation shows that the students have learned about the given learning topic. However, the students named Sahid is more passive than his friends and the lecturer approaches the student.
    d. In the group of four, students in general have been actively discussing. However, there is a student named Naufal who is very passive. It seems he does not understand the material in detail. However, lecturers explain more intensively the material to him.
    e. The last five groups are seen as active students in learning and discussion. There appears to be a student named Muhaimin who has not understood the material well, it is likely that the student does not make preparations for the lectures that day.
7. After the discussion ended, the lecturer asked the representatives of each group to present their work in front of the class.
8. The lecturer observes and corrects the student's results directly. From the results of the student responses shown up front, most of the group's answers are correct. If any answer is still wrong, the lecturer directly gives corrections to the wrong answer.
9. From the results of tests that have been obtained show that each student in the group can find a theory related to the formation of words in the Indonesian language that can explain the process of the formation of words that have added phonemes and phoneme removal contained in the text entitled "Waisak Menginspirasi Perdamaian".

10. The lecturer gives a material reinforcement of the Morphophonemic process. Lecturers and students make conclusions and reflections on the material they have learned based on the results of the analysis and calculation of the percentage.

D. *Conclusions*

The learning process using discovery learning model begins by giving stimulus, giving the text to do the identification of data, followed by collecting data in the form of words that experienced phoneme removal and *addition of phonemes, analyzing the word experiencing phoneme removal and addition of phoneme, verify the result of analysis with existing theory, and ended with the conclusion of the analysis. In general, the average learning outcomes obtained by 82%, the implementation of learning on Morphophonemic materials using the discovery learning model shows the percentage of 85%, and in terms of liveliness, students follow the learning on Morphophonemic material with percentage of 80%.*

References

Akdon dan Riduwan. (2010). Rumus dan data dalam analisis statistik.Bandung: Alfabeta.

Chaer, Abdul. (2003). Lingustik umum. Jakarta: Rineka Cipta.

Chaer, Abdul. (2015). Morfologi bahasa Indonesia (pendekatan proses). Jakarta: Rineka Cipta.

Rohmadi, M, dan Subiyantoro, S. (2011). Bunga rampai: model pembelajaran bahasa, sastra, dan seni. Surakarta: Yuma Pustaka.

Nazir. (2009). Model penelitian. Bogor: Ghalia Indonesia.

Nurdiansyah, I.A.(2016). Pengertian dan langkah-langkah model pembelajaran discovery learning. http://idekreatifguru.blogspot.co.id/2016/02/pengertian-dan-langkah-langkah-model-pembelajaran-discovery-learning.html. diunduh 26 Agustus 2017.

Tarigan, H. G.(2009). Pengajaran morfologi. Bandung: Angkasa.

Trianto. (2009). Mendesain model pembelajaran inovatif-progresif. Jakarta: Kencana Predata Media Group.

Sugiyono. (2010). Metode penelitian pendidikan. Bandung: Alfabeta.

Cooperative Learning of Stad Type in Basic Socialsciences Course as an Effort to Improve Student Learning Activities in LSLC Program

Danang Prastyo[1], Wahyu Susiloningsih[2], & Arif Mahya Fanny[3]
Prodi PGSD FKIP Universitas PGRI Adi Buana Surabaya
danang_pgsd@yahoo.com

Abstract

Lesson Study activities are very potential to encourage many parties to do the best in improving the quality of lectures and able to increase achievement motivation of the students. The principle of the Lesson Study for Learning Community (LSLC) is the openness in learning (accountability), promoting democracy, and the excellence to do the best with theavailable facilities. Student Teams-Achievement Divisions(STAD) type of cooperative learning is a Cooperative Learning approach that emphasizes the activities and interactions among students to motivate and help each other in mastering the subject matter to achieve maximum performance. Based on the activities of the plan, do, see, what the lecturer should do before starting the learning process is very appropriate if a learning process uses a STAD type of cooperative approach in Basic Social Sciences courses as an effort to boost students' learning activities on the LSLC program.This is a qualitative descriptive research because the data obtained were in the form of descriptive sentences. The subjects in this study were the students of Elementary School Teacher Education (known as PGSD) of UNIPA Surabaya. The Research procedure included (1) Planstage: literature study and empirical study. 2) Do stage: researchers' doing the learning. 3) See stage: five observer and researcher reflection related to student activities during the lecture.

Based on the results of questionnaires and test on the activities of plan, do, see that the first open class on all indicators showed good improvement on the seating layout. Furthermore, in the second open class the indicators revealedfairly good as for a little problem comes from the focus of the student itself. And finally, on the third open class all the indicators indicate very well as viewed from the observation that all students have really learned and been very active in the discussion and achievement of learning objectives.It can thus be concluded that the student activities increased from the first, second, and third open classes that had been done. It can therefore be ensured by the use of STAD type of Cooperative learningin Basic Social Sciences courses as an effort to enhance students' learning activities on LSLC program.
***Keywords**: STAD type cooperative, student activity*

A. Introduction

According to Slameto (2003: 2), the definition of learning is a process by which a person undertakes to gain a whole new behavioral change, as a result of his own experience in interaction with his environment.

While the notion of learning according to Gagne in his book The Conditions of Learning 1977, learning is a kind of change shown in behavioral change, which is different from before, the individual is in a learning situation and after doing such a

similar action. Changes occur as a result of an experience or practice. In contrast to changes which are immediately due to reflexes or instinctive behavior.

From the above opinion can be stated that the mental or psychological activities done by a person cause changes in behavior that is different between after and before learning. Mental and psychological activity is part of a learning process in which a lecturer should create an activity that can stimulate learning to be meaningful and easy to understand. Rogerio in anonim (2013) defines thinking as a mental activity to help formulate or solve a problem, make a decision, or fulfill the curiosity desire. This opinion shows when a person decides a problem, solves a problem, or wants to understand something, then the person is doing some thinking activity.

Human psychic activity includes: perception, responses, fantasies, memories, thinking, and intelligence where one has a curiosity about things, such as why one can laugh, then one will think by guessing about the answer of why *one* can laugh, then the person will make an observation to the object using his senses, after then the person already understood why people can laugh.

Lecturers need to learn to change the role consciously, deliberately, and planned in the lecturers' community to learn from *each* other. Community lecturers who learn from each other about how to teach the students are called LSLC. The principles of LSLC are openness in learning, democracy, and excellence to do the best with the facilities available.

LSLC activities include collaborative learning, continuing education of the profession, and collegiality. Grant of quality improvement of learning through Lesson Study for Learning Community (LSLC) is expected to *trigger* lecturers in university grant recipients to be able to form a professional learning community using Lesson Study activities as its ingredients.

Lesson Study activities are *very* potential to encourage many parties to do the best in improving the quality of lectures and able to increase achievement motivation in the students. Through lesson study activities, lecturers are also renovated to make better preparation than ever before. Lecturers continuously learn together how to improve the quality of learning so that students are interested to learn, challenged to learn, and experience learning relevant to the needs of future life. Students become engrossed learning (engaged).

Learning is designed for each meeting, so *that* in one meeting is clear what the material, how the learning process, and how the assessment. Lecturers involved in lesson study activities are gradually always trying to innovate in learning. Generally lecturers will be interested to try to apply valuable experience from other lecturer's lesson (lesson learned) to the class which is his responsibility.

The lecturer should have done the plan, do, see before starting a lesson in which there are mental and psychological activities that can stimulate students to carry out the learning process well. However, until now there have been still lecturers who carry out the learning process without doing the *plan, do, see* activities and some are still teaching the conventional learning where only the cognitive are observed and evaluated so that there is no interaction from one student to another.

STAD type of cooperative learning is a Cooperative Learning approach that emphasizes the activities and interactions among students to motivate each other and help each other in *mastering* the subject matter to achieve maximum performance. In addition the STAD type is also useful to cultivate the ability of cooperation, creative, critical thinking and there is the ability to help friends.

Based on the activities of the plan, do, see what the lecturer should do before starting the process of learning and *determine* if a learning process using an STAD type in Basic Concept IPS as an effort to remind students' learning activities in the LSLC program.

STAD type of cooperative learning

In Student Teams Achievement Division (STAD), according to Slavin (1995) in Jacobsen, Eggen, & Kauchak (2009: *235*), high-ability students and low-ability students are attached to a team that averages five or Six people, and team scores based on the extent to which students are able to improve their scores in skills tests. An interesting point in STAD type of cooperative learning is that students are rewarded for group performance, thereby promoting teamwork.

Students learn and form their own knowledge based on the experience and cooperation of each student in his group to complete the tasks that have been given to them, in this learning the students are trained to cooperate and responsible for their tasks while the teacher on this learning method serves as a facilitator who organizes and supervises the course.

Learning process

The steps involved in implementing STAD are as follows:

a. Giving pretest to students. This pretest may take the form of pretest or actual test of previous units.
b. Sort the student's pretest scores from the top to the very bottom.
c. Divide the students so that groups of four have high, moderate, low, and high-ability students as well as diverse gender and ethnics.
d. Divide the students so that groups of four have high, moderate, low, and high-ability students as well as diverse gender and ethnics.
e. Divide spreadsheets-prepared worksheets that focus on the content to be learned.
f. Examine groups for learning progress.

g. Manage individual quizzes for each student.
h. Give group scores based on individual scores.

According to Rusman (2011), Slavin posited that:

"The main idea behind STAD is to encourage students to help each other to master the skills that teachers teach" If students want a group to get a reward, they should help their group friends learn the lesson.*They* should encourage group mates to do their best, showing the norms that learning is important, valuable, and fun.The students are given time to work together after the lessons are given by the teacher, but not help each other while undergoing the quiz, so that each student has to master the material (individual responsibility).

Students may work in pairs and exchange answers, discuss inequalities, and help each other, they can discuss *approaches* to solve the problem, or they can ask each other questions about the content of the material they are studying. They teach a group of friends and assess their strengths and weaknesses to help them get tested. Since group scores are based on the student's progress on the previous score, anyone can be a "star" of the group within a week, because the value is better than before or because the task is perceived to be perfect, so it always results in maximum value regardless of the student's average previously.

Based on the exposure of STAD type *cooperative* learning method above can be seen that in the STAD between students in *a* group discussing each other to help achieve learning objectives (mastered the material given teachers).

At the end of the lesson the student has to do an evaluation given by the teacher individually, not the group. Individual evaluation results are administered to assign group values and teachers furthermore reward teachers for the group that earns the *highest* score.

Student learning activities

Activity in teaching and learning process is a series of activities that include student's activeness in following the lesson, asking things that *are* not clear, record, hear, think, read and all activities undertaken that can support the learning achievement.

According to Rusman (2011) learning will be more meaningful if *students* are given the opportunity to participate in various activities of learning activities, so that students are able to actualize their abilities in and outside the classroom.

Teaching is an effort made by lecturers to help students learn. Students are subjects in the learning process, students are learners. Therefore, lecturers must design student learning activities that require students to do a lot of activities so that students act as actors of learning activities, doing self-study activities or independent.

There is no learning if there is no activity. In the learning activities, students must be actively involved. In other words, learning is necessary activity (Sardiman, 2003).Hamalik (2005) also explains the value of activity in learning,

a. Students seek their own experience and experience themselves instantly.
b. Self-employment will develop all aspects of the student's personal integrally.
c. Fostering harmonious cooperation among students.
d. Students work according to their own interests and abilities.
e. Nurture the discipline of the class naturally and the learning atmosphere becomes democratic.
f. Develop school and community relationships, and parent relationships with teachers.
g. The learning is done concretely so that it develops critical thinking and avoids verbality.

Learning in school comes to life as an activity in community life.

Based on the value of activities referring from Hamalik described some student activities that need to be observed during the learning process, among others:

a. Have all the students really learned about the learning topic of the day?
b. Who are students who do not follow the learning activities well?
c. Why cannot the student learn well?
d. How do students work together in solving problems/completing teaching tasks given by lecturers?
e. How is the achievement of objectives in the learning that has been done today?

B. Method

This article aims to provide a detailed description of the increased student activity during the lecturing process.To obtain the data, observation of student activity through observation sheet with peer observer, then *from* the observation result is analyzed to describe STAD type of cooperative learning in Basic Social Sciences as an effort to improve student activity in LSLC program.

From the purpose of *this* study, it can be concluded that the research conducted was a qualitative descriptive research because the data obtained were in the form of descriptive sentences.

Research stages

1. The initial phase of this study is a plan, with literature study and empirical studies. This literature study was conducted with the aim of obtaining various theories about cooperative type stad. While the empirical study is to get a picture of student activity. Empirical study is done by giving observation sheet to know student's attributiveness. Furthermore, researchers design and plan learning tools that will be implemented and validated by expert field validators.

2. Do Stage
   At this stage, the researcher holds open class learning in accordance with the validated learning tool followed by five observers to observe the student's activity during the lecture.
3. See Stage
   At this stage reflectionwith five observers and researchers engaged in student activities during the course. The observers submitted the results of observation and provided advice and enter the lectures that have been implemented.

Furthermore, the results obtained were analyzed to know the activities of students who are known from the steps of student work and the characteristics of student activities that were obtained from the study of literature and empirical studies in the early stages of the study.

Research site

Implementation of this research was conducted in class of 2016 of PGSD Study Program of UNIPA Surabaya.

Instrument

Instrument used in this research *was* the observation sheet and questionnaire.

Data collection technique

This research begins with *observations* on the observation sheet provided and the colleagues as observers, then the students were given the test sheet to determine the achievement of the next learning objectives. Then reflection was donenrelated to student activities.

Data from the *observations* and test sheets obtained were analyzed to get a description of student activities owned by each subject.

Data analysis technique

Data analysis is to analyze the results of observations and test results that have been obtained so that researchers can draw *conclusions* about the description in detail about the improvement of student activities during the lecture. Next was drawing conclusions about the approach of STAD type of Cooperative Learning in Basic Social Sciences as an effort to remind students' learning activities in the LSLC program.

C. Finding and Discussion

Based on the results of questionnaires and test sheets on the activity plan, do, see related activities of students during the learning process in three open classes so that researchers get the findings:

From the results of the first open class observation on the indicators (a) showed 97% of the students actually learn because there are only three students who do not really learn. In indicator (b) indicates there are students who *do* not follow the learning activities because the three students are uncomfortable with the sitting position. In the

indicator (c) shows one of the factors students cannot learn well that is uncomfortable seating. In the indicator (d) shows the cooperation in the group well. In the indicator (e) shows 98% of learning objectives achieved visible from the assignment given by the lecturer.

From the results of the second open class observation on the indicator (a) shows 98% of students actually learn because there are only two students who do not really learn. In indicator (b) indicates there are students who do not follow the learning activities well because the two students do not focused in the discussion and receive an explanation. In the indicator (c) shows one of the factors that make students not to learn well namely the inappropriateness of media selection. In the indicator (d) shows the cooperation in the group well. In the indicator (e) shows 98% of learning objectives achieved visible from the assignment given by the lecturer.

From the result of the third open class observation on indicator (a) shows 100% of students really learn all. In the indicator (b) *indicates* there are no students who do not follow the learning activities well. In the indicator (c) shows no factor of students cannot learn well. The indicator (d) shows that the group's cooperation is very well visible from the students' activity during the discussion. In the indicator (e) shows 100% of learning objectives achieved visible from written tests conducted by lecturers with satisfactory results.

D. Conclusions and Suggestions

Conclusions

This article aims to provide an overview of the STAD type of Cooperative learning in the Basic Concepts of Social Sciences as an effort to remind students' learning activities in the LSLC program. From the above *theoretical* studies it can be concluded that:

There were increased student activities. From the first, second, and third open classes that have been done. It can be assured by using STAD type of cooperative learning in the Basic Social Sciences concepts course as an effort to remind students' learning activities in the LSLC program.

Suggestions

From the findings above there are some suggestions that can be used as a reference as learning future, among others:

1. In the course of optimal lecturing is the task of lecturers to carry out the plan activities, do, see before the lecture is implemented
2. Lecturers can choose appropriate strategies and methods to plan optimal learning
3. Lecturers need to prepare evaluation sheets for the achievement of learning objectives.

References

Gagne, R. M., (1977), *The conditions of learning*, New York: Holt, Renehart and Winston.

Hamalik, O.(2005). *Kurikulum dan pembelajaran.* Jakarta: Bumi Aksara.

Jacobsen, D. A., Eggen, P., & Kauchak, D. (2009). *Methods for Teaching: Metode-Metode Pengajaran Meningkatkan belajar siswa TK - SMA. Penerjemah: Achmad Fawaid & Khoirul Anam*. Yogyakarta: Pustaka Pelajar.

Rusman. (2011). *Model-Model Pembelajaran: Mengembangkan Profesionalisme Guru.* Jakarta: PT Raja Grafindo Persada.

Sardiman, A.M. (2003). *Interaksi dan motivasi belajar mengajar*. PT Raja Grafindo Persada. Jakarta.

Slameto. (2003). *Belajar dan Faktor-Faktor yang Mempengaruhinya.* Jakarta: Rineka Cipta.

Is Difficult to Apply PBL Based on Lesson Study?

Farida Nur Kumala[1], Nury Yuniasih[2], Muhammad Nur Hudha[3]
Universitas Kanjuruhan Malang
faridankumala@unikama.ac.id, nuryyuniasih@unikama.ac.id ,
muhammadnurhudha@unikama.ac.id

Abstract

This study purpose to describe the application of lesson study in the science course subjects. The application of Lesson Study is integrated with the application of problem based learning. This research is a descriptive qualitative research using instrument observation sheet and questionnaire of learning implementation, student response and learning progress. Data analysis used Miles and Huberman technique. The subjects in this study were class F2014. The learning process is assisted by 2 observers and documebtation of learning through video and photo. The results showed that the implementation of lesson-based learning consists of plan, do and see stage. At the stage of the plan implemented by developing lesson design, chapter design, RPP and learning instruments. In the do stage, problem-based learning consists of problem orientation, data collection, discussion of problems and conclusions. The last stage is seen done by reflecting on the learning process that takes place. Lesson study can improve the quality of learning both for lecturers and students. As the result shows that problem based learning takes 85% carried out. 80% student take apart activity in learning. Lesson Study improve learning activity to the lecturer and student.

Keyword: *Lesson Study, Problem based learning, Learning Science*

A. Introduction

Now days the implementation of learning is still only centered on the results. Actually it makes the learning has less of meaningful, because the students only pursue learning outcomes, without pay to the processes inside. As a result the science gained is instant and retention of learners to science less as time goes by. Learning that goes on like this is less able to empower the thinking ability of learners. The ability to think is an important skill to live and determine the decisions taken.

When a person only learns by memorizing, without interpreting the learning process, the ability to make decisions in the face of the real world up is considered quite hard. Seeing the competition that is currently strictly needed the empowerment of thinking skills in learning.

Empowerment of thinking skills can be done through learning (Pieterse etal, 2016) based on problems such as PBL or inquiry (Jansen, 2011) questions will be able to develop students' thinking skill.According to Dewey (in Sudjana, 2001) states that problem based learning is the interaction between stimulus and response, that relationship between the two directions of learning and the environment. The environment provides input to students in the form of help and problems, while the

brain's system effectively interprets help so that problems can be investigated, assessed, analyzed and searched for their problem solving.

Arends (1997) problem based learning is a learning approach that students do authentic problems to develop their own knowledge, develop inquiry, and critical thinking skills (Trianto, 2011); (Arlahlah, 2016); (Ghou, 2014). develop self-reliance and self-confidence

In addition to the improvement of learning through the model or method of learning, pedagogic skill of educators is also the main thing in the learning process. According to Irwantoro and Suryana, 2015) states that pedogogic competence is the ability of teachers in the learning both theoretic and in practice. Pedagogic competence consists of several points: mastering learners, mastering the theory and principles of learning, developing curriculum and designing lessons, organizing lessons, facilitating the development of potential learners, communicating effectively and organizing process evaluations and learning outcomes.

The way to improve teachers pedagogic competence can be used through lesson study. Lesson study is one of the teacher and student quality improvement program conducted by teachers in collaborative to plan, implement and evaluate the learning process detally and comprehensive.

Styler and Hiebert (in Spark, 1999): lesson study is a collaborative process of teachers to identify problems, design learning, implement learning and evaluate learning processes, revise learning and design and implement learning over and over.

Lesson study establishes a learning community for teachers together to analyze and implement the best learning to develop thinking skills and process quality improvement. In lesson study the process of learning is carefully observed by the observer and model lecturer to observe the activities and mindsets of learners. The data result to be analyzed and reflected to improve the next learning process. Lesson study not only pay attention and development of learners in the long term (Susilo, 2011).

Lesson study has several steps shown by Lewis in Susilo (2011) In Figure 1.

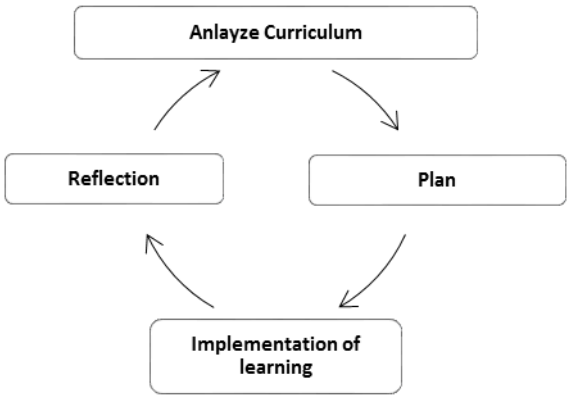


Figure 1. Lesson Study Step

Lesson study provides several benefits in the learning process (Susilo, 2011) such as : a). Improved learning based on data, b). deepen the teacher's knowledge of the subject matter taught, c). Provide opportunities for teachers to consider ideal quality for learners, c). Teachers learn collaboratively, d).

developing teacher pedagogical skills, e). Improving activities and thinking of learners not on teacher activities.

In this term, the purpose of this research is to improve the quality of learning process through lesson study program using PBL model in the learning process.

B. Method

This research is a descriptive qualitative research to observe the learning process using PBL model based on lesson study. This research was conducted in class F 2014 consisting of 40 students. The implementation of the study to implement lesson study in which there is a problem-based learning model.

The procedure in this research is, a). Plan, this stage lecturer model (lecturers teaching at the meeting) and observer lecturers jointly designing to develop lesson desigh, chapter design and RPP, b). do, at the stage do integrate problem-based learning that consist of several step such as: problem orientation, data collection, data analysis and conclusion, instruments used at this stage are observation sheets and questionnaire, c). See, the see stage is done by reflecting the advantages and inclusions. learning activities that take place at the stage do by observers and lecturers model. The results of learning placements were analyzed using miles and huberman analysis which consisted of collecting data, reducing data, presenting data and summarizing data.

C. Findings and Discussion

The results of the study describes the process of learning Science Elementary School using PBL model. Lesson study consisting of several activities namely plan, do and see. Activity plan is an activity in order to plan the implementation of learning process using PBL model. In this research, the activity plan is done by one model lecturer and two observer. The activity plan consists of several activities, namely developing lesson design, chapter design, election media and lesson plans.

Lesson study is done together in the beginning of designing learning. Collaboration and cooperative among teachers will increase the competence and knowledge for teachers. Lewis (2002) states that collaborative learning is more appealing because it allows teachers to connect with other teachers' learning, so the teacher can learn from each other.

Developing lesson design is a stage to develop and analyze the material to be studied at the meeting into small sections such as concept maps. The purpose of preparing lesson design to facilitate model lecturers in implementing learning and can analyze the difficulties in the material together with the observer. In this study the preparation of lesson design is done on the material substance and its form. The material is translated into smaller parts such as particle matter theory, solid, liquid and gas properties physically and chemically. The translation of the material into more detail is useful to guide the learning steps to be carried out as well as to reduce backwardness of

the material part during the execution of teaching the material. (Trianto, 2009) stated that the concept map aims to clarify the understanding of a reading, concrete the concept andexplain the relationship between concepts. Lesson design is shown in figure 2.

Figure 2. Lesson design

The result of lesson design development is continued in chapter design development stage. The development of chapter design is the stage of developing a short learning scenario. Chapter design is different from RPP, because chapter design only consists of three main parts namely the beginning, core and end. In the end stages of the evaluation provided during the learning process, at the core stage of the implementation of the learning model used / the stage of acquisition of the concept, in the early/begining stages of the preliminary written and apperception of the learning process. Each section is added to the teacher's conversation to the student and the student's response. In chapter design has line of student's activity . This line of response as an approximate student activity during the learning takes place. Chapter design show in figure 3.

The next chapter design is developed into a more detailed section such as RPP. The development of RPP is followed by determining the media, as well as the evaluation of the learning process. The RPP developed in this study refers to problem-based learning steps, while the steps are problem orientation, information collection can be through observation or practicum activities, discussion of observations and conclusions.

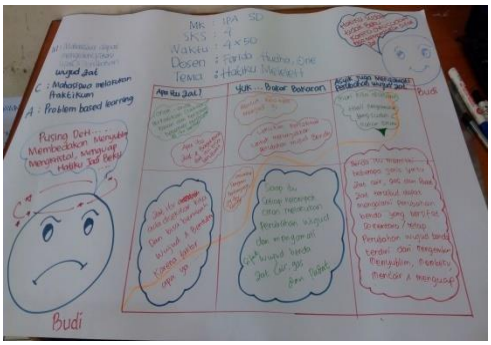


Figure 3. Chapter Design

In the second stage of the lesson study is the stage of do. At the learning stage do learning using problem-based learning model in accordance with the development of RPP in the previous stage. The do stage is done by observing the learning process implemented by the model lecturer and observer. Each observer is divided into several groups to observe all student activities in detail both attitude and mindset of students during the learning took place. A teacher in a lesson study looks at how to learn, activity, thinking in learning and analyze student learning outcomes detailly, so that teachers get extensive information (Ngang & Sam, 2015).

The implementation of problem-based learning model consists of several steps as follows:

a. Problem orientation, Starting with the stages of problem orientation is the stage where students presented problems by lecturers model / team. Problems given, is apperception to explore the initial ability/ knowledge of students on the material to be studied. Problems are placed on the worksheet and discussed by the students together without seeking information from some sources either internet or direct practice.
b. Information gathering, at the information gathering stage students collect information through several media such as the internet and practicum activities. Practicum is done by observing the physical properties of objects and observe the process of changing the form of substances using the original and manipulative media such as virtual simulation.
c. discussions of observations, discussion of results conducted by discussing the results of observations and practicum followed by analysis of experimental data.
d. inference, is the activity of drawing out the results of the experiment to become a concept of science. The conclusion is presented by the students to the front of the class. The learning process in accordance with the characteristics of problem-based learning that Arends (2001) in Trianto (2009): 1). Questioning, 2). authentic inquiry, 3). Produce the product and 4). collaboration.

The problem-based learning model is designed to help students develop thinking skills, solving problems based on acquired knowledge (Mat et al, 2011), studying the role of authentic adults and becoming independent learners (Trianto, 2009). End of the do stage, students are given a questionnaire to provide a response during the learning took place.

The third stage of the lesson study is see, this stage is reflecting the learning process that has been implemented. The see process begins with the opening of the moderator, the reflection of the model lecturer, the observer and the questionnaire of student responses to the learning process undertaken.

The results of reflection are used as a basis for improvement in the next stage. Based on the results of the discussion phase see that the process of learning PBL model takes about 85% of the target set, there are 20% of students who learn less well in the

classroom, this is due to lack of interaction with lecturers and students, and lecturer instructions on students who are less clear especially when students analyze and draw conclusions. Reflection is considered a teacher's skill to examine carefully and continuously to teach students to be better (Chetcuti, 2007 in Galini and Kostas, 2014). Reflection in lesson study provides an opportunity for teachers to see and improve their own learning outcomes with other teachers collaboratively (Susilo, 2011).

D. Conclusions And Suggestions

The implementation of lesson study-based learning provides many benefits to teachers and students. Regular collaboration among teachers to improve the learning process makes quality learning better.

References

Arends, Richardl. (1997). *Classroom Instructional Management. New York*: The Mc. Graw-Hill Company.

Alrahlah, A. (2016). *How Effective The Problem-Based Learning (Pbl) In Dental Educatio*n. *A critical review*. The Saudi Dental Journal (2016) 28, 155–161

Galini, R & and Kostas, K. (2014) *Reflection of pre-service teachers in a tabletop exercise of lessonstudy during their practicum*, (Procedia - Social and Behavioral Sciences 152, 2014) pp. 868 – 873.

Irwantoro, N & Suryana, Y. (2015). *Kompetensi Pedagogik Untuk Peningktakan Dan Penilaian Kinerja Guru Dalam Rangka Implementasi Kurikulum Nasional*. Genta Group: Sidoarjo.

Jansen, E. (2011). *Pemelajaran Berbasis Otak*. Jakarta: Indeks.

Lewis, Chaterine. (2002). *Lesson study: A Handbook of Theacaher- Led Instructional Change*. Philadelphia. PA: Researchfor Better Schools. Inc.

Mat, S. et.al. (2012). *Model Of Problem-Based Learning Using Systems Approach*. Procedia - Social and Behavioral Sciences 60 (2012) 541 – 545.

Pieterse, T. Et.al (2016). *Critical Thinking Ability Of 3rd Year Radiography*. healths age sond heid 2 1 (2 0 1 6) 381 - 390.

Spark, Dennis. (1999). *Enhacing Thinking Through Problem Based Learning Approaches. International prespectives*: Thomson learning. Singapore

Susilo, H. (2011). *Lesson Study Berbasis Sekolah. Guru konservatif Menuju Guru Inovatif.* Bayu Media Publishing: Malang.

T.K. Ngang and L.C. Sam. (2015). *Principal Support in Lesson Study Procedia* (Social and Behavioral Sciences 205 ,2015) pp. 134 – 139

Trianto. (2011). *Mendesain Model Pembelajaran Inovatif Progresif. Konsep Landasan dan Implementasinya Pada Kurikulum Tingkat Satuan Pendidikan*. Kencana Prenada Media: Jakarta.

Yew, E.H.J and Goh, K. (2016). *Problem-Based Learning: An Overview of its Process and Impact on Learning*. Health Professions Education 2 (2016)

Improving Quality of Earth and Space Science Lecturer Through Lesson Study

Erwina Oktavianty
FKIP Universitas Tanjungpura, Pontianak
erwina.oktavianty@untan.fkip.ac.id

Abstract

The purpose of this research is to improve the quality of the process and the results of earth and space science lecture through the implementation of lesson study. The quality of the results in the lecture is based on the improvement of students' mastery score. Collaborative learning is done through the lesson study stage as an approach in the lecture. The study was conducted in two consecutive cycles of collaborative planning, research lesson and post-lesson reflective. The results showed that the process of planning, implementation and reflection of lectures can improve the process. The results of student mastery increased from an average of 53.25% to 85.75%. Student response shows that collaborative learning has a positive impact on the lectures. So in general the implementation of Lesson Study can improve the quality of earth and space science in Physics Education program of education faculty Tanjungpura University.
Keywords: Earth and Space Science Lecturer, Lesson Study, Collaborative Learning

A. Introduction

Physics education study program as part of LPTK that produces physics teacher has a vision to be superior in producing physics education that recognized competent, synergistic and dedicated and territorial-based (Curriculum Team, 2009). In the curriculum of physics education program FKIP UNTAN, the subject of earth science and space is a compulsory subject of study program with the number of credits 3 (3-0), this is in line with the school curriculum that has demanded the students' competence to master the science of earth and space well both as a science and as a field of astronomy olympics. However, the implementation is dominated by theoretical studies so as to give the impact of giving experience and student thinking activities become less adequate.

The result of TIMSS (Trends International Mathematics and Science Study) for the earth science material of 2015 shows the average achievement of Indonesian students is 29 compared to the average achievement of 49 international students (OECD, 2015). While in physics education program student still shows 55% conception of physics education student FKIP Untan that is inconsistent in material of IPBA (Erwina Oktavianty, 2011).

Physics education program students are physics teacher candidates who are prepared to become physics teacher-science professional high school. Supposedly after they finish their study in LPTK already have experience and conception which is in accordance with the conception of physicist. And that prospective students learn more from how they are taught by their lecturers and not from what lecturers are exposed to

good teaching (Mellado, 1998). Therefore lectures that only provide information "the sage on the stage" does not provide opportunities for students to interact. Students need to be given the opportunity to be able to work together to solve problems related to their daily life because the learning process obtained by learners so far more on "learn about" (learning about thing) rather than learning how to be (Apriono D.,2013).

Ueno (2013) explains that in Collaborative Learning, teachers design learning so that students can learn from each other. The importance of "learning from others" experiences and the real experience of how others are learning has often been expressed in literature. Several studies have shown that teachers are hard to change (Davis, 2003). In Collaborative Learning, teachers also need to provide materials and media that support collaborative learning activities, provide questions or tasks that encourage exploration, and students work in learning groups (Sato, 2012). Lesson study is an alternative that can support collaborative learning, in addition to lesson study provides a real example of how to do learning, participation as an observer in lesson study or observing video lesson study can be used to improve the teaching skills of teachers and prospective teachers. The focus of lesson study is not just solving problems or difficulties but how problems can be solved by sharing experiences and thinking together and interacting with different learning components.

Based on this rationale, this research has a strategic value to increase the knowledge and experience both for lecturers and students in Physics Education Study Program FKIP Untan in conducting Earth and Space Science lecture based on the result of the study of student concept concept in collaborative between team teaching so that effort improvement the quality of the learning process in the course of earth science and space can be achieved.

B. Method

Development of lectures Earth science and space physics education program FKIP Untan implemented by implementing lesson study on the discussion of sun, earth and moon matter. This activity was followed by lecturers of physics education program FKIP Untan. The lesson study phase that is implemented is the stage of plan, do and see.

The sample was taken by saturated samples. Namely all students of physics education courses that take the courses of Earth Sciences and Space (IPBA) in the even semester of the academic year 2015/2016 amounted to 31 people.

The instrument used in this research is the observation sheet of earth and space science lecture, student questionnaire assessment sheets and tests of mastery of earth, moon and solar interaction materials.

The research stages are

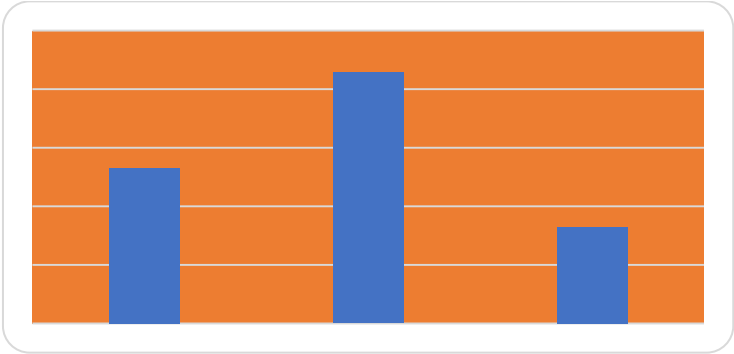
Plan: make an IPBA lecture analysis and plan innovative learning in the form of a lesson plan (RPS).

Do: conducting IPBA lectures by model lecturers.

See: teachers and lecturers together reflect on lectures

C. Finding and Discussions

Based on observation and reflection, it can be seen that studentlearning outcomes during the learning process enhanced throuh collaborative learning on lesson study. At the end of the lecture obtained information on student acquisition increase from 53.25% to 85.75% as the graph below



Picture 1. The acquisition of learning outcomes

Student response to learning is positive. Students feel challenged to follow lectures in a collaborative way. Observer also said the interaction made by students with students look positive where students pay attention to friends who ask or express opinions, then the response is very positive. Other observers also highlight how student interactions with interactive media have been prepared. Still needs improvement in the media being used because some of the existing information needs additional information from the internet. There are students who can not be connected by the internet so he can not participate to give his opinion.

The implementation of lesson study in this study was conducted in two cycles. With each cycle implemented according to the stage of planning (plan), implementation (do) and reflection (see). The first Open Class is implemented on the rotational material and the earth revolution while the material given in the second open class is the interaction of the earth, the moon and the sun and the eclipse. The following will be described in the lesson study phase:

Plan

At this stage, all lecturers of IPBA subjects are involved in lecturing analysis, making lesson design and student worksheets based on local myth collaboratively.

In this activity, lecturers discussed obstacles in earth and space science learning. Misconception has found on the discussion. The results of Erwina Oktavianty (2011) show 55% conception of physics education student FKIP Untan that is not consistent in material of IPBA. Other hand building creativity and teamwork for students are obstacles of lectures, usually when the students are given task or group task. They tend to fisnish the task by themselves or some members of the group only, while the rest of the group just riding name only. So the difficulty in understanding the concept of earth

and space is always in the lecture in the form of misconception. (The result of misconception). Likewise with the assessment done in the course, the assessment is only done based on the value obtained without considering the discussion conducted by the students. So that students do not feel fair and not maximal.

Based on the analysis of the above problems then the discussion continued with the lecture method that will be implemented. Based on the results of the discussion, collaborative learning is chosen as an approach in the lecture. Students discuss in groups with each group consisting of 4 people. In a group of students discuss the problems that exist in the worksheet which is at the next meeting. The number of students involved in this lecture is 31 people in one class.

Therefore lesson design is made for two more flexible meetings and completed by the worksheet.

Figure 1. Stage Plan by the team of lecturers of the subjects of IPBA

The worksheet is designed with attention to the local myths or habits of the people in understanding the phenomena related to the matter of the earth and solar moon's interactions, such as culmination point, lunar eclipse and solar eclipse. In addition, this planning discussion leads to the use of the media used. An interactive multimedia media that integrates local science and information technology is provided in lectures. So that the learning media can accommodate the myths that develop related to IPBA lectures. This local science is derived from investigations conducted by students on previous assignments. Among them is the dominant concept of gravity in the practice of culmination.

Do/Open Class

Open class activities are held in two meetings. This is done to see the change in material mastery and the ability to conduct collaborative discussions in learning so as to gain improved students' thinking skills.

Lectures adapt to cooperative activities where students discuss in groups. However, each student is not expected to get the same conclusions but can find problem

solving in the worksheet of each of the discussions. So that student misconception can be reduced.

In the early stages of the lectures, lecturers provide motivation to students about the phenomenon of celebration of culmination that is done by Pontianak city people every 2 times a year, every 20-23 March and 20-23 September every year. Then discuss the activities in the celebration and compare with the activities of one of the cultural events held during Imlek and July-August. Students then share classically against their findings and discussions.

Picture 2. Student discuss the worksheet based on multimedia interactive

Furthermore, the model lecturer leads to the solution of the problem as a jumping task that has been available on the worksheet. Data and information gathering is done by taking into account the interactive multimedia that has been given by the model lecturer. Then the students presented their findings in a classical way.

The same is done in the second cycle. The material discussed is eclipse phenomena. So through the workshop students get a clear picture and a detailed understanding through the project against the concept of eclipse.

Picture 3. Students present their eclipse media.

Using this strategy for the lecture, student could more active in discussion and enthusiasm in all lecture activity.

At the stage of do, the observers observed the activity of the lecture with the focus of observation is the activity of the students. The observation sheet used by the observer can make observations as an alternative observation. Namely the interaction between students with students or with lecturers, student interaction with the media of biak learning given by lecturers model in the form of interactive multimedia or media that they make. And the benefits that observers get in the implementation of lectures.

See

This is the important step of lesson study. Reflection stage is discussion between observer, team teaching of earth and space science and model after the lecturer and discuss about what happened during the learning implementation.

Learning reflection activities led by a moderator so that all observers can deliver the results of observation in an orderly manner. In addition, the observer can also share the learning experiences that have been obtained. This discussion is expected to provide input to the next learning process.

Some of the information obtained from the discussion is that the median utilization by the students can be increased again, especially in conformity with the given worksheet. In addition, student interaction with students in one group can be built with encouragement from lecturers. In general, lecture planning that has been made and implemented is good with workshop method. That way students can feel challenged in solving problems and also engage in group discussions.

D. Conclusion and Suggestion

Based on the findings and discussion above, it can be concluded that generally, the implementation of Lesson Study can improve the quality of earth science and space in the program of Physics Education faculty of education University of Tanjungpura.In detail, the conclusions obtained are

a. Implementation of lectures by implementing collaborative learning through lesson study activities can improve students' ability to discuss effectively.
b. the process of planning, implementation and reflection of lectures can improve the process
c. Student learning outcomes increased from 53.25% on average to 85.75%. Student responses show that collaborative learning has a positive impact on lectures.

Because this collaborative learning on lesson study can be used as an alternative to improve the quality of learning in universities.

References

Apriono,D.2013.*Pembelajaran Kolaboratif Suatu landasan untuk membangun kebersamaan dan keterampilan kerjasama*. Diklus Edisi XVII, Nomor 01, September 2013 (292-304)

OECD. (2015). *PISA 2015 Assesment Framework: Key Competencies in Reading, Mathematics, and Science*

Oktavianty, Erwina. 2011. *Students Conception Of Earth And Space in FKIP Untan Physics Education.* Proceeding of International Science Seminar, UPI Bandung

Permendiknas nomor 41 tahun 2007. *Standar Proses Untuk Jenjang Pendidikan Dasar dan Menengah*. Jakarta. Menteri Pendidikan Nasional.

Permendikbud Nomor 81A Tahun 2013 tentang Implementasi Kurikulum.

Sato, Manabu. 2013. Mereformasi Sekolah, Konsep dan Praktek Komunitas Belajar. Jakarta: Pelita.

Sato, Masaaki. 2012. Dialog dan Kolaborasi di Sekolah Menengah Pertama, Praktek "Learning Community". Jakarta: Pelita.

Ueno, Masamichi. 2016. Pembelajaran Kolaboratif dan Pendidikan Demokrasi. Makalah Disajikan pada Short-Term Training on Lesson study (STOLS) for Institute of Teacher Training and Education Personnel (ITTEP), Tokyo, 2 - 28 Oktober

Profiles of Contextual Teaching Material for Forest Prototype-BasedCollaborative Learning

Muhfahroyin[1], Anak Agung Oka[2]
Biology Education Department of Muhammadiyah University of Metro
muhfahroyin@yahoo.com

Abstract

The objective of the research was to develop the contextualteachingmaterialfor the learning-forest prototypebasedcollaborativelearning model. The research was conducted by using research and development (R and D) adapted from Thiagarajan 4D model. Steps of the model are Define, Design, Develop, and Dissemination. Through the research was developed contextualteaching material in the plant morphology description. The result of the researchshowed that the contextualteachingmaterial for the forest prototypebased collaborative learning model was valid to implementing in the collaborative learning.The average score of teachingmaterialwas 85% suitable to use.Based on the research, the researcher gave suggestion to the teachers, that to fasilitate the students in the biology contextuallearning can implement the teachingmaterial for the forest prototypebased collaborative learning.

Keywords: *Teaching Material, Contextual Learning, Learning-forest prototype*

A. Introduction

Contextual teaching materials are teaching materials oriented to everything related to natural phenomena, both qualitatively and quantitatively, and the problems related to its application to develop technologies to overcome public life problems (Depdiknas, 2007a). Therefore, through contextual teaching materials, students are expected to acquire knowledge to develop their process skills and academic achievements to overcome problems in real life (contextual) (Blanchard, 2001).

Science learning can facilitate students to have competences when it is conducted with meaningful learning. A meaningful learning is an active, creative, effective, and contextual learning. It provides meanings personally to the learners, by relating materials with students' self-experiences in the past to anticipate the future. In a meaningful learning, students conduct learning actively and creatively (Silberman, 2001). In addition, a meaningful learning also demands linkages between learning in calssrooms and daily life problems. In this case the contextual learning will provide more productive meaning to learners. Depdiknas (2002) and Isjoni (2007) suggest that gaining a meaningful learning does not necessarily change existing curriculum and orders, but each aspect of basic competence can be integrated between its linkages to life realities.

Science linkages to daily life problems besides facilitate students to learn biology concepts and principles, it is also positive because students are more understanding science problems in daily life (Ausubel, 1968; National Department of Education

2002). Teaching materials which is developed contextually is very helpful for students to facilitate them learning higher science concepts and principles. Sufficient science understanding will help students to overcome problems related to science in daily life and to be able to make further development steps in form of science concepts use for daily life interests which are basics of thinking for students in overcoming daily life problems. When the meaningful property of science learning has reached aspects of attitude, moral, and care from the learners, then characterized personality will be formed along with the conducted learning. Moreover,Muhfaroyin (2007) explains that contextual learning in biology learning can form learners' characters of faith and God-consciousness (*taqwa*) and at the same time train the science process skills. In addition, the usingforest-prototype-based contextual teaching materials will also be relevant to scientific approach (Muhfaroyin, 2013). Learning with forest-prototype-based teaching materials can be done collaboratively to create scaffolding; where students help each other to reach specific competence success in learning groups.

Collaborative learning demands learners to be responsible upon their own learning and make efforts to reach information related to their competences that they should understand. In collaborative learning, teachers asthe facilitators for all students in learning groups, so that all students are ensured to learn to form learning community (Rockwell, 2012; Saito et. al., 2015). To see this collaborative learning process results, assessments are made by respective students. Luzet (2013) suggests that collaborative learning is based on the Zone of Proximal Development (ZPD) and Scaffolding theories, where students help each other to reach success in specific competences in the learning groups.

Formed collaborative learning characteristic is that students learn in a group and they have dependence in the learning process where completing tasks requires members of the group to cooperate, interact directly, and each students is responsible to agreed tasks, students learn interpersonal communication skill, and teachers as facilitators, knowledge sharing between students, and heterogenic grouping (Brandt, 2004). In addition, Olivares (2005) states that in collaborative learning, students are trained to communicate and think creatively. Student togetherness in the critical thinking group produced higher understanding possessed by each of group member.

From this rationale, it is important to develop contextual teaching materials to facilitate and empower students' potentials. Classical-and-textual-based teaching materials has been widely developed, but contextual teaching materials especially forest-learning-prototype-based contextual teaching material has not yet been optimal to develop.

B. Method

This was a research and development (R and D) research which was adapted from Thiagarajan (1985), with the following steps.

1. Define

Define stage is conducted by analyzing concept and need analysis about contextual teaching materials and learning-forest prototype has been used as the education vehicle.

2. Design

Design is conducted to produce contextual teaching materials based on learning-forest prototype, before continuing to development step.

3. Develop

*Develop*step is to conduct development of teaching materials based on learning-forest prototype. This activity is the manifestation of designing. Development is conducted by composing and validating teaching materials based on learning-forest prototype. Validation is conducted by 3 biology education experts.

4. Disseminate

Disseminate is conducted to socialize the development results of contextual teaching materials based on learning-forest prototype to students and lectures of biology education, to find out, understand, and use learning model based on learning-forest prototype for collaborative learning.

C. Findings and Discussion

The contextual teaching materials based on learning-forest prototype has been developed related to plant description based on learning-forestprototype. To find out profiles of these teaching materials, validation reviews had been conducted to the following validation aspects: 1) conformities between materials and objectives; 2) conformities with science and technology developments; 3) material accuracies; 4) systematic of material; 5) learning instruction clearness; 6) easy to understand materials; 7) conformities between materials and learners; 8) design and layout; 9) sufficiency and depth of materials; 10) updateness; 11) contextual; 12) stimulating curiosities; 13) stimulating critical thinking; 14) language aspect; 15) training cooperation in learning. TheValidation Score Average of Contextual Teaching Materialcan be seen in Table 1.

Table 1 TheValidation ScoresAverage of Contextual Teaching Material

No.	Validation Aspects	Scores			
		Validator 1	Validator 2	Validator 3	Average
1	Conformities between materials and objectives	80	80	100	87
2	Conformities with science and technology developments	80	100	100	93
3	Material accuracies	100	80	80	87
4	Systematic of material	80	80	80	80

5	Learning instruction clearness	80	100	60	80
6	Easy to understand materials	100	80	100	93
7	Conformities between materials and learners	80	100	80	87
8	Design and layout	100	80	60	80
9	Sufficiency and depth of materials	80	100	80	87
10	Updateness	80	80	100	87
11	Contextual	60	80	80	73
12	Stimulating curiosities	100	80	80	87
13	Stimulating critical thinking	80	100	80	87
14	Language aspect	100	80	80	87
15	Training cooperation	80	80	100	87
	Average	85	87	84	85

These profiles of contextual teaching materials based on learning-forest prototype was stated to be proper with average values of 85% according to contextual learning instrument design need. An instrument is proper when it minimally reaches 63.1% (Sugiyono, 2008). Further,Muhfaroyin (2007) suggests that in learning biology, learners needs to be introduced to real conditions in the fields so that students will understand environment circumstances as the biology learning sources. Thinking levels to be expected from students in learning contextual biology is thinking in sequences and sufficient science process skill, not only memorizing materials, but also observing real environment conditions. Further, Bell (2007) suggests that developing reasoning ability needs training and biology learning that emphasize process skill will optimize students' abilities.

Contextual teaching materials based on learning-forest prototype can be developed to facilitate students to improve science process skills including observing, classifying, measuring, communicating, interpreting, and inferring (Gega, 1994; Depdiknas, 2007b; Muhfahroyin, 2016). Similarly, Blanchard (2001) suggests that in contextual learning, students relate theoretical learning concepts to realities in the fields. Learning in the fields requires instruments for field activities which are operational and easy to do (Johnson, 2007). In science contextual learning, learners will also be trained in science process skills.

Learning which emphasizes science process skills train students to do real things that scientists do such as observation, measurement, identification, controlling, and experiment. The science process skill is an approach to do by scientists in their quests to solve natural mysteries (Ramig*et al*, 2002; Rezba *et al*, 2008; Muhfahroyin, 2016). In addition Suparno (2001) suggests that improved process skill will make students to conduct learning with scientific method development, discover and develop facts, so

that learning will be more meaningful, constructive and contextual. This meaningful learning is also suggested by Ausubel (1968).

Learning-forest prototype which is supported with contextual teaching materials is proper to implement and can be used as contextual learning vehicle for students. Learning biology is not only in classrooms, but also in surrounding environment (Yuniastuti, 2013). Further Muhfaroyin (2013; 2016) states that through this vehicle, students are able to get live experiences from environment about substances of relevant reviews with subject to learn and students will experiences environment conditions which requires characters of environment caring and science process skills.

D. Conclusion and Recommendation

Contextual teaching materials based on learning-forest prototype which had been developed is stated to be proper to use with average score of 85% so that it can be implemented to support collaborative learning based on learning-forest prototype.

Teachers and lectures can do biology learning by using learning-forest prototype with support of contextual teaching materials had been developed. Learning by using learning-forest prototype model requires some observers according to the students' learning groups, so that the Lesson Study should be conducted for this learning.

References

Ausubel. 1968. *Educational Psichology: a Cognitive View*. New York: Holt, Rinehart, and Winston.

Bell, R.L. 2007. *Teaching the Nature of Science through Process Skills.*Pearson Publisher.

Blanchard, A. 2001. *Contextual Teaching and Learning*. @B.E.S.T.

Depdiknas. 2002. *PendekatanKontekstual* (*Contextual Teaching and Learning*). Jakarta: Ditjen Dikdasmen Depdiknas.

Depdiknas. 2007a. *Petunjuk Teknis Pengembangan Silabus Biologi*. Jakarta: Ditjen Manajemen Dikdasmen Depdiknas.

Depdiknas. 2007b. Permendiknas No. 41 Tahun 2007. *Standar Proses*. Jakarta: Depdiknas.

Johnson, Elane B. 2007. *Contextual Teaching and Learning.* Bandung: MLC.

Isjoni. 2007. *Paradigma Pembelajaran Bermakna*. Bandung: Falah Production.

Muhfahroyin. 2007. Pendekatan *Contextual Teaching and Learning* untuk Mengintegrasikan IMTAQ dalam Pembelajaran Biologi. *Jurnal Pendidikan dan Pembelajaran*. Volume 5 Nomor 1 Maret 2007.

Muhfahroyin. 2013. Inisiasi *Prototype* Hutan Pembelajaran sebagai Wahana Implementasi *Scientific Approach* bagi Mahasiswa Pendidikan Biologi. Makalah. Disampaikan dalam Seminar Nasional Pendidikan Sains tanggal 9 Nopember 2013. Solo: UNS.

Muhfahroyin. 2016. The Development of Learning Forest Model to Activate Students Science Process Skill. *Scientific Journal of PPI-UKM.* Vol. 3 (2016) 06.

Ramig, J.E., Bailer, J., Ramsey, J.M. 2002. *Teaching Science Process Skills*. School Specialty Children's Publishing.

Rezba, R.J., Sprague, C. R., Mcdonnough, J.T. 2008. *Learning and Assessing Science Process Skills.*Kendall Hunt Publishing.

Silberman, M. 2001.*Active Learning, 101 Strategi Pembelajaran Aktif.* Yogyakarta: Yappendis.

Sugiyono. 2008. Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, dan R&D). Bandung: Alfabeta.

Thiagarajan, S. 1985. *Development Research Model in Education*. Boston: Allyn and Bacon.

Yuniastuti, E. 2013. Upaya Meningkatkan Keterampilan Proses dan Hasil Belajar Biologi dengan Pendekatan Pembelajaran Jelajah Alam Sekitar pada Siswa Kelas VII SMP Kartika V-1 Balik papan. Jurnal Ilmu-ilmu Sosial. Vol. 5 Nomor 1 Tahun 2013. (Online).http//:www.fkip-uns.ac.id.

Improving Teacher's Professionalism Through School-Based Lesson Study at SD Laboratorium Undiksha Singaraja

I Made Citra Wibawa[1], I Komang Sujendra Diputra[2], I Nyoman Laba Jayanta[3]
Primary School Teacher Education, Universitas Pendidikan Ganesha
imadecitra.wibawa@undiksha.ac.id[1], komangsujendra.diputra@undiksha .ac.id[2],
lab.jayanta@undiksha.ac.id[3]

Abstract

*The aim of this activity was to improve teachers' understanding and awareness of their professional competency. One of the approaches that can be used to improve teacher's professionalism in teaching is done through school-based lesson study. The steps followed in this activity were 1) a **se**minar to improve the teachers' understanding and awareness about the importance of school-based lesson study; 2) a dissemination of the implementation of school-based lesson study through video conference of the result of training in Japan and 3) a lesson study capacity building at SD Laboratorium Undiksha with the following stages: (1) planning (plan), (2) implementation (do), and reflection (see). Based on the results of the implementation of the school-based lesson study it can be concluded that there is an increase in understanding and awareness of the teachers about their professional competency as indicated by an increase in performance during the implementation of the activity. This was shown in the ability of the teachers to make a plan and teaching preparation, their mastery of teaching methods and strategies, their mastery of materials taught to the students, their ability to manage the class, their ability to administer test and evaluation. All if these show an increase in the quality of teaching through the school-based lesson study.*
***Keywords**: teacher's professionalism, school-based lesson study*

A. Introduction

The quality of human resources as the product of education cannot be separated from the quality of the educators (teachers and lecturers) as the implementers of the teaching and learning process. High quality teachers are able to implement the curriculum in the form of teaching process, so that the goal of education can be reached. Act No. 14 of 2005 on Teachers and Lecturers , Article 2 Paragraph 1 states that "the status" of a teacher is a " professional". A teacher who says that he or she is a professional has to continually improve his or her professional service to improve the students' welfare. Since his or her duty is to make the students learn, a teacher has to continually learn how to make them learn better due to the increasingly greater demand of the era of change. Formerly, it was assumed that it was enough if the students could master the cognitive aspect in learning. Now, that is not adequate at all.

The Regulation of the Minister of National Education of the Republic of Indonesia No. 16 of 2007 on the standard of the academic qualification and teacher's competence states that teacher's competence standard is developed fully in four competences, i.e., 1) Pedagogical competence or the teacher's ability to manage the students' learning, 2)

Personality competence, i.e, steady personality skill, having noble character, wise and charisma and becoming a good model for the students. 3)Social competence, i.e., the teacher's ability to interact effectively and efficiently with the students, his or her fellow teachers, students' guardians and the community. Professional competence, i.e., the ability to master the teaching materials broadly and deeply. In this case, the target for supporting the quality of education is the teacher, thus, professional competence has to be improved, not only knowledge and skills, but the expected comptence is the willingness to improve things that support the feasibility of his or her competence. In keeping with various demands for improving teacher's competence, the effort to improve professionalism has been made through the improvement of academic qualification, certification, and professional education and training on teaching basic skills. But a teacher's creativity in the teaching and learning process does not have any impact on other teachers. Generally, the teachers with a high self importance, who feel superior are not easy to accept inputs for improving the teaching. The teaching and learning process that is followed by a teacher is a taboo for his or her colleagues to see.

In an effort to improve teacher's professionalism there is a need for a model of development that can change the mindset and actionset of the teachers into collaborative culture and information sharing. Lesson study is a model of teacher professional development which can be selected. Lesson study is a teacher's professional development model through collaborative and continual teaching research based on collegiality principles in which the teachers help each other in learning to develop a learning community (Hendayana. *et al*., 2007). Styler and Hiebert (in Susilo *et al*., 2009: 3) state that lesson study is a collaborative process in a group of teachers when they identify teaching problems, designing a teaching scenario (which consists of the activity of looking for books and articles about the topic to be taught), making the students learn based on the scenario (one teacher implements the teaching while others observe), evaluate and revise the teaching scenario, teaching based on the revised scenario again, evaluate the teaching again and sharing the outcome with other teachers (dissemination). From some definitions above it can be concluded that lesson study is a model of teacher's profession development in improving teacher's professionalism that is done together by a group of teachers to realize teacher's proessionalism in a better direction.

Some considerations that can give positive assumptions of the benefits of lesson study include 1) stimulating motivation to develop oneself. 2) training teachers "to see" the students. 3) making research an integral part of education. 4) helping the dissemination of innovations and new approaches. 5) placing teachers in a respected position.

So far elementary teachers of SD Laboratorium Undiksha have not got any optimum training on lesson study. based lesson study with the capacity building from the team of community work of Undiksha is expected to make the teachers open to receive suggestions for improving the quality of teaching, improving the ability to make

innovations in teaching through hands on activity, mind-on activity, daily life, and local materials. The principle of coleaguelity and mutual learning are implemented in collaboration when implementing lesson study. In other words, the teachers involved in the lesson study activity are not allowed to be superior (feeling that they the most clever) or inferior (feeling inferior) but all of the participants in lesson study have to have an intention to learn.

B. Method

The problems that have been formulated above can be resolved strategically by improving the understanding and skills of teachers to implement the learning through the pattern of school-based lesson study. The steps followed in this activity were 1) a **se**minar to improve the teachers' understanding and awareness about the importance of school-based lesson study; 2) a dissemination of the implementation of school-based lesson study through video conference of the result of training in Japan and 3) a lesson study capacity building at SD Laboratorium Undiksha with the following stages: (1) planning (plan), (2) implementation (do), and reflection (see).

C. Findings and Discussion

The planning stage was done for 3 times, i.e., on August 8, 21 and 26, 2017. The product from the first stage was the completion of three lesson plans, student's worksheet and observation sheet to facilitate an open class. In the planning stage, the model teacher (Ketut Yayuk Anggreini, S.Pd., SD) with the team of lesson study from Undiksha and practicum students from PPG SM3T program who collaborated to write lesson plans that reflect student-centered teaching. The planning started with an analysis of needs and problems faced in teaching, such as developing basic competences into active teaching activities, the technique to make the students learn, using a strategy to compensate for the lack of facilities and learning resources, so that one can know various real conditions which will be used for the teaching itself. The method used in teaching was cooperative learning model and group discussion. The model teacher was very enthusiastic to participate in the planning activity. With the existence of the lesson plans, the ability of the model teacher in designing lesson preparation became better, since the lesson plans made have obtained many inputs from the lesson study team. The model teacher said that this planning activity was very useful, since they could write teaching materials together and they could exchange opinions, enriching their insights into the selection of appropriate strategies and methods of teaching, and training to develop mutual respect and respect for other's opinions. It was hoped that such kind of activity could be continued to produce effective and efficient teaching.

The next stage was implementation (do). This second stage was implemented on August 9, 22, and 29, 2017 at SD Laboratorium Undiksha. Based on the agreement at the planning stage, the model teacher was Ketut Yayuk Anggreni, S.Pd., SD. The

observers were the members of the team from Undiksha and student teachers from PPG SM3T program. The stage started with the implementation of teaching based on Curriculum 2013 which was pesented by the model teacher and the observation was made by the observers. On the whole, the *do* activity ran well. The model teacher was very ready and energetic in managing the teaching in the classroom. This was indicated by the attention and guidance given to all the students at the time of teaching, the presentation of the materials was very clear and at the time of doing the assessment the teacher always gave rewards to mativate the students to learn.

Based on the results of the implementation activity (*do*), then a reflection (*see*) was done. One of the lecturers from the team of Undiksha , Mr I Made Citra Wibawa acted as moderator, opening the reflection program. The moderator invited the model teacher to express his feeling when she acted as model teacher in the teaching process. After the model teacher expressed her feeling, then the moderator invited the observers to present their observation results. From the three times of teaching a summary of comments from the observers was made as follows. 1) The teaching was very good, however, there were some students who were less active, some did not talk. 2) It would be better if the students presented their works in group in front of the classroom, so that all of the students could pay attention to their friends. 3) The model teacher taught very well, had given helps to the students and this need to be improved again. 4) There were students (No. 2 and No. 10) who had not been able to work in group, they still worked individually. 5) The model teacher had motivated the students and this made the teaching more active. 6) the model teacher had taught using student-centered method and the students could find by themselves the concepts taught. 7) there was a student (No. 6) who responded very slowly to the question given by the teacher and should be given guidance soon.

D. Conclusions and Suggestions

On the whole, the lesson study activity gives a new nuance to the teaching. There are many useful experiences learned from the lesson study activity. Especially for the model teacher who was very serious in preparing the teaching, trying to implement the lesson plans that have been planned, motivating and helping the students to learn, and did an assessment of the effectiveness and efficiency of the teaching done, and was more enthusiastic to do innovations in teaching to improve the next implementation of the teaching. For the lesson study not to be implemented just in the capacity building program, there is a need to guarantee the continuation of lesson study and to make it a routine agenda once a month to develop teachers and to improve teacher's professionalism and competence.

References

Hendayana, S. dkk., (2007). Lesson Study Suatu Strategi Untuk Meningkatkan Keprofesionalan Pendidik. Bandung: UPI Unipress.

Herawati S. (2012). Peningkatan Mutu Perkuliahan Di Perguruan Tinggi Melalui Lesson Study, Makalah disajikan dalam Lokakarya Lesson Study untuk Dosen FMIPA Universitas Muhammaddiyah Surabaya, 9 Februari 2012.

Suratno, T. (2011). Implementasi Lesson Study pada Pengajaran Deret Aritmatika di Sekolah Avicenna. Makalah, UPI.

Arum, W. S. A. 2007. Upaya meningkatkan profesionalisme guru berlandaskan ilmu pendidikan dalam mencerdaskan kehidupan bangsa. *Jurnal Perspektif Ilmu Pendidikan*. Vol. 16 Th VIII. Oktober 2007.

Catherine Lewis (2004). Does Lesson Study Have a Future in the United States?. Online: http://www.sowi-online.de/journal/2004-1/lesson_lewis.htm

Lesson Study Research Group online: http://www.tc.edu/lessonstudy/whatislessonstudy.html

Departemen Pendidikan Nasional (2007). *Peraturan Menteri Pendidikan Nasional Nomor 16 Tahun 2007*, tentang Standar Kualifikasi Akademik dan Kompetensi Guru, Jakarta: Depdiknas

Departemen Pendidikan Nasional, 2005. *Undang-Undang Nomor 14 Tahun 2005,* Tentang Guru dan Dosen, Jakarta: Depdiknas

Developing quality of learning and teaching English as a Foreign Language Through Lesson Studyat GagasCeria Primary School, Bandung Indonesia

Juliasih[1], Wullan Novianasari[2], Fransiska Dwi Setiyahandayani[3]
SD Gagas Ceria, SD Gagas Ceria, SD Gagas Ceria
juliasih@gagasceria.com, w_novianasari@gagasceria.com,
f_dwi_s@gagasceria.com

Abstract

English teacher in 4th grade find out that student competency not as she expected. The teacher feel that there is a decrease in the achievement of students compared to when they were in 3rd grade. The teacher also found that students in the 4th grade have limited vocabularies to understand an information and to write them. Therefore, we discuss and try to find the problem by tracing factors inhibiting learning process. Then we choose to use lesson study as a tool to solve the problem. To find solutions, we held a series of lesson studies. by inviting other teachers (cross level subjects). We discussed, do and evaluate it. Based on these discussions, we conclude thatmastering vocabulary is important. When children do not have enough vocabularies then they will have difficulties in gathering information in English and to overcome the limitations of time, teachers can do integration with other subjects, especially Indonesian. From the series of Lesson Study conducted, we found the insight to make improvements in the implementation of learning. This has a positive impact on improving the student's competencies.

Keywords : *english as a foreign language, lesson study, teaching strategic, cross level subjects*

A. Introduction

English is a very important in the era of globalization as it is today. It is one of the international languages that can connect the citizens of the world. With the ability to speak English, many advantages and conveniences that can be obtained especially on the mastery of communication technology in international world. To communicate, English must be mastered properly, both oral and written. In Indonesia, people need to learn English to have a better knowledge. Formerly English was introduced from junior high or high school level, but now English lessons in Indonesia began to be introduced to children since elementary school age even kindergarten with the hope that our children in the future can speak English fluently. In fact, English in schools, especially Primary Schools, only serves as a complement to the curriculum academic needs. The difficulty of mastering new vocabulary with proper pronunciation becomes one of the obstacles. Lack of methodology when conveying learning is another obstacle. The worst, the 2013 curriculum has removed English lessons in Elementary School. None of the

teaching and learning activities can be detached from the method. According to Sardiman, A.M (1988; 90) method has position as extrinsic motivation tool that is active and functioning motif, because of the stimulus from outside. In accordance with the development of the child at primary school age, the teacher as much as possible can create a method of learning English that can be accepted by children.

English Lesson at Primary School in Indonesia.

English began to be introduced at an earlier age, starting from grade 4 of elementary school. Although still limited to local content in the Basic Education Curriculum 1994. The main purpose of the introduction of English at an earlier age, is to improve the quality of output and providing more input.This change is is based on that language learning in children has several advantages. Age of onset (AO) is one of the determinants of language learning success. Learning language will get perfection when it starts at the age before puberty because at this age biologically the brain has a high level of elasticity that allows one to learn a language faster (Lennerberg in Sujana, 2001; Khrasen in Sutarsyah, 2004). Besides learning language in childhood will be more successful because psychologically children are free from the shame and feel wrong like adult language learners.

The Government of Indonesia through the Basic Education Curriculum 1994 began introducing English at an earlier age, starting from the fourth grade of elementary school (at age 10). Although as a local content, schools and parents are very enthusiastic about welcoming the idea of early English. This is evidenced by the large number of primary schools that began to provide English as a local content (see Kismadi, 2004, Luciana, 2004, Sutarsyah, 2004), although in many schools it faces obstacles such as the readiness of syllabus, material, teachers, teaching methods and others.

However, the curriculum of 2013-2014 reduces the number of subjects at the primary school level. The reduction in the number of subjects is, from eleven subjects to six subjects, namely Religion, Bahasa Indonesia, Civic Education, Mathematics, Art and Culture, and Physical and Health Education. However, this reduction is only agreed for grade 1-3 students, while grade 4-6 will still be discussed again.

According to MusliarKasim, the Deputy Minister of Education and Culture at the time, English subjects were abolished for elementary students due to giving students time to strengthen their Indonesian language skills before learning a foreign language. Therefore, English subjects will no longer be contained in the compulsory curriculum for elementary school students (SD) which are enforced by the Ministry of Education and Culture in the 2013-2014 academic year.

English Lesson at GagasCeriaPrimary School, Bandung.

GagasCeriaPrimary School is a national private school. Programs and learning activities in this schools are always guided to develop the spiritual, emotional, social, intellectual, and physical aspects in a balanced way, by always paying attention to the uniqueness of individuals, and always linking its development to the environment and God. We deliver the noble / character values, practical life skill, entrepreneurship, social service, love and caring environment in some special routine programs. GagasCeria Season is a daily routine program for character and managerial development. GagasCeriaSpesial Week is a program every semester end for the development of practical life skill, entrepreneur, and social service.

West Java Cultural Week Program is to develop knowledge and appreciation of local culture. As an Indonesian citizen, the main language used in learning is Indonesian. As a world citizen, English development is provided with intense frequency (4 hours of meetings per week). Information and Communication Technology was developed to prepare students in the 21st century by providing various good learning facilities.

At GagasCeria, English is taught from grade 1 to grade 6. Teaching English is provided using various methods such as: singing methods, story telling, role play, games, craft and project based learning. There are two English teachers here. One teacher holds three levels. English Language Teachers 1,2,3 and 4,5,6. We use the book "My Pals Are Here" from Marshal Cavendish, Singapore.

At Gagagseria, we teach English as a Foreign language. In http://www.collegeofteachers.ac.uk/courses/some-basic-definitions-english-language-teaching, Teaching English as foreign language is:English taught to learners, both overseas and in the UK, who do not normally live or work in an English-speaking country. TEFL (Teaching English as a Foreign Language) refers to teaching people whose first language is not English, but who need to learn it for work or leisure. These students are usually adults who are paying for the courses themselves, or their company is. They are often highly motivated and literate, and already have an aptitude for languages. The most dynamic area of TEFL is working with young learners. Find out about using a PGCE and specialist qualifications to teach EFL to children and teenagers.

Lesson Study

Lesson Study has been implemented by the Japanese education system since 1900's. However, Stigler and Hiebert described Lesson Study extensively in 1999 in their book “The Teaching Gap” (Hock & Sam, 2010). Lesson Study is an approach used to conduct the research on teaching in the classroom. This approach is able to explore the development of more meaningful teaching because it emphasizes the teaching process. The exploration of the teaching process is in the

form of inquiry investigation (Chassels & Melville, 2009) andsystematically through the observation of teaching (Fernandez, 2002).

Lesson Study is a continuation of collaborative teaching methods and has its own characteristics (Daipi, 2009). Lesson Study can enhance teachers' learning experience as well as improve their teaching. Teacher learning experiences include teachers' knowledge of the content of the lesson (content knowledge) and knowledge of teaching methods (pedagogical knowledge), which should be built and derived from observation and reflection activities of teaching practices (Dotger et al., 2012; Lewis, 2008; Post & Varoz, 2008). It also does not marginalize the importance of students' learning in the teaching process. The evaluation and reflection of each lesson is not only on teachers but also focuses on the development of student learning. Teachers observe learning ability and intelligence of students (Cheng & Yee, 2012; Lewis, 2008).

This helps teachers plan lessons carefully and meet the students' needs. In addition, the Lesson Study approach enhance creativity and critical thinking of trainee teachers (Ong et al., 2010), particularly when analyzing in-depth lessons, stimulating innovation, and reforming teaching and learning to find solutions to a problem and to expand understanding skills as well as the ability of teachers and students. Lesson Study can be implemented in various ways to suit the teachers, students, and the environment while meeting the criteria in Lesson Study cycle, as shown in Figure 1.

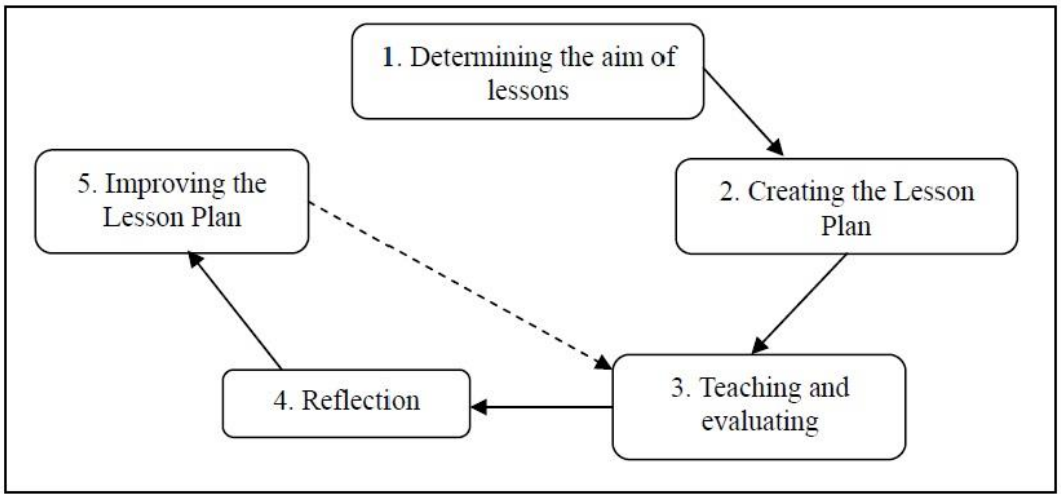


Figure 2. Cycle of lesson study

Figure 1. Lesson Study Cycle

Lesson Study implementation involves several teachers teaching sessions. Uniquely, the teachers work together to determine the objective of each teaching session. The first step in the Lesson Study involves teachers' discussion to determine appropriate learning objectives with targeted students. The teaching

objective should be reasonable as students need to understand the concept and teach effectively. In the second step, teachers are asked to build a complete Lesson Plan for teaching together (Lewis, 2008; Post & Varoz, 2008; Teacher Education Division of the Ministry of Education, 2011) based on long-term judgments about student learning. Lesson Plan contains detailed information about different aspects of each lesson to be carried out (Fernandez, 2002).

Cooperation in the preparation of this Lesson Plan is expected to generate more thoughtful ideas. In the third step, a teacher will implement teaching in a simulation classroom based on the proposed Lesson Plan. Another teacher will monitor and evaluate the teaching (Lewis, 2008; Post & Varoz, 2008). Both are expected to understand the subject matter taught, as they will develop a Lesson Plan.

Therefore, the observation of the students responses is based on observations protocol then the results is recorded (Fernandez & Robinson, 2006). Deep observations will provide detailed feedback to stimulate the teacher to understand their students' learning better (Cheng & Yee, 2012). After completing the lesson, the teacher will reflect on the teaching and learning and discuss the strengths and weaknesses of teaching during the process of teaching (Teacher Education Division of the Ministry of Education, 2011).

As such, the Lesson Plan can be improved based on the reflections, which can be used to identify weaknesses in the operation of learning (Marble, 2007). Next, the second lesson can follow the improved Lesson Plans. Indeed, during the second lesson, the teacher can try to modify the thoughts of students who previously adopted the wrong concept of learning (Cheng & Yee, 2012).

Lesson Study at GagasCeria School

Lesson study practice at GagasCeria Primary School started from a self-directed initiative (2008-2010) to establishment of a learning community (2011-2013). The third stages of practice in doing lesson study at GagasCeria (2011-2016) was to collaborate and built networking with external parties outside the school. In this phase, many Lesson study's experts, both domestic and foreign, came to our school. We get many benefits by getting different point of views related to the observed learning. After running about 4 years, The school leader felt that there was an unfavorable pattern especially during the reflection / post lesson discussion session. There was a tendency if the PLD (Post Lesson Discussion) was attended by the outsider / expert, the teachers felt they got different point of view and learned a lot. However, if PLD sessions were attended only by fellow teachers, it felt like nothing new was learned. Ultimately only the voice of the dominant teacher, senior teacher or school leader were heard. Seeing this condition, School leaders felt if this conditions went continuously, we would have a negative impact on teachers learning culture. School leaders set up teams to discuss these

conditions. The seven members of teams were formed from teachers and school leaders. The teams discussed and found out the root of the problem. From the discussion sessions, the team found differences in point of view among teachers related to the Image of good lesson. During PLD discussions all participants spoke based on their own experience when they were at school or their wish about good lesson for the children in their class. It seemed that, all those things caused teachers became dependent on external opinion or expert opinion from outside, as they came with a different image or better views related to what good learning is like. At the end of the presentation, we will explain the follow-up team related to our finding. The team recommends to determine the school image of good lesson so that everyone in the school have the same image of good lesson will be like. An interview session with the teacher was conducted. From the interviews we drawn the conclusions and agreements with teachers about two images of good lesson in terms of collaboration and intervention. Both of them aimed to ensure that all children have the right to learn.

B. Finding and Discuccion

In the beginning of school year, English teacher in 4th grade find out that student competency not as she expected. The teacher feel that there is a decrease in the achievement of students compared to when they were in 3rd grade. In the 3rd grade they show good grade when they graduated. In other hand, when they are at the 4th grade, students have difficulties in mastering the material taught in class. The teacher also found that students in the 4thgrade have limited vocabularies when they have to understand the information and to write them.

Table 1: English score

Student's Number	**School year 2011-2012**		**School year 2012-2013**		**School year 2012-2013**		**School year 2013-2014**	
	3rd Grade				**4th Grade**			
	1st semester	2 nd semester	1st semester	2 nd semester	1st semester	2 nd semester	1st semester	2 nd semester
1	8	8.7	8.2	7.55	7.2	6.95	8.4	7.75
2	10	9.75	9.1	9.6	9.2	8.8	8.9	9
3	9.2	9.7	8.8	9.5	9.2	8.5	8.8	9.6
4	9.8	8.85	9.6	9.8	9.6	8.9	9.5	9.5
5	8.7	7.9	8.8	7.9	9.6	9.1	8.05	8
6	8.6	8.1	9.6	10	9.9	9.7	10	9.9

7	10	8.9	9	9.2	8	9.4	7	7.1
8	9.8	8.1	9.2	9.3	8	8.8	8	8
9	9.3	8.5	9.1	9.9	7	7.2	7.1	7
10	10	8.2	6.4	7.05	6.6	5.15	7.2	6.55
11	9.8	9.85	8.8	6.7	8	8.3	9	8
12	8	9.2	8.3	5.75	8	8	7.8	7.15
13	9.9	9.25	7.8	8.15	8.2	7.5	6.7	7.8
14	8.7	8.55	6.9	8.1	7.8	7	8	7.85
15	9.7	8.3	8.4	7.6	7	8.8	7	8.5
16	8.7	9.1	9.1	8.9	9	7	7.1	7
17	7.3	6.7	8.6	8.9	7	8.3	8.2	8.8
18	8.4	8.1	6	7.3	7.4	6.6	6.5	5.5
19	9.2	6.5	9.2	8.3	7.9	7.75	7	7
20	6.8	7.55	6.9	7	8.6	7.3	7.65	9
21	9	8.95	5.65	6.25	8	5.25	7.2	9.1
22	10	9.75	8.1	8.7	8.1	7.6	8.85	6
23	8.9	9.05	8.6	9.25	9	8.2	8.4	8.9
24	9	9.05	9.7	9.1	8	8.8	7	7
25	6.8	6.6	7.9	7	7.5	5.85	7.3	7.2
Average	**8.9**	**8.5**	**8.7**	**8.9**	**7.2**	**7.5**	**7.7**	**7.8**

In one study session between English teachers, they discuses and have a presumption that there is a gap in curriculum between 3rd grade and 4th grade. Teachers also face difficulties in providing the materials due to the limited time available. In GagasCeria Primary School, the objective learning for children 1st to 3rd grade is to master basic English. While learning objectives for 4th to 6th grade is learning English as a support in learning another subject at school. For example, they are looking for information in English related learning materials in the classroom.

Therefore, we discuss and try to find the problem by tracing factors inhibiting learning process. The first step is to make plans to reproduce the vocabulary of children by reading a book. Teachers require children to borrow English books in the library. After that the teacher gave the question according to the contents of the book. In addition, from grade 3, the teacher gives homework reading comprehension text 2 times in 1 semester.

To overcome the limitations of time, teachers need to understand the essence of the material that will be given. Teachers can do integration with other subjects, especially Indonesian. Par example, in making "Thank you letter," teachers can integrate it with Indonesian lessons. So they don't need to repeat the same material

and can directly focus on the skill to make a letter in English and no longer need to teach the parts of the letter.

When children do not know the goal of lesson, it will have an impact on the interest and motivation in the following study. The students achievement will be decreased. To avoid this, The activity can be packaged in the form of Project Based Learning. par example the project is to make a booklet about the animals. Teacher ask students to seek information about animals. Students should make project to create a new type of pokemon. Means the students will need to find out what animals would be base of pokemon that want to create. The Pokemon will consist of any animals and the strengths of the them. After that, students should write the information obtained. Then explain them in front of the class.

Besides that, we choose to use lesson study as a tool to solve the problem. To find solutions, we held a series of lesson studies by inviting other teachers who teach at 3rd and 4th grade (cross level subjects). We discussed about lesson plan together and carry out the learning in accordance with the lesson that we planned. After that we do the discussion and evaluation.

C. Conclusions

1. Mastering vocabulary is important. When children do not have enough vocabularies then they will have difficulties in gathering information in English. Although in each theme has been determined to master the vocabularies, in the process the children is not limited to those targets. To strengthen the understanding of the vocabularies, teachers using visualization and ask children to apply in daily life.
2. To overcome the limitations of time, teachers need to understand the essence of the material that will be given. Teachers can do integration with other subjects, especially Indonesian. Example, in making "Thank you letter," teachers can integrate it with Indonesian lessons. So they don't need to repeat the same material and can directly focus on the skill to make a letter in English and no longer need to teach the parts of the letter.
3. When children do not know the goal of lesson, it will have an impact on the interest and motivation in the following study. The students achievement will be decreased. To avoid this, The activity can be packaged in the form of Project Based Learning.

From the series of Lesson Study conducted, we found the insight to make improvements in the implementation of learning. This has a positive impact on improving the student's competencies.

D. References

Zanaton, Hj Iksan, et.al. (2014). Applying the Principle of *"Lesson Study"* in Teaching Science.*Canadian Center of Science and Education*.Vol. 10, No. 4.

Tsingos, Cherie; et.al. (2013). Reflective Practice and Its Implications for Pharmacy Education. American Journal of Pharmaceutical Education; Vol. 78 (1).

Sardiman**,** A.M. (1998). Interaksi & Motivasi Belajar Mengajar. Jakarta: RajaGrafindo Persada.

Dr. Nana Sudjana,. Drs. Ahmad Rivai m. (2004).*Media Pengajaran*. PT. Sinar Baru Algesindo.

Depdiknas, (2004). *Kurikulum 2004: StandarKompetensi Mata Pelajaran Bahasa InggrisKelas 4-6 SD dan MI*. Jakarta: DepartemenPendidikanNasional.

Huda, Nuril, (1999). *Language Learning and Teaching: Issues and Trends*. Malang: UniversitasNegeri Malang.

Cahyono, BambangYudi,. UtamiWidiati, (ed.),.(2004). *The Tapestry of English Language Teaching and Learning in Indoensia*. Malang: State University of Malang Press.

Long, Michael.(1990). Maturation Constarints on Language Development.*Studies in Second Language Acquisitions.* Vol. 12, pp. 251 – 285.

Developing Students Learning Attributes through Collaborative Learning Based on Flipped Classroom

Suwito
Geography Education, Kanjuruhan University of Malang, Malang, Indonesia,
suwitounikama@gmail.com

Abstract

Educators and education practitioners should be able to respond educational shift by modify paradigm of learning in the classroom. The problem that frequently emerge were the lack of conceptual and practical understanding, experience sharing among the students, as well as spirit of collaboration in learning. The purpose of the study was to build and develop students' learning attributes through collaborative learning based on flipped class. The study was done in the framework of lesson study, using three steps, namely plan, do, and see. The technical steps included socialization, identifying problem, designing learning process, implementation, evaluation and reflection, and follow up. Lesson study was conducted in four classes of geography education students of year 2014. The result showed that collaborative learning based on flipped classroom was effective in developing the spirit of cooperation, honesty, discipline, and openness as it prioritized on the ability to cooperate with the others. There were some obstacles regarding time and class size in conducting lesson study. In conclusion, collaborative learning based on flipped classroom in the framework of lesson study could develop students learning attributes.

Keywords: collaborative learning; flipped classroom; learning attributes.

A. Introduction

Educational issues in Indonesia, both in term of fundamental-philosophical and technical-operational are debatable and still on discussed. The discussion in education aims to find the best way to create reliable human resources academically, socially, and vocationally. The challenge faced by educators today is to promote learning that can make students learn in finding a fact and information, process it, and develop anything beneficial to himself and the community.

Learning should not only repeat key ideas or ideas, but also be able to explore student ideas or ideas. It is intended that students get a more meaningful learning. Based on the observations in the classroom, there were some problems in the course of Introduction of Geography that should be considered: 1) how to find the best way to convey the various concepts taught in Introduction of Geography course so that all students can understand the concept and apply it in everyday life, 2) how the

Introduction of Geography can be understood as a continuous and integral understanding, 3) how to solve various problems proposed by students through communicating idea, 4) how lecturers can extend students' perception so that they can learn various concepts and relate them to real life.

In order to improve the quality of the learning process, lesson study is conducted. Lesson study is not a strategy nor method of learning, but it is an effort to improve the learning process and results that is implemented in collaborative and sustained by a particular group. One of the main objectives of lesson study is to gain a better understanding of how students learn and how teachers teach.

Based on previous explanation, researcher is interested to implement a collaborative learning in Introduction to Geography course in order to build positive attributes which are accommodated through collaborative learning, such as teamwork, honesty, openness, discipline and a culture of collaboration to enrich repertoire of knowledge through experiences sharing, both individuals and groups.

As associated with aspects of the learning process in improvement of learning attributes, the objective of this lessonstudywere as follows.

1. To apply collaborative learning in order to enhance cooperation of individuals and groups as the key to success in outcomes of Introduction to Geography course.
2. To build positive attributes that support adherence to the learning process in the course of Introduction to Geography, including cooperation, honesty, discipline, openness, and mutualsupport.
3. To minimize conflicts that often occur in teamwork throughcollaborativelearning.
4. To provide some consideration to conduct similar research in broader field.
5. To develop lecturers' professionality in order to improve the quality of classroom teaching and learning outcomes.

B. Method

Place and Time

Lesson study was conducted in offering A, B, C, and D of Geography Education first year students in University of KanjuruhanMalang. Lessonstudy lasted for 2 weeks consisting of 2 cycles of activity. Each cycle stages consisted of Plan, Do and See.

Object

Object of lesson study was students participating in Introduction to Geography course and lecturer as model to engage the spirit of collaboration and cooperation with openness and reciprocity.

Attributes to be Developed

Character education has a higher meaning than moral education, because in itdoesn't only teach what is right and wrong, but rather the habituation merit. This is in line with what was proposed by Wynnw (1991) in DarmiyatiZuhdi (10: 2009) that character education is more focused on how to apply the value of good deed in the form of behavior.

There are many aspects of character that have been expressed by some experts, but this activity referred to the seven main aspects proposed by Ari Ginanjar. The selection was based more on consideration of aspects that may be raised in the learning phase of collaborative and in accordance with the nature of the course of Introduction to geography. The seven aspects of theattributes include: honesty, responsibility, visionary, discipline, cooperation, fairness, and caring.

Learning Model

The model used in this study was a collaborative learning. The model allowed the lecturer to create a social environment that is characterized by a democratic environment and scientific processes. The primary responsibility of educators was to motivate learners to work collaboratively in the learning process. In addition to problem-solving efforts in collaborative groups, from day to day learners learned the principles of democracy through interaction among their peers. In a social context, collaborative learning in this course theoretically functioned as a democratic laboratory for students in accordance with the expected goals and competencies.

Procedures

In general, the sequential steps of lesson study were as followed.

1. Preparation

   In preparation, an initial meeting was held. (a) Lecturer Model (LM) presented the purposes and significance of lesson study for improving pedagogic professionalism. (b) LM composed syllabus and learning scenario. (c) LM presented syllabus and learning scenario as grand design to the team. (d) The team gave suggestion related to the activity to be carried out. Observation sheet was developed based on pedagogical aspect

and competencies to be achieved. (e) The improvement was made. The agreement on the number of cycle (min 2 cycle of plan, do, and see), time, and documentation was made. The documentation was needed as supplement in reflection.

2. Implementation

In implementation, a technician was in charge of recording the process of lesson study using camera. Filming is done thoroughly and then editing was made on some events that was considered important. The observer sat in the back while observing the lesson progress. The activities were as followed. (a) LM carried out the lecture process from the learning contract until the next meetings (the team conducted the observations according to the agreed time). (b) After the first observation, lecturer and the team reflected on the learning process with the help of recording. (c) LM and team planned the next lesson based on reflection. The improvement was done focusing on the lecturer ability to deliver the competences and facilitate the learning process. (d) LM re-conducted the lesson as planned on the agreed schedule. (e) The team did reflection as in step b—d until minimal of two cycles.

3. Reflection

At the end, valuable lessons were gained from reflection. Reflection activities conducted thoroughly by: (a) LM and team reflected on entire learning cycles. Students' representatives were invited to give their perspective on the learning to deepen the analysis. In this session, the assessment and evaluation of documented evidence was done thoroughly. (b) Various suggestions from the team and students as well as the results of reflection were documented as learning materials to be disseminated to the faculty along with the entire recording process. (c) Full report was prepared for experience sharing with the other lecturer in University of Kanjuruhan Malang.

C. Findings and Discussion

Implementation in First Cycle

a. Description

First cycle began with implementation of collaborative learning by group method. The purpose was to improve discipline and teamwork. First cycle was held in one meeting or 3 hours lesson.

The implementation of this learning was done by one lecturer model who was assigned to teach and become facilitator, one moderator who assisted model lecturer in arranging the learning process, and two observers who observed the learning process. In the first cycle of learning application was conducted by collaborative method containing two activities, namely the group discussions and group presentations.

b. Plan

The initial phase in the first cycle was planning that was held on January 16, 2017. The planning started with drafting lesson that will be implemented based on preliminary data about the students' condition which was submitted by lecturer of the course Introduction to Geography who will also act as lecturer model of lesson study. The design of learning is made by focusing on the importance of teamwork and student discipline. Based on their designs, implementing lesson study activities to do in the first cycle didn't require any media, because learning would be more on a group discussion. The lecturer model only prepared observation sheet to observe the activities and performance of each group.

c. Do

Implementation of 'do' in the first cycle was held on January 18, 2017. After lecturer model and moderators started the lessons, students' representative reported the preparations they had made for the presentation. Through these results, lecturers asked students to join in small groups. Based on the conditions and target achievement of the course, the group formed was a group based on the existing group in the presentation activities.It aimed to have good communication and coordination, so that they built a good cooperation in each group.

Each group coordinated and discussed the problems faced in carrying out individual tasks. In addition, each division made work plans and performance targets that must be addressed by concrete action for successful discussion or presentation.

In the end of session, the lecturer asked for a brief report on the results of the discussions that had been undertaken by each group. Then the lecturer concluded and provided motivation for students to work well together and on the importance of discipline for the success of planned presentation activities including discipline in attending class. After that, lecturer model and moderator ended the lesson.

d. See

Evaluationwas done immediately on 19 January 2017. At this stage, lesson study team discussed all the activities carried out in the stage of do. Based on observations,there were still some shortcomings in the implementation of lesson plan as followed.

1) Time of lessonwas not well managed, causing some of the planned activities couldn't be implemented.
2) Many students were observed to be not disciplined in following the lecture indicated ten students who came late. This indicated that the previous lesson couldn't raise the students' involvement in coming to the class.
3) Team didn't discussed well. Only one group observed to have optimal discussion.

Reflection showed the urge to improve the learning so that it would be well planned for second cycle and could achieve the desired result.

Implementation in Second Cycle

a. Description

Second cycle of lesson study was focused more on improving student discipline from the time attending the class, the time of finishing group discussion, and quality of teamwork in team discussion.

Second cycle was held in one meeting and was carried out by one model lecturer who was assigned to teach and become a facilitator during the lecture process. In the second cycle the implementation of learning was done by modifying the group of experts and group sharing among group. In addition, worksheet was developed tomonitor the team target.

b. Plan

Planning was done on January 25, 2017. This stage began with the improvement and preparation of lesson plan that would be implemented based on reflection in the first cycle. Lesson planin second cycle focused more on improving the discipline both the time of attending the lecture and completion of the group target, and the quality of team work. Based on the draft made in the second cycle, it was planned that the lecture arrived ten minutes earlier than lectures scheduled. This was intended to build perception that lecturers were ready to give lectures on time. It was also intended to discipline student attendance in a timely manner.

Furthermore, the grouping during the lectures modified by the formation of group experts and group sharing. Modification of this group was done with the intention that every student had a complete understanding of their group progress. This would push the students to complete targets. The development of Student Worksheet (LKM) which contained the targets to be achieved by each group was also intended to increase discipline and teamwork within the group.

c. Do

Implementation phase of second cycle was held on January 26, 2017. Lecturer model was prepared ten minutes before the lecture took place as planned. Lecture activities began by delivering the purpose of lectures. After delivering the summary of the previous week material and the steps to be taken at the second cycle meeting, the lecturer model conditioned the students in their respective group called expert group. Lecturer model distributed Student Worksheet to be completed by each group whose members were responsible as experts of the group.

Expert group discussions lasted for approximately thirty minutes, in which each member was obliged to master the worksheet which that would be distributed in groups sharing. After the expert group discussion finished then new groups called sharing group was formed. It was formed from representatives of each group came together to provide information on the performance that had been achieved and what had not been achieved and the target achievement to the members between groups.

Groups sharing took place as planned, with each member of sharing group formed from members of different group. Each group discussed and coordinated about what had been achieved and what each group needed. This sharing group activity lasted approximately for forty minutes. When the lecturer gave a sign that the discussion should be ended, students still asked for more time.

At the end of the lecture, the lecturer asks for worksheet of each expert group and the sharing group to be submitted to the committee chairman of the exhibition as a report from each group. Lecturer model then concluded from the lecture activities that have been going on and appreciated the decrease in the number of students who were late in attending the lectures. Lecturers again provided motivation from the importance of discipline and teamwork to be able to make the exhibition activities in accordance with the expected.

d. See

Reflection of the implementation in second cycle was conducted right after the implementation. Based on observations, the number of students who came late was very significantly declined, from 10 people down to 2 people. This indicated the impact of the motivation given by the model lecturer. Group discussion was also well conductedbecause of the given worksheet that gave students guidance to carry out activities. Only discussion in sharing groupseemed ineffective. Model lecturers needed to be more assertive in providing reinforcement and suggestion to the conflicts that occur in sharing groups discussion.

Limitations in Implementation of LessonStudy

Some limitations in implementation of LessonStudy were described as follows.

1. Lecturer model didn't involve observer in designing lesson flow. This implied on the lack in data collection since the observer didn't quite understand about lesson flow and objectives.
2. The lack of time (only in two weeks) contributed to un-optimal implementation of lesson study. Minimum of lesson study session required (four meeting) was not fulfilled.More time was needed in conducting stages of do and see.
3. The size of class (forty five students in one class) was also the problem faced in this lesson study. The class was too big that lecture was not effectively conducted because of the lack of supervision and monitoring from the lecture. Lecturers were often also overwhelmed in organizing thediscussions, both in large groups and small groups so that miscommunication and mismanagement frequently happened in the classroom.

D. Conclusions and Suggestions

Conclusion

Based on the implementation of learning that has been done, it can be concluded that:

1. Collaborative learning model was quite effective in conducting the course of Introduction to Geography, because the subject contains many concepts of geography and demands more on students' ability to work cooperatively with others.

2. Lesson Study generally went smoothly, however, some limitation on the timing and size class was some problems to deal with.
3. Lesson Study provides a significant impact on improvement of the learning process of Introduction to Geography.
4. Attribute of learning is successfully developed in Introduction to Geography courses through lesson study activities,including:
    a. Cooperation. Students' cooperation improved in each cycle and its quality was more visible during group discussion and presentation.
    b. Discipline. It was indicated by the accuracy of the implementation and the plan made by students as well as the participation and contributions of students make from preparation to the implementation of the discussions and presentations.

Suggestion

1. Observer needs to be involved in planning lesson flow
2. Time allocation should meet the minimum requirement of lesson study, that is four time of meeting.
3. Class size should be regulated so that the lesson could be conducted effectively
4. Collaborative learning can be implemented in any other courses to build learning attributes and enhance collaboration among students.
5. Workshop was required as a follow-up to the result of the research.

References

Ari Ginanjar Agustian. (2007). Rahasia Sukses Membangun Kecerdasan Emosi dan Spiritual: ESQ. Jakarta: Arga.

Arends, R. I. (1998). *Learning to teach*. Singapore: McGraw-Hill book Company.

Arends, R. I. (1997). *Classroom instruction and management*. New York: McGraw-Hill Companies, Inc.

Heinich, R., Molenda, M., Russell, J. D., & Smaldino, S. E. (2002). *Instructional media and technology for learning*, 7th edition. New Jersey: Prentice Hall, Inc.

Jacobs, G. M., Lee, G. S, & Ball, J. (1996). *Learning Cooperative Learning via Cooperative Learning: A Sourcebook of Lesson Plans for Teacher Education on Cooperative Learning*. Singapore: SEAMEO Regional Language Center.

Mukti Amini. (2008). *Pengasuhan Ayah-Ibu yang Patut Kunci Sukses Mengembangkan Karakter Anak*. Dalam Character Building Umar Suwito dkk.2008. Yogyakarta: Tiara Wacana.

Qin, Z., Johnson, D. W., & Johnson, R. T. (1995). Cooperative versus competitive efforts and problem solving. *Review of Educational Research*. 65(2). 129-143.

Slavin, R. E. (1995). *Cooperative learning*. Second edition. Boston: Allyn and Bacon.

Tadkiroatun Musfiroh. (2008). *Pengembangan Karakter Anak Melalui Pendidikan Karakter*. Yogyakarta: Tiara Wacana

The Development of Lesson Study trough Learning Community in Mathematics, Science and Information Technology Education Faculty of Universitas PGRI Semarang

Intan Indiati[1], Eko Retno Mulyaningrum[2], Ernawati Saptaningrum[3], and Azizul Ghofar Candra Wicaksono[4]
Universitas PGRI Semarang
intanindiati@upgris.ac.id

Abstract

The purpose of this research is to identify the implementation of lesson study forlearning community (LSLC) in Math, Science and Information Technology Education Faculty, Universitas PGRI Semarang. LSLC was done into three phases of lesson study, including plan, do and see. Learning community was conducted by the involvement of many participant from different subject interest who acted as an observer. The implementation of LSLC then recorded and measured by monitoring sheet and media documentation. The data is analysed descriptively using qualitative method. the percentage of implementation rate in plan, do and see phase of LSLC also perform as an additional data analysis. By identifying the LSLC implementation, it known that the LSLC was successfully implemented with average 83,12% in plan, do and see phase. LSLC also strengthen the learning community and collaboration among the lecturers in Math, Science and Information Technology Education Faculty. So we suggested to implement LSLC in another Faculty and institution to develop a learning community.
***keywords**: Lesson study, learning community*

A. Introduction

The efforts to improve quality of teaching and learning processes in educational institutions put the lecturer in a central position to determine the development and academic quality of students. In addition, lecturers have a strategic position in the development of higher education, especially to produce professional graduate pre-teacher. In this global era, it necessary when lecturers have innovative thinking and act effectively in improving the quality of teaching and the development of learners. In carry out his professional duties as an educator, the lecturer gets the obligation to perform basic activities in accordance with the Minister of Culture of Higher Education No.44 of 2015 article 28 that is planning, implementation and control of the learning process, and the last is the evaluation of learning outcomes.

The main tasks undertaken by Lecturers are aimed to the achievement of the quality of graduate students who can partially be seen by the achievement of students. Therefore, Lecturers need to design and conduct learning process along

with the evaluations appropriately and effectively. Learning activities should be in good quality, student centered, be able to involve active participant and focus on the process and high-order thinking skills. Basically, each lecturer will arrange and prepare the lesson according to the condition of each class. However, in reality, not all lesson plan can be realize perfectly, sometimes there are mistakes during the learning activities.

Today many students mostly not be able to achieve the competency perfectly, lack of skills and lack of competition ability in the community. This condition is mostly due to the less conducive learning environment and the implementation of irrelevant learning. Thus, updates in the formulation of learning activities need to be done by educators both individually and in teams. Formulation of learning activities in teams is preferred because it has many advantages when compared with individuals. Teamwork will provide many inputs and opinions from different perspectives. Thus, the preparation of learning will be better and able to accommodate various aspects of learner needs.

The Cooperation between educators in improving the quality of education and learning should be cultivated. This activity can be packaged into a collaborative and sustainable learning study based on the principle of colleague known as Lesson study. Lesson study is a process of school-based professional and collaborative development that is done to improve the teaching and learning process in the classroom. Lee (2008) points out several benefits of lesson study, first is to develop the professionalism of Teachers and Lecturers and help to see things from the perspective of students, so that the learning will be carried out in accordance with the needs of students. Marsigit (2007) has conducted research on the implementation of lesson study and found that lesson study can improve student's motivation, activity and performance. Lesson study is able to improve the professionalism of Teachers and Lecturers in terms of teaching performance, variation of teaching methods, and collaboration activities.

Based on the results of the implementation of the lesson study conducted by Sulistyoningsih et al (2013), it can be seen that lesson study activities can improve the quality of learning process and lecturer competence in planning and implementing the lesson. Another study conducted by Indiati et al (2013) through the application of Microteaching Lesson Study (MLS) in PPL 1 course was able to reduce misconceptions and improve students' teaching skills. This shows that through the implementation of Lesson Study, learning activities can be improved in terms of the quality of the implementation of the learning itself and the achievement of learner competency.

However, the interdependent learning through Lesson Study has not shown the maximum result. It found that this activity only intensive at the beginning of the program, but will decrease the intensity of collaboration on an ongoing basis, the

longer the collaboration activities through Lesson study will be reduced even until it is not done at all. Lesson study implementation is not easy, especially in maintaining the intensity and frequency of that implementation. Therefore it is necessary to make an update in the implementation of lesson study, one of them with the implementation of Lesson Study oriented learning community (LSLC). Learning community can be interpreted as a community, where educators (teachers and lecturers) collaborate to improve the quality of learning, collectivity and professionalism with each other both in one clump of knowledge and between clumps, and involving the participation of parents and society (Sato, 2012). With this learning community, the lesson study activity can run continuously and further strengthen cooperation among educators and other academics.

Based on this background, the problem in this research is: "How is the implementation of lesson study for learning community (LSLC) in FMIPATI PGRI University of Semarang?". In general, the purpose of this study is to improve professionalism of educators and to build ideal learning in the classroom. The particular purpose of this study is to find out the implementation of lesson study for learning community (LSLC) in FMIPATI Universitas PGRI Semarang.

B. Method

This research is classify into descriptive research with qualitative approach. This research is used to observe the implementation of lesson Study oriented learning community (LSLC). LSLC activities are basically done in accordance with the lesson study procedures consisting of the stage plan, do and see. Phase plan is an activity of preparation of learning tools and design of learning activities on a team. Stage Do is a learning activity and implementation of lesson plan, at this stage the observer will observe the performance and condition of students during learning. Phase see is a reflection and evaluation of learning activities that have been implemented. But the development of activities plan, do and see will be developed again into a learning community that can improve the continuity and sustainability of lesson study.

Instrument used in this research consist of learning device and observation sheet. Learning tools consist of syllaby, lesson plan and student's worksheet. While the observation sheet consists of the learning device assessment sheet and the lesson study observation sheet.

The subject of this research is the academic community of FPMIPATI Universitas PGRI Semarang (first year). The data collection in this study was conducted through the analysis of learning activities. Thus, the research activity refers to the three stages of lesson study ie plan, do and see which is packaged in learning community by involving various parties in the implementation of the three stages, as an observer. Data analysis is done by calculating the percentage of

implementation of each stage of lesson study based on the existing monitoring sheet. Further descriptive explanation of the implementation of each stage of activity in the lesson study is all in. The results of the implementation percentage of each lesson study stage become the reference of the success quality of LSLC implementation in FPMIPATI with the criteria of achievement <75% for enough category and ≥75% for good category.

C. Findings and Discussion

The implementatipn of plan stage in LSLC in four department in FPMIPATI Universitas PGRI Semarang describe as follows.

Tabel 1.The Monitoring of Plan Stage

Cycle/Department	Score	Persentage (%)
Cycle I P.Mat	13/15	86.67
Cycle II P.Mat	13/15	86.67
Cycle III P. Mat	9/15	60.00
Cycle I P.Bio	14/15	93.33
Cycle II P.Bio	15/15	100.00
Cycle I P.Fis	14/15	93.33
Cycle II P.Fis	14/15	93.33
Cycle I P.TI	12/15	80.00
Cycle II P.TI	12/15	80.00
Average		85.93

The second step in LSLC is do activity. The implementatipn of do stage in LSLC in four department in FPMIPATI Universitas PGRI Semarang describe as follows.

Tabel 2.The Monitoring of Do Stage

Cycle/Department	Score	Persentage (%)
Cycle I P.Mat	21/24	87.50
Cycle II P.Mat	18/24	75.00
Cycle III P. Mat	18/24	75.00
Cycle I P.Bio	21/24	87.50

Cycle II P.Bio	22/24	91.67
Cycle I P.Fis	20/24	83.33
Cycle II P.Fis	21/24	87.50
Cycle I P.TI	20/24	83.33
Cycle II P.TI	21/24	87.50
Average		84.26

The last step in LSLC is see activity. The implementatipn of see stage in LSLC in four department in FPMIPATI Universitas PGRI Semarang describe as follows.

Tabel 3.The Monitoring of See Stage

Cycle/Department	**Score**	**Persentage (%)**
Cycle I P.Mat	11/16	68.75
Cycle II P.Mat	12/16	75.00
Cycle III P. Mat	13/16	81.25
Cycle I P.Bio	14/16	87.50
Cycle II P.Bio	15/16	93.75
Cycle I P.Fis	15/16	93.75
Cycle II P.Fis	12/16	75.00
Cycle I P.TI	10/16	62.50
Cycle II P.TI	12/16	75.00
Average		79.17

First Open Lesson in Mathematic Education

In the lesson design, learning process begins with the formation of groups consisting of 4 students in each group (consisting of male and female students). The next activity is an exploration activity with question and answer method. Students observe examples and not examples group to find group concepts and group examples. After that, the students enter the elaboration stage by conducting MFI discussions in groups and proceed with the quiz.

At the end of the learning activities the lecturer model provides evaluation (confirmation) as well as awards for group work. Learning activities is end with the

formulation of conclusions. Furthermore, the model lecturer provides structured assignments and confirms the material to be studied at the next meeting.

In the do activity, Lecturer model has been implementing learning plan in accordance with the lesson plan that has been prepared previously. Observations from observers indicate that some students have studied in groups, discussed and worked on MFIs, but some students were inactive and closed during the lesson. Some of the students are seen as as- sociate with examples, others are having difficulty in discussions, not participating actively in MFI work, and still others are confused by the notations. These students can not learn well because of the lack of concentration, lack of communication and inter-group collaboration, and the lack of students' understanding of the concepts being studied. However, the model lecturers have tried to condition the class by going around in each group to check, motivate, guide, and explain the concepts that students still do not understand. In general, learning objectives have been achieved. Model lecturers have done the learning quite well by applying STAD model, have high spirit in teaching, as well as readiness in teaching including RPP, mastery of material, and media used

Second Open Lesson in Mathematic Education

The second open class activity starts with the phase of the plan which was held on October 14, 2106 with the participants of the activity plan as many as 6 lecturers. In the activity plan, Mrs. Sugiyanti, S.Pd.,M.Pd as a lecturer of the model convey the results of the design of learning with material limit. Learning activities are designed using STAD learning model, with discussion method and group assignment. Learning activities open with greetings, explanation of learning objectives, the delivery of apperception about function and function limit, followed by exploring the benefits of studying the material functions and limit functions in everyday life and benefits in other subjects. Furthermore, the core activities begin with the division of groups consisting of three to four students in each group. Learning is followed by question and answer and material exposure from the lecturer (function, function value, function limit, limit of function and limit limit) by using PPT. After the exposure of the lecturers, students get MFIs to work on and discuss in groups. During the discussion, the model lecturers went around to check student activities. Furthermore, the students were asked to present the results of their discussion in front of the class and the model lecturers gave the review followed by the reinforcement related to the result of the group discussion. After that, the model lecturers together with the students make a conclusion about the material that has been studied.

In the activities do, Lecturer model has been implementing learning in accordance with the RPP that has been prepared previously. Do activities were held

on October 19, 2016 and attended by 4 observers. Observations from the observer indicate that students have not been able to learn from each other well. Most passive and many who have not understood the material described by the model lecturer and just look active during the discussion. Most students are not yet clear in drawing graphs with some interfals. Many students have not yet been able to determine δ and Σ in verifying limits, as well as other issues. Therefore, the model lecturers have sought to continue to guide and provide direction during group discussions. In general, most learning objectives have been achieved. Model lecturers have attempted to prepare learning, media, and tools well despite the need for improvements at subsequent meetings.

First Open Lesson in Biology Education

The first open class activity begins with the phase plan that was held on 7 October 2106. In the activity plan, the model lecturer presented the results of RPP preparation for the topic of learning theory of information processing (Figure 1). Model lecturers design learning by initiating learning by displaying a video showing the existence of information processing activities, followed by group divisions and discussions related to concepts, principles and learning processes that contain information processing. The lesson plan is followed by review and checking the students understanding by the material confirmation from the lecturer. After that, students return to work in groups to design learning activities that reflect the learning theory of information processing in accordance with the MFI to be distributed. Discussion activities to design lesson learning followed by presentation of group discussion result one by one, and learning ended with review from Lecturer

Planning that has been prepared by lecturers of the model get some input from some parties, including is on apersepsi activities should model lecturers display some images that have some meaning in it, then students are given the opportunity to think and conduct information processing activities. Representatives of students are asked to express their thoughts in turn, the differences in perceptions between students are explored by lecturers to be directed to the concept that each individual can process information in ways and results that can be different from one another. It can direct the students' attention that what will be further studied through lectures is about the theory of information-processing learning. In addition, no corrections, additions or improvements are made during the discussion for the stage plan

Activities do and see was done on October 14, 2016. This activity was attended by seven observers. Learning activities are conducted in accordance with those that have been designed at the stage of the plan, but there is little control in the learning of the lack of time management that causes learning activities have not

been fully completed in accordance with the schedule of lectures. The unfinished learning is seen from the presentation of the final discussion of the students (the activities of preparing and designing learning activities that apply learning theory of information processing) that can not be done by all groups so that there is only one group that has the opportunity to present the results of the discussion. Some notes related to the implementation of learning have been neatly recorded by the observer. The results of observations made by the observer focused on how students learn. The result of the observation shows that in general the students can learn from each other about the topic of learning. Students can interact well in expressing their opinions, in some groups some students are actively discussing, those who look at the literature / learning resources, and those who focus on recording and listening to the explanations of group friends during the discussion. However, there are some students who have not understood the concept, and those who have not understood the explanation of a group of friends. It can happen is possible because there are some students who are not preparing the lectures properly so they can not follow the discussion and explanation from others. Especially for students who can not follow the lecture well, should be given more explanation and understanding compared with other groups or members

The results of the observation also indicate that the model lecturer has done several things aimed to condition the learning, among which is the model lecturer has given the opportunity to the students to ask, argue, and discuss. Model lecturers encourage students to actively participate in discussions, guide and monitor the discussion process, and present an interesting apperception at the beginning of the lesson. In general, learning objectives on openclass activities have been achieved well. The lecturers have run the lesson and constructivist.

Principles of collectivity built through LSLC activities are seen from the observer's view of the benefits gained from learning have been done. Some valuable lessons learned by the observers are the use of visual perception with certain concepts that cause the students to learn and analyze about the topic of learning is very good to do. In addition, the observer considers that the learning done during the open class has been practicing the thinking skills, the learning goes with coherent, the explanation of model lecturers is very simple but contains a solid content, lecturers are always intensive in assisting students, as well as all important opinions and concepts are always recorded on the board Write so as to facilitate students to follow the learning. These things can be imitated from professors of capital and can be further developed in future lessons.

Second Open Lesson in Biology Education

The second open class activity in the Biology Education Study Program was conducted by AzizulGhofarCandraWicaksono, S.Pd.,M.Pd on 21 October 2016. In the activity plan, the model lecturer presented the results of RPP preparation for the topic of cognitive social learning theory. Lecturer model designing learning that is almost the same as learning in the open class before by way of starting learning by showing a video that shows the existence of cognitive social activities, such as a child who learn by imitating various activities of adults. Learning is continued with group divisions and discussions relating to cognitive-charged concepts, principles and learning processes. The lesson plan is followed by review and checking the students understanding by the material confirmation from the lecturer. After that, students work again in groups to design learning activities that reflect cognitive social learning theory in accordance with the MFI to be distributed. Discussion activities to design learning activities followed by presentation of group discussion results. For discussion only two groups of representatives are held so that the learning time is expected to run properly. After that the learning ended with a review of the lecturer. In the activity plan, there is not much input from other colleagues. It's just that there is an input to try the unification of other seats with a modified U-shaped model in the presence of small groups.

The Do and See activities of the second open class in the Biology Education course were conducted on October 28, 2016. The Do's activities were conducted in accordance with the lesson plans previously discussed. Learning takes place on time, it's just that there are obstacles, especially in aspects of students' understanding of the topics studied in the lesson. Cognitive social theory is considered more difficult than the previous topics so that students need extra time and direction from the model lecturer to really master the topic of learning. In addition, other constraints arise when the transition of seats from u-shaped to clusters per small group. Students have difficulties to move the position so that it takes time to shift the lecture chair. In addition, the position of one group with another also looks irregular.

During the implementation of student learning have learned each other well through group discussion. Observations from observers show that each student can explain the material to his or her students in turn, those who record and ask questions and discuss. However, during the discussion there were some students who tended to be passive (listening only to their peers) and did not provide feedback questions during the discussion process.

To overcome this problem, model lecturers have tried to go around and check on student discussion activities as well as ask questions to develop their thinking skills, and direct discussion activities in accordance with the range of topics studied as shown. lecturers model have also attempted to direct students in searching and

enriching references via the internet. In general, learning objectives have been achieved. Model lecturers have delivered appropriate apperception videos and learning materials are presented in a sequence. Model lecturers also always check students' understanding and activities, give students opportunities to argue, motivate students, and use effective learning model in accommodating the topic of social cognitive learning theory.

First Open Lesson in Physic Education

The first open class activity starts with the yng plan phase implemented on October 11, 2106. In the activity plan, the model lecturer presented the results of RPP preparation. The learning activity begins with the model lecturer conveying apperception through questions about vectorprimitive on simple crystals and sounds of the Bragg Law. The learning activities were continued with material explanations related to Miller index, distance between fields, and simple crystals by model lecturers. After that, the students are divided into seven groups. Each group then held a discussion on the topic of learning in accordance with the MFI presented by the model lecturer, and finally the student representatives in each group to deliver the results of the discussion. Learning activities are closed with evaluation and conclusion, as well as assignment by model lecturer to study the material to be discussed next meeting that is about reverse lattice.

Do's activities at the first openclass are implemented in accordance with the pre-arranged RPP. The do activity was attended by five observers. The results of the observations show that students can learn well for Miller topics, inter-field spacing, and simple crystals. Students look at the material and respond to questions from lecturers. Students also discuss and make good lecture notes as well. Most students run the lecture well, but there are still some students who seem to lack understanding of the topics presented in the course. Lecturers have tried to encourage less-active students by asking questions and responding to students' issues as well as conditioning the discussion activities well. In general, learning objectives are achieved. In addition, the lecturers of the model run the learning with passion, systematic learning, able to give a comprehensive attention to the students and able to empower students' excellence.

Second Lesson in Physic Education

The first open class activity starts with the phase of the plan which was held on October 18th, 2106. In the activity plan, the lecturers of the model convey the result of RPP preparation. The learning activity begins with the model lecturer conveying apperception through questions surrounding the bravais lattice on the cube of the cube. The learning activities are continued with material explanations related to the crystal structure of the cube by the model lecturer. After that, the students are divided into seven groups. Each group then held a discussion on the

topic of FCC and BCC crystal structures in accordance with the MFI presented by the model lecturer, followed by student representatives in each group to present the results of the discussion. After the group presentation was completed, the learning was continued by submitting Miller's material index by the model lecturer followed by giving the students questions. Students are then asked to come forward to work on the questions that have been given before. Learning activities are closed by evaluation and conclusion, and the assignment by the model lecturer to study the material that will be discussed next meeting is about simple crystals.

Learning activities when do in accordance with lesson plan that has been prepared previously. The activity was followed by five observers. The results of observation indicate that most students can learn well, although there are some students who have not been able to follow the learning completely. The existence of a student who has not been able to follow the learning is possible because of the lack of understanding of the student on the instruction and explanation of the model lecturer.

Besides all, targeted learning objectives can be said to have been achieved. Lecturer model has presented learning by involving various sources of learning are varied, give attention and guidance that is intensive enough for students during the learning and communicative in interacting with students.

First Open Lesson in Information Technology Education

The first open class activity begins with the plan phase which was held on September 26, 2016. In the activity plan, the model lecturer presented the results of RPP preparation and discussion related to the RPP which had been prepared before by the **model** lecturer. Learning activities planned akandimulai with model lecturers who will condition the lecture room to be ready for use for learning activities, student's absences, and provide motivation and lecture goals. The core activities **of** learning begin with the exploratory stage in which model lecturers give lectures on learning topics, followed by elaboration stages that can give students the opportunity to ask questions related to learning topics, as well as confirmation, where the model lecturer re-ask the student's understanding of the material that has been submitted . Learning activities are closed with activities compiling a summary of discussion and question-and-answer activities, post-grading and assigning tasks for subsequent meetings.

Do activities in the first open class was done on October 19, 2016. Activities do in accordance with the planning that has been discussed in the activity plan.Hasil observations from observers show that during the learning activities, students have learned in groups, but there are some things that are less than the maximum ,

Especially from the aspect of the facility. This is because there are some PC units that do not work so interfere with the smoothness in the learning process. Of all the students who attend the lectures, some of them can not follow the learning well. Some of the students were seen asleep, ignoring the instructions of the model lecturer, not participating in group work (eg on computer program writing). This is probably due to the disinterest of students on the topic of lectures, tired, and differences in the ability of each student in mastering the lecture materials. However, the model lecturers have attempted to encourage students who can not learn well by forming small groups, providing feedback through questions, approaching student seats, checking and giving directions, and admonishing students who are less orderly in learning.

Learning objectives on the first openclass can be said to be achieved. Model lecturers have directed the learning well enough, always give emphasis and repetition of the material so that students can follow the learning well. Model lecturers are also always trying to trigger students in developing their own skills.

Second Open Lesson in Information Technology Education

The second open class activity starts with the phase of the plan which was held on October 17, 2016. In the activity plan, the model lecturer presented the results of the preparation of RPP and the discussion related to the pre-arranged RPP. The RPP prepared by the model lecturer contains learning activities that start from the initial activities which include a review of the material at the previous meeting, the presentation of the material coverage, objectives, and final capabilities expected to be obtained in the lesson. Followed by core activities consisting of an explanation of the definition of attribute and key tables, functional dependency on the data and providing examples of how the functional dependency on the data. Learning is continued with student activities to analyze the functional dependencies contained in the table. Furthermore, the model lecturer explains and describes how to decompose first normal form (1NF) and ask students to analyze and decompose first normal form (1NF). After the 1NF topic finishes, the model lecturer goes on to explain and elaborate how to decompose 2nd normal form (2NF) and ask students to analyze and decompose the 2ndnormal form (2NF). So hereinafter on 3rd normal form (3NF) and last on Boyce Codd Normal Form (BCNF). Learning activities are continued by giving students the opportunity to ask about functional dependency and normal form. In addition, lecturers also provide feedback questions to students, followed by discussion of problems that arise at the time of table decomposition and discussion of the steps of completion of table decomposition

During the implementation of learning, the observer has made observations that show that all students have learned from each other and are actively involved

in the discussion and active in doing the tasks that have been given by the lecturer. During the lectures only found inactive students, which is proven when the instructor instructs students to do the task, the student does not immediately do it. To reactivate the students, the model lecturers have attempted to provide reprimands and questions, and always visit students when they have a discussion. In general, the learning objectives of the second openclass activity have been achieved, the model lecturers have implemented the learning properly, active in monitoring student activities and good education.

Based on the monitoring of the implementation of LSLC in the four study programs in FPMIPATI revealed still found some aspects that need special attention. These aspects are found in every cycle of lesson study activity. First on the activity plan, the aspect that still needs to get attention is on the not yet discussed evaluation instruments that will be used in the learning process. This is because at the time of the discussion plan more focused on the preparation of lesson design that will be applied to open class activities. Then on Do's activities, the aspects that need to be improved on the next LSLC implementation are the questions used at the end of the lesson of facilitating the varying student competencies and developing Higher Order Thinking Skill and not yet leading to the giving of the jumping task. Another thing that still needs to get attention in the next implementation is the arrangement of class settings that often become obstacles for lecturers model to be able to reach the whole class also for the observer to be able to place the right position of observation. This is found in the activities of the Physics Education Study Program conducted at GU 601 (constraint of classroom extent that is not in accordance with the number of students). It is expected that the setting of the classroom can be in U shape. Next on the see activity, from the monitoring sheet still found the observer who gave commentary result of observation still focused on the teaching performance. This creates inconvenience for the model lecturer. Conditions like this cause has made other lecturers to be unwilling to become a model lecturer. This was then clarified by the research team acting as facilitator of the LSLC program on the focus of observation in the do activities that should focus on the students as well as the ethics as observers in the activities of do and see.

D. Conclusion

Lesson Study-oriented Learning Community in four courses in FPMIPATI UPGRIS has been done well. The percentage of activities of Lesson Study is as follows. In the Plan stage reached the percentage of 85.93% and Do stage of 84.26% and the See stage of 79.17%.

References

Chassel, C. & Melville, W. 2009. Collaborative, Reflective, and Literative Japanese Lesson Studyin an Initial Teacher Education Program: Benefits and Challenges. *Canadian Journal of Education*. 34 (4): 734-763.

Djamarah, S. B. 2000. *Guru dan Anak Didik Dalam Interaksi Edukatif*. Jakarta: RinekaCipta.

Hillocks, G. 2010. Teacher Argument for Critical Thinking and Writing: An Introduction. *English Journal*. 99 (6): 24-32.

Indiati, I. dkk.2013. Penerapan *Microteaching Lesson Study (MLS)* Pada Mata Kuliah PPL 1 Untuk Mereduksi Miskonsepsi Dan Meningkatkan Keterampilan Mengajar Mahasiswa PGMIPAU IKIP PGRI Semarang.LaporanPenelitian. IKIP PGRI Semarang.

Ingweson, D. W. Los Angeles County Office of Education. 2000. *Classroom Management: A California Resource Guide*. LA: Los Angeles County Office of Education.

Lee, J. F. K. 2008. A Hong Kong case of Lesson Study- Benefits and Concerns.*Elsevier Teaching and Teacher Education*. (24): 1115-1124.

Lewis, C., & Perry, R. 2006. Professional Development Through Lesson Study: Progress and Challenges in The U.S. *Tsukuba Journal of Educational Study in Mathematics*. (25): 89-106.

Maasaki, S. 2012. *Dialog dan Kolaborasi di SekolahMenengah Pertama: praktek Learning Community*. PELITA

Manohar, U. 2010. *Reciprocal Teaching Strategies*. (online) (http://www.buzzle.com/articles/teaching/, diaksestanggal 21 Oktober 2015).

Marsigit. 2007. Mathematics Theachers' Professional Development through Lesson Study in Indonesia. *Eurasia journal of Mathematics, Science & Technology Education*. 3(2): 141-144.

Mulyaningrum, E.R. 2015.LaporanPelaksanaan STOLS For ITTEP BATCH 5 TIC JICA Tokyo. KEMENRISTEK DIKTI

Nawawi, H. 1989. *OrganisasiSekolahdanPengelolaanKelas*. Jakarta: Masagung.

Permenristek DIKTI No.44 Tahun 2015.TentangStandarNasionalPerguruanTinggi.

Roestiyah. 2008. *Strategi Belajar Mengajar*. Jakarta: PT. Rineka Cipta.

Sato, Manabu. 2012. *MereformasiSekolah: KonsepdanPraktekKomunitasBelajar*. PELITA.

Sulistyoningsih, M. Nurwahyunani, A. Mulyaningrum, E.R., danWahyuni, S. 2013. *Reformulasi Pendidikan Tinggi Keguruan: Pembelajaran Progresif Pendidikan Guru Berbasis Lesson Study Terintegrasi*. LaporanPenelitian. IKIP PGRI Semarang.

Toulmin, S. E. 1985. *The Uses of Argument*. Cambridge: Cambridge University Press.

Undang-undang No.14 tahun 2005.Tentang Guru danDosen

Increasing Students Ability in Analysis Learning Curriculum 2013 Through Sustainable Discussion Method

Hafsah,H M.Yunan[1], Zedi Mttaqin[2], Sawaluddin[3], Devi Mayasari[4], Rima Rahmania[5]
Program Studi Pendidikan Pancasila dan Kewarganegaraan Fakultas Keguruan dan Ilmu Pendidikan Universitas Muhammadiyah Mataram, Pagesangan 83127
dansa_machi@yahoo.co.id

Abstract

The aim of this study was to find out the student process of analyzing the learning tools of curriculum 2013 through continuous discussion method. The research method used was the classroom action research, the subject of the research was the fourth semester student of Pancasila and Citizenship Education program amount 22 students, the technique of data collection used observation, performance, and documentation. Technique of data analysis was descriptive statistics. The results of this study indicate that First, the students process in analyzing the learning tools of curriculum 2013 using the method of continuous discussion was (1) Students are given the task to arrange syllabus components and determine the format of syllabus to be used, (2) Students design and analyze syllabus, lesson plan, subject matter, indicators, methods, media, learning resources, and assessment (3) Students discuss in the groups to develop learning tools, (4) Students present the results of their analytical skills in front of the class, (5) Other students respond to statements submitted by the group presenter, (6) the lecturer gives the reinforcement of the material that has been discussed. Secondly, there was improvement of students' ability in analyzing the learning tools of curriculum 2013 by using continuous discussion method in Pancasila and Citizenship Education program was 90% with complete category. Then 10% of students who are less ability in analyze the learning device curriculum 2013.

***Keywords**: Ability to analyze, Curriculum 2013, Continuous Discussion.*

A. Introduction

Professional teacher preparation and guidance has been taken with various efforts, ranging from recruitment of prospective teachers, teacher qualification, preparation of learning tools up to the improvement of school curriculum. It is expressly implied that a teacher is prepared to possess and convey four competencies namely pedagogical, professional, social and personal competence. In particular, the mastery of pedagogical and professional competencies is taken through the mastery of courses, both theory and practice teacher. In the readiness of the learning process of a teacher should be able to prepare learning tools both syllabus and Lesson Plan so that in the process of learning can be done well by first analyzing both Syllabus and lesson plan then the results of analysis can be discussed before the implementation process.

Based on the results of reflection and discussion during the learning process undertaken by the students, first the students follow the syllabus format that will be compiled based on the curriculum of 2013 which refers to the syllabus and lesson plan components that already exist, the activity of learning implementation plan (RPP) done individually without including Other students in his group to discuss the preparation of syllabus and lesson plan before the ongoing analysis and discussion. In the early the results of the analysis are individual and feedback given directly to the students about the observations before the discussion was held in the groups. Observation process was done by the lecturer model and the observer who directly monitor the implementation of the process. The process of analysis was certainly expected to be qualified to be utilized in the learning process either individually or in groups.

The current curriculum was the 2013 curriculum, hopefully that the use of this curriculum can create an improvement quality of education and the quality of the learning process in Indonesia from an appalling ranking compared to the quality of education of neighboring countries. One way to achieve the quality improvement of education is to study the lesson or lesson study.

Lesson study is one of the learning activities that aim to improve the competence of teachers / lecturers and the quality of learning, with the main target of students as output can have the appropriate competence skills expected. Paidi (2005) states that lesson study is defined as a study for the analysis of a research-based learning practice to find a specific learning innovation. Joharmawan (2006) stated that lesson study is the activity of designing learning to improve the quality of student learning which is carried out by a teacher based on learning plan which is designed together, then observed by other teachers and reflected together based on observation result. The purpose of the reflection is to perfect the learning process that focuses on the discussion of how students learn, when students start to get bored, how to acquire knowledge, how to collaborate students in groups, and others.

Lesson study is an activity planned by a team with certain techniques to improve the quality of education. In this case lesson study is directed to improve the quality of student learning both at the level of planning and implementation. According to Saito (2006) learning be basis lesson study is a cyclic learning that is carried out in three stages, namely; "Plan", "Do" (carry out and observation), "See" (reflect and evaluate), these three stages are carried out in a collaborative and sustainable way.

A teacher is prepared to possess and master four competencies, namely pedagogical, professional, social, and personal competence (Uno, 2010: 18-20). In particular, the pedagogical and professional competence can be measured from the student's ability to analyze learning tools and then practice them. This will describe the satisfaction of both theory and personal practice. As well as in the course of

Curriculum and Textbook, it is necessary to be optimally optimized in the learning tools according to the applicable curriculum first step in the practice of learning. Therefore, the students' ability in analyzing learning tools according to the applicable curriculum becomes a must for prospective teachers before they are in the field or teaching practice.

This is also the case with the fourth semester students of the Citizenship Education Program (PPKn) of the Teacher Training and Education Faculty of Ummat as a student who is taking the curriculum course and the PKN Textbook for the preparation of teaching practice. In pursuing the subject, the target of learning achievement is planned, how students are taught, what materials are given, and what competencies will be achieved. With this learning will be guided on the competence according to the demands of the times in the direction according to the applicable curriculum 2013.

Referring to the results of initial reflection during the learning activities of students in the fourth semester of PPKn Ummat Study Program, students' ability in analyzing the learning tools of the 2013 curriculum has not been maximized. This is seen from the absence of a significant increase of the results of student analysis of learning devices. In addition, the pattern of student analysis also has not involved other students as observers together. This indicates that the students have not been able to develop the optimal learning curriculum in 2013. In the process, students are still doing individually and less involving the suggestions or opinions of other students. The purpose of the reflection is to perfect the learning process that focuses on the discussion of how students learn, when students start to get bored, how to acquire knowledge, how student co-operation during continuous discussion, and others.

Therefore, it is necessary to study the lesson study to improve the ability of fourth semester students of PPKn Study Program in analyzing the learning tools of curriculum 2013 in the subject of curriculum and text book of PKn through continuous discussion method. This is to provide feedback among students in the classroom in order to act as observers together and provide input to the results of other student analysis, in addition to the results of observation and control of lecturers. This kind of learning process will have a positive impact on the students' ability to develop and analyze the learning tools of the 2013 curriculum. The inputs in the form of continuous discussions are focused on student activities analyzing the learning tools of the 2013 curriculum. Coaching activities to improve students' skills in analyzing the 2013 curriculum learning tools through continuous discussion methods can be pursued by a lesson study implementation model. This model is done because it can learn each other about the learning method in the learning planning phase, the implementation stage of learning in the classroom, and also discuss the learning process based on the results of joint observation when

delivering the learning tool analysis results, and more importantly the lecturer can understand how students learn. As the results of research conducted by Wahyuni (2013) found that improving learning outcomes, the active classroom atmosphere of the sharing of information with the collaboration between lecturers and observers so that lesson study can be applied and implemented in all courses.

The Researcher conducted lesson study on improving students' ability to analyze the learning tools of curriculum 2013 through continuous discussion method to students who follow the curriculum and text books PKN fourth semester of PPKn Ummat study program. In this case to explore the process of students analyzing the learning tools of curriculum 2013, and whether the lesson study can improve students' ability in analyzing the learning tools of curriculum 2013 through continuous method of sustainability. Based on the action that undertaken by all of parties in this lesson study. This study aims to find out the student process of analyzing the learning tools of curriculum 2013 through continuous discussion method, and to know whether or not the improvement of student ability in analyzing the learning tools of curriculum 2013 through continuous discussion method.

B. Methode

In this study, the subject of research was the fourth semester student of Citizenship Education program amounted to 22 students.

The research method used in this research was classroom action research (PTK) which is designed in to two cycles. There were some procedural steps in this research, namely Plan, Do, and See stages. Phase Plan, researchers along with educational practitioners discuss and draft how actions are implemented and what needs to be prepared include; 1) identify problems found in initial observation, 2) identify student learning objectives, 3) plan instructional design, 4) prepare research lessons to be observed. The Do stage is an action performed at the time of execution and observation. At the time of implementation stage is done; 1) assigning one student as a model to carry out the learning based on the design that has been prepared, 2) the researcher along with other students and lecturer observing the learning process conducted by the students assigned as model, 3) the observer collecting data about the learning process, thinking ability, cooperation , Student behavior during learning takes place. At the time of observation stage is done 1) observers discuss about the learning that has been implemented by students and 2) analyze the data collected at the time of learning took place. In the observer's observation stage, the observer is drawing up notes as inputs that include learning planning, notes on student behavior as a result of observation, and reflecting on the lessons learned, and 3) using reflection results to improve future planning.

Students' ability to analyze learning tools of curriculum 2013 is collected using document recording method completed with instrument in the form of assessment

rubric. Further measuring the student's ability level to analyze the learning tools of curriculum 2013 the researcher use both written and unwritten test methods. While the data about the students' ability to learn collected using observation method. Furthermore, the collected data was analyzed by quantitative descriptive technique through descriptive statistic that is by converting the scores obtained by the students into the evaluation guide.

C. Findings and Discussion

Student Process Analyze Learning Tool 2013 Curriculum through the Method of Continuous Discussion.

The result of the research shows the process of student analyze the learning device of curriculum 2013 done through 6 stages, that is; 1). Students can arrange syllabus components well. This is evident from the work of students when given the task to develop syllabus components according to the curriculum of 2013, from the work of the average student able to arrange syllabus component according to the curriculum 2013. Students are given individual assignments, but in completing their duties students discuss together and one another corrects each of their work before being collected as a task. 2) Students have been able to design syllabus, RPP, subject matter, indicators, methods, media, learning resources, and assessment (assessment) well. This is evident from the work processes of students in the class when given the task to design these components according to the curriculum 2013. The student asked to make the initial framework of their work in the classroom, after that they can compile at home. 3) Students discussed in groups to develop learning tools. This can be seen from the work and the work of students in preparing the learning tools according to the 2013 curriculum that began to improve, where students are divided into four groups and then given the task to develop learning tools. From the work of the students, the pattern is getting better although there are still some students who have not experienced significant progress in preparing the learning tools according to the curriculum of 2013. 4) The students are good enough in presenting the results of their analysis skills in front of the class. This is seen from the way the students in presenting their work with a firm, straightforward, and courageous. Although there are still some students who experience obstacles in terms of vocabulary that is used still limited so tend to stumble in presenting the results of his work. 5) Other students began carefully in response to statements submitted by the presenter group. This can be seen from the thoroughness of the students in capturing, discriminating, and criticizing the location of the lack of work of the presenter group. The accuracy and accuracy of this student cannot be separated from the students' ability in understanding and mastering the learning tools according to the curriculum of 2013. In addition, the way students responded and asked was able to use language that is easy to understand and understandable

by other students. 6). Lecturers provide reinforcement of the material that has been discussed. The next action is the lecturer to provide reinforcement of the material discussed and draw conclusions of learning outcomes, and provide follow-up.

The student process in analyzing the 2013 curriculum tools through ongoing discussions is a stage in which one another becomes an observer. So that enables one student can observe, criticizing in the form discussion of other student work, beside that lecturer also acting as teacher, supervisor, and observer course of learning after given learning action. Guidance through lesson study has the advantage of more active students, carefully digging the location of advantages and disadvantages of work, and able to criticize properly. This is similar to that disclosed by Joharmawan (2006) that the guidance through lesson study has advantages, namely: 1) teachers have a spirit of introspection to what has been done, 2) courage to open up to be able to accept suggestions from others, 3) courage To acknowledge shortcomings, and 4) the courage to acknowledge and use the ideas of others.

Students' Ability to Analyze Learning Tool of Curriculum 2013 through Continuous Discussion Method

Based on the results of observation and analysis qualitatively, in the first cycle students' ability to analyze learning tools according to the curriculum 2013 can be described as follows. The analysis on the syllabus component is not yet optimal; it can be seen from the tasks collected by the students in analyzing syllabus components as well as the level of liveliness and participation of students when the material about the syllabus of the 2013 curriculum is discussed together in a less participating class. The analysis of learning implementation plan component (RPP) is not yet optimal, it can be seen from the students' ability to analyze the components that must exist in the RPP of the 2013 curriculum, where the students have not been able to properly arrange the components so that the results of the analysis are also limited by Unclassified location according to the curriculum RPP 2013 reference. This is also evident from the students' ability to convey the RPP component while the discussion in the class still impressed stammered by not too mastered, resulting in the results of the analysis that has not been optimal. For the analysis of key components, indicators, methods, media, learning resources and assessments (assessment) can be said as a whole not yet optimal and in accordance with the curriculum 2013. Components are basically integrated in RPP, so that when students compile and analyze the student's RPP component directly analyzes the main component components, indicators, methods, media, learning resources, and assessment (assessment). So directly the results of student analysis of RPP and syllabus can be said to have analyzed the results of other components. With this, students have not been maximized in analyzing the subject matter, indicators, methods, media, learning resources, and assessment (assessment) in accordance

with the curriculum 2013. Aspects of media selection and student learning resources have not analyzed the aspects of the lack of variety of media and learning resources listed, whereas in accordance with the designed material, media and learning resources are very numerous and easily obtained in the vicinity. For the aspect of the analysis of the formulation of indicators and the selection of learning materials is quite good because the material and indicators are in accordance with the theme being taught. Similarly, the ability of students in analyzing the aspects of selection of methods, especially the varied learning method is good enough, but still seem more impetus from lecturer activity than the students.

Furthermore, after the discussion through lesson study activities for improvement in cycle II, the students' ability experienced a very significant improvement in the aspects of analyzing learning tools according to the 2013 curriculum through continuous discussions. Especially on aspects of formulation of indicators, selection of materials, learning resources, media and learning methods that have reached the good category. The analysis on syllabus component is good enough; it can be seen from the tasks collected by students in analyzing syllabus component and also see the level of activeness and student participation when the material about syllabus of curriculum 2013 are discussed together in class. Analysis of learning implementation plan component (RPP) is good enough, it can be seen from the ability of students to prepare RPP, as well as the ability of students in conveying RPP components while discussing in class. For the analysis of key components, indicators, methods, media, learning resources, and assessments (assessment) can be said to be quite good and in accordance with the curriculum 2013. Components are basically integrated in RPP, so that when students compile and analyze components the student's RPP directly analyzes the main component components, indicators, methods, media, learning resources, and assessment (assessment). Thus, the ability of students in performing analysis of these components can be said to have increased or is good enough.

Here is the result of student analysis on RPP component that contains; Preliminary activities that include apperception and motivation are good enough. This is evident from the activities of students such as invite other students to discuss by raising a problem, then discussed together. Questions and answers about the components in the syllabus and lesson plans and shortcomings in the preparation based on the curriculum 2013. But the information about the steps of activities undertaken by students has not informed. In the core activities, especially aspects of mastery of the material, the use of learning strategies, scientific approaches, and the application of thematic learning is still lacking. Most of the students lack material knowledge, especially in integrating several concepts.

Some concepts from the content of the subject matter are well integrated. Students' ability in analyzing learning strategies is still less sharp, especially in

critiquing activities oriented on continuous discussion, so as not to provide appropriate criticism target. The task of analyzing activities is limited to the media used alone, not suggesting to use other, more concrete media. The activity of questioning and associating answers to questions is good, as well as the student's duty to inform the results of his work has shown a good improvement seen from the ability of each student to communicate in the class during the presentation and respond and answer questions. Students are already involved in learning activities to the fullest. Similarly the use of language for students is good enough and the use of effective vocabulary. In closing activities for all aspects such as reflection, assessment, and follow-up activities are good enough.

The findings in this study are in line with research conducted by Made and Suniasih (2013) on the ability to design and implement learning according to the 2013 curriculum through the study of learning. Where the results show the ability of students to plan and implement learning can be improved through the study of learning.

In the first cycle of students' ability in the fourth semester, the Citizenship Education program analyzes the learning curriculum of 2013 by 75% with unfinished category. Then 25% of students have been able to analyze the learning tools of curriculum 2013 maximally. Furthermore, after the lesson study, the students' ability in analyzing the learning tools of curriculum 2013 by using continuous discussion method on the pancasila and Citizenship Education program is 90% with complete category. Then the 10% there are some students who are less able to analyze learning tools curriculum 2013 well and maximally.

D. Conclusions

Based on the results of research and discussion presented, it can be concluded as follows. The process of students in analyzing the learning tools of curriculum 2013 using continuous discussion method is (1) students are given the task to compile syllabus component, (2) students design syllabus, RPP, subject matter, indicator, method, media, learning resources, and assessment (assessment) , (3) the students presented the results of their analysis skills in front of the class, (5) the other students responded to the statement submitted by the presentation group, (6) the lecturer gave the reinforcement of the material that had been discussed. There is an improvement of students' ability in analyzing the learning tools of curriculum 2013 by using continuous discussion method in Pancasila and Citizenship Education program by 90% with complete category. Then the 10% there are some students who are less able to analyze the learning device curriculum 2013 to the maximum.

References

Joharmawan, Ridwan. 2005. *Reformasi Sekolah melalui Lesson Study*. Makalah disampaikan dalam seminar dan workshop Lesson Study di FMIPA UM 21 Juni 2005.

Made, Purta dan Suniasih, Ni Wayan. 2013. *Kemampuan Merancang dan Melaksanakan Pembelajaran Sesuai Kurikulum 2013 Melalui Kaji Tindak Pembelajaran.* Jurnal Pendidikan dan Pengajaran, Jilid 48, Nomor 1-3, April 2015, hlm. 80-86

Paidi. 2005. *Implementasi Lesson Study untuk Peningkatan Kompetensi Guru dan Kualitas Pembelajaran yang Diampunya*. A Paper presented in the discussion of MAN 1 Teacher on Desember 10, 2005. Yogyakarta.

Putra, Made dan Suniasih, Ni Wayan. 2015. *Kemampuan Merancang dan Melaksanakan Pembelajaran Sesuai Kurikulum 2013 Melalui Tindak Pembelajaran.* Jurnal Pendidikan dan Pengajaran, Jilid 48, Nomor 1-3, April 2015, hlm. 80-86

Saito, E. 2006. *Development of school based in-service training under the Indonesian Mathematics and Science Teacher Education Project*. Improving Schools. Vol. 9 (1): 47-59.

Uno, B. Hamzah. 2010. *Profesi Kependidikan (Problema, Solusi, dan Reformasi Pendidikan di Indonesia)*. Jakarta: Bumi Aksara.

Wahyuni, Sri. 2013. *Optimalisasi Pembelajaran Melalui Pelaksanaan Lesson Study*. Jurnal Pendidikan Almuslim. Vol 1 (1).

Domino Games To Improve Learning Outcomes

Dedy Juliandri Panjaitan
Universitas Muslim Nusantara Al Washliyah Medan
juliandri.dedy@yahoo.com

Abstract

This article is a result of development research to produce learning media in math lesson. The purpose of this study is to improve student learning outcomes mathematics is expected to solve the problem of low mathematics learning outcomes of students, especially on the subject matter of special angle trigonometry value. In this article, To achieve that goal, teachers must change the way they teach from conventional methods to other methods that make students more interactive in understanding the subject matter. Teachers need to be equipped with the ability to master educational technology to improve the process of learning oriented approach to process skills and using a comfortable and enjoyable learning strategy (Quantum Learning and Quantum Teaching). By mastering educational technology, teachers can better plan, design, implement, and evaluate and do feedback as a domain to achieve learning objectives. For that done the research using domino trigonometry as a medium of learning mathematics on the material mastery of trigonometric specialty angle values. The results of hypothesis testing showed that students who were taught using domino trigonometric learning media had higher learning outcomes than students taught by conventional methods. The use of domino trigonometry is well used as a learning media to improve the motivation of learning mathematics, the effectiveness of learning mathematics, the result of learning mathematics of students, especially on students' mastery of material on the specific angle of trigonometry.

Keywords:*learning media, domino games, learning outcomes*

A. Introduction

In mathematics the relevance of each concept is closely interwoven and neat, so understanding in a concept will greatly support the understanding of other concepts. But the reality is that students are afraid of or hate math. They assume that mathematics is a complicated and frightening lesson, not realizing how important maths are to them.

For that teachers must change the way of teaching from conventional methods to other methods that make students more interactive in understanding the subject matter. To achieve these goals teachers need to be equipped with the ability to master educational technology to improve the process of learning oriented approach to process skills and using a comfortable and enjoyable learning strategy (Quantum Learning and Quantum Teaching). By mastering educational technology, teachers

can better plan, design, implement, and evaluate and do feedback as a domain to achieve learning objectives.

Many kinds of learning media are used in presenting a subject matter. One way of presenting the subject matter that is expected to improve learning achievement is to use domino card learning media.

The size of the card used as a learning medium is the same as the usual domino card size, but there is a significant difference on the card surface. On a domino card the card surface usually has a circle (as a symbol of a number) ranging from blank (zero) to a circle numbering 6 (six). In domino trigonometric learning media on its surface there are two things, namely trigonometric special angle, and trigonometric special angle value.

The use of domino trigonometric learning media can be done not only during the learning process takes place, but students can also use it when free or relaxed. This is because the learning media is more dynamic in its use. Learning media is designed more likely to the game tool, so its use can be more relaxed, and not impressed is doing the learning process.

The purpose of this study are as follows: (1) To develop the learning media on the material Specific Angle Value Trigonometry in the form of domino trigonometry; (2) To know the effectiveness of using domino trigonometric learning media in improving student's learning motivation; (3) To know the effectiveness of using domino trigonometric learning media in increasing the effectiveness of learning; (4) To know the effectiveness of domino trigonometric learning media in improving student learning outcomes.

B. Method

This article is the result of research development and experimental research. Research development to produce learning media. Further research continued with experimental research to see the effectiveness of learning media and prove the research hypothesis. The study was conducted on two sample groups, experimental group and control group.

Research Development Methods

Research development is carried out with the following stages:

a. Stages of preparation of learning tools, which include learning media in this case is domino Tigonometry, RPP (Learning Implementation Plan), and test learning outcomes. The result of this stage is called draft 1.

b. Learning device development stage, which includes:

1) Expert Validation

After the draft 1 has been completed, further assessment by several competent experts to assess and provide input or suggestions for the improvement of the

draft 1. Those who will be selected are lecturer of mathematics education and math teacher. This validation generally includes substance truth, conformity with student's level of thinking, and conformity with concepts and learning steps using trigonometric domino learning media, contained in the validation sheet. Based on the assessment, correction, input and suggestion of the validator is then done revision of draft 1 so that the resulting draft 2.

2) Simulation of instructional media
Learning media simulation (domino trigonometry) is conducted with the aim to give an idea to the partner teacher about the implementation of the learning that will be done as well as to get input about the appropriateness of time allocation and whether the learning media can be clearly understood by the students in its use so that it can be applied to the class which become the research subject. The results of this simulation will be used to revise draft 2 and produce draft 3. If deemed necessary draft 3 consulted again with the validator or directly tested to produce draft 4.

3) Field Trial
After the 3rd draft is complete, further field trials are conducted.

a. Subject of trial
The test was performed in one of the randomly chosen X classes.

b. The design of experimental learning devices
The design of the learning device test is a one-group pretest-postest design.

c. Test data collection instrument
The data collection instrument of learning device testing is: (1) Questionnaire response student to get data about student response; (2) Test learning outcomes to get data about student learning outcomes.

d. Test data analysis techniques
(1) Data on student responses were analyzed using percentages. (2) The data obtained from the test results of further learning processed to determine the validity and reliability.

The results of this trial are used to revise draft 3 and produce draft 4. Draft 4 can be consulted again with the validators to produce the final draft.

Experimental Research Methods

a. Population and Sample
The population of this study are students of class X (ten). The study was conducted on two representative classes selected randomly from the

population. One for the experimental class with 36 students and one for the control class of 37 students.

b. Research design

The experimental research design is illustrated below:

Class	Treatment	Postest
Experiment	X	T
control	Y	T

Information:

T : Postest;

X : Treatment, that is learning with domino learning mediatrigonometry;

Y: Treatment, that is learning with a conventional approachc.

c. Research variable

The variables in this study are as follows

1) Independent variable / treatment, is teaching using trigonometric domino learning media.
2) The dependent variable is the result of student learning after being treated (postest score).
3) Control variables, are:

   1. Subject matter, experimental group and control group received the same material that is trigonometric material; 2. Teachers who teach, Experimental groups and control groups are taught by the same teacher; 3. Time, The number of face-to-face hours in the learning in the experimental class and the control class are the same; 4. Uncontrolled variables, uncontrolled variables in this study are the economic background and health conditions of students, parents' education and distance of student residence with school.

d. Research Instruments

The experimental research instrument is an instrument that has been piloted in the above development research. The test instrument is a learning outcome and a questionnaire of student responses each of which is used to collect data as the basis for answering research problems numbered 2 and 3.

e. Data collection technique

The data in this study were collected in the following manner.

1) Learning Result Data

Student learning result data is collected through test, ie posttest given after learning process in experiment class and control class. Instrument test result of study form multiplus choice as much 20 question. The test instrument of learning outcomes is tailored to the curriculum on the specific angular value material of trigonometry.

In order to obtain a good test, the first result test is tested to 30 respondent students who will not be a research sample. This student of the respondent is taken from class XI students who have studied trigonometric material. A test of value test is performed to determine the validity of the test by using the Biserial Point Correlation Coefficient. From the test validity test results stated that the whole item tested validity. To determine the reliability of the test used the technique of splitting two then followed by Spearman-Brown formula. The test of learning outcomes was also analyzed the problem level of problem difficulty, and different problem power analysis.

2) Student Response Data

This data was collected by using questionnaires given to experimental class students in order to know the students' responses to mathematics learning by using domino trigonometric learning media. Implementation of this activity after learning is complete.

f. Data analysis technique

To answer the second research problem and to test the hypothesis proposed in this study, then after the data collected analysis is done by using descriptive statistical analysis and inferential statistics. Descriptive statistical analysis is used to obtain answers about the effectiveness of mathematics learning by using trigonometric domino learning media on trigonometric specific angle values. While inferential statistical analysis is used to obtain answers about student learning outcomes using domino trigonometric learning media and student learning outcomes using conventional methods.

1) Descriptive Analysis

a) Data Analysis Learning Outcomes

Data analysis of student learning outcomes descriptively aimed to describe mastery of student learning outcomes. The data analyzed here is the postest result data. A student is said to be complete learning when having

absorptive power exceeds the value of Minimum Decision Criterion. Learning completeness is achieved when classically at least 85% of students in the class have been thoroughly studied (Mendiknas, 2007). From the results of analysis, learning mathematics with domino trigonometric learning media is said to be effective if the two aspects below are met, namely: 1) mastery learning; 2) Student response

With the completeness aspect met.

b) Analysis of Student Response Data
Student response data obtained through questionnaire was analyzed by using descriptive statistic with percentage. Students 'responses are said to be effective if students' answers to positive statements for each aspect responded to each learning component are 80 percent.

2) Inferential Statistics Analysis

Inferential statistical analysis is done to test the research hypothesis, that is: learning result of student that follow learning by using domino trigonometric learning media better than result of student learning following learning by conventional method for material of angle value specially trigonometry at class X. Testing done by using statistic test t test.

C. Findings And Discussion

Result

From the results of research obtained data in the form of student learning outcomes on learning mathematics material special angle trigonometry value. The data obtained from the research samples are spread in two classes, namely data obtained from the experimental class that was given learning by using learning media using domino card and data obtained from the control class by using conventional learning method (without using domino card learning media).

Overall data of student learning outcomes in the mathematics learning material specific angle trigonometry value, obtained score average 12.19 with standard deviation (SD) 3.03. Detailed descriptions of data from each experimental group are described as follows:

Data of Student Learning Result of Mathematics of Experiment Class

Based on the data obtained from the students' learning outcomes in the mathematics learning of trigonometric materials for the group given the learning treatment using domino trigonometric learning media (experimental class), it was

found from the respondents overall got the lowest score of 7 and the highest 17, with the average score 13, 14 with standard deviation (SD) 2.55.

Student Mathematics Learning Data Class Control

Based on the data obtained from the student learning outcomes in the mathematics learning material, the specific angle values of trigonometry for the group given the treatment of learning by not using trigonometric / conventional domino (control class) learning, were found from the overall respondents obtained the lowest score 5 and the highest 18, with average score of 11.27 with standard deviation (SD) 3.19.

Testing Requirements Analysis

Prior to data analysis, we first test the analytical requirements to meet the requirements of the variance analysis technique. As the test requirements analysis used data normality test and homogeneity test of population variance.

1. Normality Test

The data normality test was performed to find out whether the sample used in this study came from a normally distributed population. Technique used to test data normality by using Liliefors test. Acceptance or rejection of Ho based on price comparison L calculate with L table at significant level $\alpha = 0.05$.

The normality test is performed on the data obtained from the experimental class. Test results data can be seen in the following table:

From the result of normality test of learning result data stated that Lhitung of learning in experiment class and control class is below specified denial limit. Thus it can be concluded that the data distribution of student learning outcomes in the experimental class and control class is normal distribution.

2. Homogeneity Test

To find out the homogeneity of variance between groups compared, the data homogeneity test was done. The analysis technique used for homogeneity test is Fisher test. Homogeneity test performed with significant level sebsar 5%.

The test criterion is based on the comparison of probability count value with a significant level of 5%. If the probability value of the count is less than the value of the table, the inter-group variance tested is homogeneous. Homogeneity tests were performed on data obtained from both treatment classes.

From the calculation results seen that $F_{arithmetic} = 1.56 < F_{table} (\alpha = 0,05) = 1.75$, can be drawn conclusion data obtained come from homogenous population.

Hypothesis testing

From the results of the test data analysis requirements note that the research data is a normal and homogeneous distributed data, so that hypothesis testing can be done.

From the calculation results with t test, obtained for $t_{arithmetic} = 2.76$ and $t_{table} = 2.01$ at 5% significant level. This means $t_{arithmetic} > t_{table}$, thus the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. It can be concluded that the use of domino trigonometry in the learning of trigonometric material is better than conventional learning.

Discussion of Research Results

Based on the results of the calculation in the research obtained obtained that the results of learning mathematics students who are taught with learning using domino trigonometric media higher than the results of learning mathematics students who were taught by conventional methods. This is possible because learning by using domino trigonometry students do not feel overwhelmed, or forced. The use of domino trigonometry as a learning medium can create a more relaxed learning atmosphere and the atmosphere of learning turns into an atmosphere in the game.

The use of trigonometric dominoes in learning creates a more relaxed atmosphere. This is due to the use of domino trigonometry to create a class atmosphere like in a game of dominoes. So that all students are actively involved in the game and do not feel like they are learning math as used in conventional methods.

The pleasant atmosphere caused by learning by using trigonometric domino learning media directly can improve the effectiveness of learning. This is due to the use of domino trigonometry can also be used outside the learning hours can also be done formally and non-formal. Besides domino trigonometry can also be done without the teacher

Lessons learned using domino trigonometric learning media are believed to be superior in improving students' mathematics learning outcomes, especially in the mastery of trigonometry. For students who have learned with domino trigonometric learning media, do not feel burdened by conventional delivery methods commonly used by math teachers in the delivery of special angle values trigonometry.

Based on the data obtained also indicated that the average value of mathematics learning outcomes of students who were taught using domino trigonometric

learning media is higher than the average score of students' mathematics learning outcomes taught using conventional methods. From the comparison of the average results obtained to give a conclusion that the results of learning mathematics students who were taught using domino trigonometric learning media is higher than the results of learning mathematics students who were taught using conventional methods.

Limitations of Research

Although this research has been best done, this research can not be separated from the limitations in terms of research methods, field implementation, and in terms of writing the results achieved. Some limitations in this study include:

First, In the implementation of research, the treatment is carried out by the same teacher in both learning mediums being studied. So the possibility of treatment conducted by teachers in each media less achieved with the maximum. Secondly, the subject matter taught in the treatment is limited only to the subject matter of trigonometry, especially to the specific angle of trigonometry, whereas in the mathematics lesson there are still many basic subjects to be taught. Third, students who are the subject of the study are not strictly controlled outside of school, so the possibility of learning time from different learning experiences of each subject beyond the treatment provided affects the student's ability.

D. Conclusion

The conclusion of this article is : (1) The use of trigonometric domino learning media can improve students' learning motivation; (2) The use of domino trigonometric learning media can improve the effectiveness of learning; (3) The use of dominant trigonometric learning media can increase the mastery of trigonometric specific angle values.

E. References

Panjaitan., Dedy. (2014). Penerapan Pembelajaran Matematika Realistik Untuk Meningkatkan Hasil Belajar Sistem Persamaan Linear Dua Variabel. **Jurnal Mathematics Paedagogic**. Volume 5 Number 1 : 37.

Panjaitan., Dedy. (2016). Penerepan Pendekatan Contextual Teaching and Learning (CTL) Untuk Meningkatkan Hasil Belajar Statistika. **Jurnal Penelitian Pendidikan MIPA**. Volume 1 Number 1 : 1

Panjaitan., Dedy. (2016). Meningkatkan Hasil Belajar Siswa Dengan Metode Pembelajaran Langsung. **Jurnal Mathematics Paedagogic**. Volume 7 Number 1 : 83

Panjaitan., Dedy. (2016) Penerapan Permaianan Domino Untuk Meningkatkan Penguasaan Operasi Hitung Bilangan Bulat. **Jurnal Kultura**. Volume 17 Number 1 : 6104

Sadiman, A. (2010). *Media Pendidikan*. Jakarta: Raja Grafindo Persada.

Sobel, M. (2003). *Teaching Mathematics.* Translation Suyono. Jakarta. Erlangga.

Suherman,E.dkk. (2003).*Strategi Pembelajaran Matematika Kontemporer*. Bandung. UPI.

Trianto. (2007). *Model-Model Pembelajaran Inovatif Berorientasi Konstruktivistik*. Jakarta. Prestasi Pustaka Publisher.

Developing Interview and Joke Learning Model in Speaking Class at IKIP Mataram

Agus Salim[1], Sudirman[2]
Mataram Institute of Teacher Training and Education, Indonesia

Abstract

Speaking is one of compulsory subject in Language and Art Education Faculty of IKIP Mataram. It deals with three semesters in a row. However, the researchers found the problems in terms of the students' speaking ability. In finding the solution, we have been conducting the research that financed by DIKTI. Furthermore, this is the continuance solution that aimed at developing the teaching and learning model. The learning model is designed in two years by using ASSURE Michalak and Rachel's theory. In collecting and analyzing the data, we applied Huberman and Miles theory; data collection, data reduction, data display and verification/conclusion. The data are in form of verbal and non-verbal taken from 15 students and lecturers as the material and media assessors. The findings show that 1) the six steps in developing the learning model guiding us (lecturers) to have good preparation, attention, and creation to make the students interested in learning speaking, 2) through the six steps, we are aware of media and material, using media and understanding the students' need are very important in teaching and learning process, 3) the students are motivated and interested to have an intensive communication with their friends in and out of the class, 4) the learning materials are basic categorized and need to be revised (assessors), and 5) most of students state that the learning model is interesting, but need to be revised from the students' understanding on materials instruction (students). Therefore, there are some implication on students' confidence, motivation and creation in English communication.

Keywords: *developing learning model, interview, joke, English class zone*

A. Introduction

Faculty of Language and Art Education (FPBS) IKIP Mataram is one of the new students' favored in each year, the newest data of total of the students who are still active as much as a thousand eighty four people that spread out from first till eighth semester. The total of students represent that English is very important for Lombok people to prepare themselves in a foreign language's ability to receive foreign visitors which grow up faster every year. The ability to speak English is the question when results of the preliminary observations made on some of the last semester and it shows that; 1) ranges from 70% to 80% of the students were not able to understand, and responds every question that has been asked to him, 2) most of them were still lack of ability in speaking because the strategy and model in

learning process in speaking lesson is not good enough, 3) so, the problems that they encounter make them unconfident, worry to have mistake and no any ideas to communicate with their friends and others.

The first solution on the problems are improving and developing an interesting model to teach them. So the learning model that is being developed at this study is called *an interview and joke, English Class Zone.* Here it isdealing with ASSURE (Michalack and Rachel, 2011). Analyze the learners, state objective, select media and materials, using the media and materials, require the learners, evaluation.

The students' problems are formulated in to some question of the research; how is the process of development of learning model in speaking class using interview and joke; how is the role model of learning speaking subject in improving students' ability at FPBS IKIP Mataram; what are the lecturers' correction and suggestion on the learning media and materials. What are the students respond on the media, materials and model that they are taught with.

Furthermore, the purposes of this study are; developing the learning model (interview and joke) through applied research products at 15 of FPBS student of IKIP Mataram. Improving the students' speaking skills by using a model that is being developed. This research are limited on the development of learning model by using ASSURE with only five teen students as the subject.

ASSURE is the instructional design model that develop by Heninich, Molenda, Racher, and Smaldino; It guides the instructors through the design process lessons by embracing the use of technology. ASSURE appreciate learning styles of students and (attract) constructivism which learners interact with others in their environment to build prior knowledge "(Michalak and Rachel, 2011), the six steps are;

a. Analyze the Learners

Identifying students is very important to choose the best approach to meet your goals and find the right resources. Students are a group of people who will convey the information to (e.g., students, coaches, other instructors, etc.) There are many ways to analyze:

1. General characteristics: age, grade level, gender, socioeconomic status, etc.
2. Special Competencies: prior knowledge about a topic, skill, ability, etc.
3. Learning styles: visual, verbal, logical, etc.

b. Formulating Standards and Learning Purposes

The second step is to formulate standards and learning purposes that will be achieve. The standard is taking from the students competence that was defined. There are some important things that must be notice are: use the

format ABCD. **A** is the audience, students who become the learners. The instruction that we ask should focus to what learners should be done rather than what lecturer should be done, **B** (behavior) – the verb that describes new capabilities that should be owned by the learner after going through the process of learning and could be measured, **C** (conditions) – the condition of the learners performance is measuring, and **D** there is the criteria of the students problem in achieving the foreign language.

c. Choose Material and Learning Media

The third step in planning effective learning is by choosing a strategy, technology, media and instructional materials which appropriate. Learning strategy must be selected whether it is the student-centered or centered on the teacher and decide which method will be used. The need to be underlined in this point is that no one method is the best method to another and there is no one method that can be fun/answered the needs of learners in a balanced and comprehensive, so that synergy should be considered in several methods.

d. Utilizing Media and Materials

The fourth stage is to use the technology, media and materials. At this stage involves the planning of our role as a teacher/lecturer in using technology, media and materials. To do these processes follow the stages "5 p", namely:

1. Preview, check out the technology, media and materials that will be used for learning appropriate with its purposes and is still eligible to wear it or not.
2. Prepare technology, media and materials that support our learning.
3. Prepare the learning environment, so that it supports the use of technology, media and material in learning process.
4. Prepare the learner, so that they are ready to learn and of course will achieve the maximum result process.
5. Provides a learning experience (centered on the teacher or learner), so that students achieve the maximum learning experience.

e. Participation of Students

Require Learners' Participation the fifth step is to enable the participation of the learner in speaking. Learning is not enough to know, but should be able to feel and implement and evaluate things that are learned as a result of learning. To enable the learners in the learning process that using the technology, media and materials it would be nice to come up with psychology, because it will determine the process and success of learning. The psychology of learning in learning process that need to attention are: 1) the Behaviorists,

because the appropriate response/ feedback from teachers can empower the learners. 2) Cognitive, because the information that received by the learners can enrich the mental scheme of them. 3) Constructivist, because the knowledge and skills that received by learners will be more meaningful and lasting in the head if they are having any direct activity in the learning process.

f. Evaluate and Revise

The sixth step is to evaluate and revise the process of learning model and the implementation. Evaluation and revision is done to see how far the technology, media and materials we choose/use can achieve the goals that we have set before. From evaluation results we will obtain the conclusion; whether technology, media and materials we choose is already good, or should be repaired again.

B. Research Method

The development of this learning model is called interview and joke, English zone class at speaking subject. It deals with ASSURE, Michalak, Rachel (2011). They state that in developing the learning model, there are six steps that can be applied. They are; analyze learners, state objectives, select media and materials, using media and materials, requires learners, and evaluation.

In collecting the data we applied four steps based on Miles and Huberman (2012) theory. Data collection, data reduction, data display, and verification/conclusion. Through these process, this research is categorized as qualitative research.

C. Research Findings and Discussion

An important finding in analyzing learners is; most of students have limited skills in conveying their ideas in English. Thus, the academic ability does not indicate that they are English students. The way they ask and answer the questions are not fully correct in grammar but it is refer to the ungrammatically sentences. It could be seen from the early and final data;

Early data

Data 1.*A:*_Okay, this is time for your interview please introduce yourself first._

Kinar:_Okay I wanna introduce my self. My name is Nursakinah you can call me Kinar I come from Bima I'm six semester I'm student number 14411226_

A:*What is your hobby Kinar?*
Kinar:*My hobby is running and singing*
A:*Singing?What do you love your hobby? What make you interest with that hobby?*
Kinar:*I like in hobby but running is because is okay because make my body is health is sing I like is voice music*
A:*Where are you stay right now? Where you stay right now*
Kinar:*I'm stay in Gomong lama MataramKecubung 4 number 16 boarding house*
A: *What do you do when you in the boarding house?*
Kinar: *Everyday something reading book sleeping cooking blablabla*
A:*You from Bima, right?*
Kinar:*Yes I'm from bima I like bima city*
A:*What kind culture of bima*
Kinar:*Culture in Bima is Bima language culture in pacuajara in Indonesian language pacuankuda*
A:*What pacuajara looks like?*
Kinar:*Okay because a child joki riding horse is running fast horse*

Data 2.*Jaya: Okay, I want to interview about yourself and about your culture and then you must introduce about your full name and short name and you must call a student number, and then about culture, please start from now.*
Aan: Okay thank you, before I tell you about my culture let me introduce before. My name is AanRiansyah and you can call me Aan, and my student number 14411215. And I'm come from Dompu and my culture in Dompu is call "RimpuTembe"
Jaya:: RimpuTembe.
Aan: OkeyRimpuTembe, rimputembeit's mean your, your close your yourbody, ya your body with,with sarung and it is usually for man and or girl. Actually special for girl and then why he, why she use sarung or RimpuTembe? She is one of a culture in Dompu itself. The purpose of RimpuTembe itself to, what is it call to "menutupaurat". Like, all muslim with using cadar and then ..
Jaya: Yes I want to ask about your, what is name ribuuapa? ribuapanamanya ?
Aan: RimpuTembe
Jaya: Aaaa ... RimpuTembe. When he use RimpuTembe what in a usually use a RimpuTembe, everyday or every party like that?
Aan: Okay, for use RimpuTembe is not everyday, not everyday and its only is special, special..Jaya: Aa.. special moment

Aan: Like a when she before married , he must use RimpuTembe and then, as only this, only that.
Jaya: Only that?
Aan: Ya
Jaya: And then, this the culture about the DompuRimpuTembe and this is have introduce in out country and when you come like (orang luargitu) people (orang Luar)
Aan: Strange people
Jaya: Yaa strange people, strange people how about a strange people when ask a (bagaimanamaksudnyaketakjubanmerekaituterhadapbudayaitu, bagaimanareaksinyagitu). Can you tell me?
Aan: Okay when strange people or come our, my country yes, because in Indonesia very much a what is it call very very much "budaya"
Jaya: Culture
Aan: Ya very much culture. So many kind of culture, so when the strange get in my country, He want to know about the my country and he want to learn about my country and the our culture like that, like using RimpuTembe and what else and etc. ok that's all my our country and thank you
Jaya: Okay thankyou for Mr. Aan. He finish tell about culture okay thankyou Mr. Aan, and Wassalam.
A:*What make you love with Bima?*
Kinar:*I loving Bima*
A:*What make you feeling in love in Bima?*
Kinar:*I'm falling love in Bima, Bima is very very many beach, many mounts. I like beautiful beach, mount*

The second stage is the formulation of standards and learning objectives (selecting media and materials). At this stage, we formulated and defined the learning objectives based on the basic competence at Kerangka Kualifikasi Nasional Indonesia (KKNI) . There are four basic competence are adopted; attitude (Sikap), knowledge (Pengetahuan), general skills (Keterampilan Umum), and special skills (Keterampilan Khusus).

Attitude (sikap)	S10. Able to implement a sense of responsibility in achieving performance in accordance with the rights and obligations S11. Ability to implement a sense of responsibility in developing attitudes, values, and ability of learners are based on the values of local wisdom and noble character

Knowledge (pengetahuan)	P1. -Master the theoretical concepts of basic grammar -Master the theoretical concepts of medium-level grammar -Master the theoretical concepts of advanced grammar -Master the theoretical concepts of speaking skills
General Skill (keterampilan umum)	KU1. -Able to think logically, critically, and systematically in the context of science and or technology development in accordance with the field of English education -Able to create creative and innovative ideas in the context of the implementation of science and / or technology in accordance with the field of English education
Special Skill (keterampilan khusu)	KK1. -Able to speak basic level English -Able to speak medium level English -Able to speak advanced level English -Able to speak advanced English

The next stage is choosing media and teaching materials. The media and materials are chosen based on the students' need and ability. There are several media that used in process teaching and learning LCD, whiteboard, recorder (HP or tape recorder), folio paper, and objects around the class. Furthermore, the teaching materials are also chosen in a basic level communication such as; showing direction, daily activities, personal problems, situational dialogue and others. They are collected at a learning speaking module see appendix 1.

Then the process was continued to apply the media and materials that were chosen students. This stage was started with interviewing activity one students to others. So that, at this finding section we display some students' conversation that recorded at the process from the beginning to end activity ;

Data 3. ***A:****Okay, this is time for your interview please introduce yourself first.*
Kinar:*Okay I wanna introduce my self. My name is Nursakinah you can call me Kinar I come from Bima I'm six semester I'm student number 14411226*

A:*What is your hobby Kinar?*
Kinar:*My hobby is running and singing*
A:*Singing?What do you love your hobby? What make you interest with that hobby?*
Kinar:*I like in hobby but running is because is okay because make my body is health is sing I like is voice music*
A:*Where are you stay right now? Where you stay right now*
Kinar:*I'm stay in Gomong lama MataramKecubung 4 number 16 boarding house*
A: *What do you do when you in the boarding house?*
Kinar: *Everyday something reading book sleeping cooking blablabla*
A:*You from Bima, right?*
Kinar:*Yes I'm from bima I like bima city*
A:*What kind culture of bima*
Kinar:*Culture in Bima is Bima language culture in pacuajara in Indonesian language pacuankuda*
A:*What pacuajara looks like?*
Kinar:*Okay because a child joki riding horse is running fast horse*
A:*What make you love with Bima?*
Kinar:*I loving Bima*
A:*What make you feeling in love in Bima?*
Kinar:*I'm falling love in Bima, Bima is very very many beach, many mounts. I like beautiful beach, mount*
Data 4. ***A:****Okay mister, I will interview you about your culture and before you tell me about the culture, let me introduce yourself before like your name short name and your student number*
Jaya:*Okay okay mister my name is Rajayatul Ali Sabana, my friend usually call me Jaya, and then I'm student number 14411212, this student number, and then..*
A*: Tell me about your culture*
Jaya: Okay my culture in Lombok is you know like "BauNyale"
A*:: Yes what is it*
Jaya:*Baunyale is culture every year, every year in place in kuta beach, kuta beach like in a yes kute beach, this is the story about the baunyale in the Lombok there are queen, there are queen and there are king, the queen are very pretty beautiful like that in Lombok. This is the all of king in Lombok want to married in a queen like putrimandalike. Putrimandalike is name and then, putrimandalike is one (apamengecewakan?)mengecewakan..*
A*: Disappoint*

Jaya:*Disappointed about a king because he want must (apa , orang bijaksanagitu)*
A*: Bijaksana?*
Jaya:*Because he want not disappointed about society, society in Lombok and then putrimandalike (memutuskangitu)*
A*: Make a decision*
Jaya:*Ya, make a decision his down (terjun, terjun in mount atasgunung to in a beach terjunkepantegitu, and then before putrimandalike down in beach he said that this, when I'm down in a beach I will be a like a (cacingsejeniscacinglahsejeniscacing kayak gitu) this is many color like white, red, yellow and green this is the kind of cacing, and then when putrimandalike down in beach okay this is about culture "BauNyale" and every year all of people in Lombok together "BauNyale"inikute beach this is the culture in Lombok until now. Okay that's all for me wassalam.*

The final stage is the evaluation. The evaluation was conducted in giving the questionnaires to the students and lecturers as the learning media and materials assessor. The questionnaires for the students consists five (5) aspects a) Logical b) Simplicity c) firmness d). Completeness (completeness) e). Usefulness (function). While all statements on the questioners given to the validation consist of three (3) aspects; A) cover and content, b) learning aspect, c) language aspect. See appendix 2.

Most of assessors were assessing that the learning media and materials need to be revised to higher quality of contain (university lesson) and language must be better. Meanwhile, the students' respond on the learning media and materials 10 of them stated that the materials need to revise into higher contain, then the others said that the materials are good and easy. Most of them are also interested learning with the model that being developed.

D. Discussion

The discussion is important to explain more about the findings at point C. Since this study was dealing with ASSURE process the findings could be elaborated in some ways; 1) analyze the learners; this study was conducted with only 15 students. They were chosen because of three reasons; the students have no more motivation, no confidents and they get anxiety, when they are getting communication in English. These are because of their speaking quality, as it could be seen from the data

Data 1. ***A:****Okay, this is time for your interview please introduce yourself first.*

The speaker actually would like to say" *it's your time to introduce yourself"* but the speaker express it in wrong way.

Data 2.*Jaya: Okay, I want to interview about yourself and about your culture and then you must introduce about your full name and short name and you must call a student number, and then about culture, please start from now.*

Data 2 shows that the speaker does not understand how to produce and explain the ideas that he want to say in correct way, the true sentences that he should express is that "*I would like to ask you about your culture, and could you please elaborate it by your own words, but then, before you do it, please mention your students' number"*

Another reason why they are also chosen at this research; to have participation in examining the development of learning model. While being participated, they were demanded to give the respond of questionnaires statements related the learning media and materials.

Furthermore, before the research was conducted we formulated the standard and objective of learning. We arranged them by adopted the KKNI basic competence as it is elaborated at the findings season.

The next process is selecting media and materials. In selecting media and materials we were aware that their capability in receiving and redoing the task that given, so we took the basic standard of learning materials, and it could be seen at appendix 1.

In requiring the learners and applying the materials, we found the same capabilities in expressing, elaborating their ideas, as it was the same with the early data;

Data 3. ***A:****Okay, this is time for your interview please introduce yourself first*

This sentence was produced by different student but it is incorrect from the reduction and the structure, this data also in line with the sentences that produced by other students;

Kinar:*I like in hobby but running is because is okay because make my body is health is sing I like is voice music*
A:*Where are you stay right now? Where you stay right now*
Jaya:*Baunyale is culture every year, every year in place in kuta beach, kuta beach like in a yes kute beach, this is the story about the baunyale in the Lombok there are queen, there are queen and there are king, the queen are very pretty beautiful like that in Lombok. This is the all of king in Lombok want to married in a queen like putrimandalike. Putrimandalike is*

name and then, putrimandalike is one
(apamengecewakan?)mengecewakan..
***A**: Disappoint*
***Jaya:**Disappointed about a king because he want must (apa , orang bijaksanagitu)*

The sentences look like correct in grammatically, the redaction but if they analyzed more carefully, we will find the mistake in grammar, words and sentences redaction.

***A:**Where are you stay right now? Where you stay right now*
***Jaya:**Baunyale is culture every year, every year in place in kuta beach, kuta beach like in a yes kute beach, this is the story about the baunyale in the Lombok there are queen, there are queen and there are king,*

E. Conclusion

This first year research is an early process of the development of interview and joke learning model in speaking subject at the Faculty of Language and Art Education (FPBS) of IKIP Mataram. Since it was conducted and the subject were taken from semester two until six, this research could be concluded; 1) the implementation process is carried out in six (6) stages that started with the analysis of students who will be the participants of the limited class test. Then it continued by the formulated the standards and learning objectives, the selection of media and materials, the use of selected media and materials, the class test is limited and ends with evaluation and revision; 2) the learning model that is being developed leads the students to learn English in fun (communication full in English). 3) at the end of the development process of the early stage of this learning, lecturers and students were also invited to assessed and responded the learning media and material before they were used. The assessments are in the form of a questionnaire. The assessment results show that 1) the learning material is still basic, need to be revised 2) the use of the language should be better and accurate, 3) the cover of learning module the design should be more interesting. Meanwhile, most of the students stated the learning model is easy to understand and simple good to be used in teaching speaking, then they also interested in learning speaking with the model.

F. References

Agus Salim. 2010. *Classroom Interaction in Speaking Class at IKIP Mataram.* Unpublished.

Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K.(2010). *How learning works*: Seven research-based principles for smart teaching. San Francisco, CA: Jossey-Bass.

Agung G.A.2013. *Teachers' Strategies in Teaching Speaking to Students at Secondary Level.* Journal of English and Education. Vol. 1. N0.2.

Marriam.B and Muhammad. A. 2011 *Factor effecting Students English Speaking Skill.*Bitish Journal of art and social sciences. ISSN: 2046-9578. Vol. 2. No. 1. Britishjournal. publishing. Inc 2015. www.bjournal.co.uk/BJASS.aspx

Maryam.B and Reza.O .2014. *Technology in Teaching Speaking Skill.*Acme International Journal of Multidisciplinary Research. Vol. II. N0.IV. ISSN: 2320-236X. April 2014. Available at http://www.aijmr.net

McKay,Lee,Sandra. 2006. *Researching Second Language Classroom.* New Jersey:LawrenceErlbaumAssociates Inc.Publishers

Michalak, Rachel. 2011 *"ASSURE Model - Learning Theories.*" ASSURE Model - Learning Theories ETC547 Spring 2011. N.p., n.d. Web. 18 June 2015. <https://sites.google.com/

S.Chee Choy and Pau San O.2012. *Reflective Thinking and Teaching Practices: a precursor for incorporating critical thinking into classroom.* International Journal of Interaction. Vol. 5. N0.1. eISSN: 1308-1470. pISSN: 1694-690X. Januari 2012

S. Mohamed Yunus. 2015 *"Lesson Plans Using ASSURE Model."*Lesson Plans Using ASSURE Model. N.p., n.d. Web. 18 June 2015. <http://www.academia.edu/6755099/Lesson_Plans_using_ASSURE_Model>.

Usman Kasim. 2004. *Classroom interaction in the English Department Speaking Class at state University of Malang.* Jurnal ilmu Pendidikan. Oktober 2004. Jilid 11. No. 3

Vrasidas, C. (2002). *A systematic approach for designing hypermedia environments for teaching and learning*. International Journal of Instructional Media 29(1). Email: cvrasidas@cait.orghttp://www.cait.org/vrasida

Developing EFL Critical Reading Syllabus and Materials for Student of the English Department – IKIP Mataram

Fathurrahman Imran[1], HeriHidayatullah[2], Edi Firman[3]
IKIP Mataram[1], IKIP Mataram[2], IKIP Mataram[3]
fathurrahmanimran@ikipmataram.ac.id,[1],
herihidayatullah@ikipmataram.ac.id.[2], firmaneddy@gmail.com.[3]

Abstract

The demand of a new model of syllabus and materials were required by the launching of KKNI-based Curriculum in Indonesia particularly at the English department of FPBS-IKIP Mataram. Due to, the students' needs and learning characteristic became the purpose of this current research.A qualitative research had been conducted to find out the data needed by which two kinds of questionnaires were administered.The data obtained from the instruments were analyzed qualitatively (Likert scale). From 132 respondents, the results dealt with the learning characteristics showed that the audio was 19.69%, the visual was 50.75%, and khinesthetics was 29.54%. In relation to the students' needs, there were four aspects to be considered 1) necessities in which most of the students' topic interest was abouteducation (72%), culture (63%), and social life (45%).In adition, the whole critical reading sub-skills had to be covered; 2) weaknesses in which the students reading ability were categorized into good but their current critical reading skills was not good because of some obstacles; 3) the teaching critical readingobjectives were divided into two namely external and internal sub-skills in which the students expected to have it unless grammar mastery; and 4) classroomactivities in which the respondents tended to see teachers as all roles but Class controllers. Meanwhile, the students' role as all roles but as knowledge receivers. The critical reading tasks were not loved to be done only in large group (11%). Thus, it could be concluded that the students needed critical reading syllabus and materials that covered the whole objectives and three topics interest with the settled teachers and students' role.

Keywords:*KKNI-based curriculum, EFL critical reading, syllabus, material*

A. Introduction

The term "critical" does not mean negative in any context but it is closest in meaning to the term "evaluative". Thus, critical reading refers to the ability of evaluating before making decision in the activity of reading which is undoubtfull can increase the students' social process and effect on words choice in spoken and or written skills (Universitesi, 2014:133). In addition, considering the variety of information presented today either printed or non-printed media, anyone specifically college students are required to be able to differentiate between the truth and opinion.Basri (2013) stated that there are two reasons why the students must be critical, firstly because of the various types of information received nowadays either

its sources or essences, and secondly because of the students as peoplepower who must be provided with a sufficient ability to think in order that they can improve themselves on their own disciplines.

Reading in a critical way needs the readers' strategies for the sake of obtaining the message of the author before coming onto the readers' conclusion. One of the effects of critical reading strategies is on the students' vocabulary retention (Khabiri&Pakzad, 2011:73).

In relation to this current research, all effective teaching techniques and strategies that displayed the readiness of the students in acquiring the critical reading skills or their critical reading profile wasinsufficient since they have to be provided with critically challenging texts (Ghajar&Kafshgarsouteh, 2011:26). In addition, much theories mention that one of the fundamental aspects to be provided for the sake of teaching learning process is the teaching materials. Due to,Errington and Bubna (2015) stated that the textbook could reinforce underdeveloped students' epistemology through limitations of content and position as passive recipients of an authoritative version of oversimplified knowledge. In further, Richard (2001: 251) comments that 'instructional materials generally serve as the basis of much of the language input that learners receive and the language practice that occurs in the classroom'. However, it is important to be taken into account that there are some types of textbook, two of them are teachers-made textbook and ready-made textbook. In relation to the ready-made textbook, Swan (1992) in Hutchinson & Torres (1994) warned that it seems difficult to find out the textbook that can absolve teachers of responsibility in the day-to-day decisions like what and how to teach it. To the researchers' opinion, it would be best textbook to be used in classroom setting when the educators developed their own textbook. They also assumed that the teaching materials used sometimes were not appropriate with the students' needs and characteristics. Due to the fact that the critical reading lecturers adapted materials from various resources to be used in the teaching learning process,this current research produced a textbook for students based on their needs and characteristics.

Another important thing to be considered, beside teaching materials,was the available of syllabus, in which its content is more specific and more concrete than curriculum (Krahnke, 1987:2).The importance of syllabus specifically in Indonesia could be seen from accreditation files, in which it becomes one of the eight standards to be required. In addition, its importance also can be seen from its purpose, which serves three major roles, as a contract, as a permanent record, and as a learning tool (Parkes& Harris, 2002:55). However, the absence of syllabus in the teaching learning process might lead the students not to achieve the learning goals that had been developed by the institution.The lecturers also might choose irrelevant teaching materials to be taught. The fact showed that the development of

KKNI-based curriculum had been done in 2015. Due to, the researchers assumed that there might be no universities especially the English department of FPBS IKIP Mataramdeveloped syllabi particularly for critical reading course.

In accordance with the above explanation, this current research proposed a syllabus for critical reading course, which was developed based on KKNI-base curriculum along with a critical reading textbook for students by considering their needs and characteristics.

At last, producing those two products was urgent to be done through this current research in order that the graduations could compete in Asian Economy Society or MEA, which not only required their English skills but also their skills in making decision, giving logical reasons, and other critical reading skills.

One of the important aspects in the educational activity is curriculum. it is supposed to be importance since it focuses on determining what knowledge, skills, and values students learn in school, what experiences should be provided to bring intended learning outcomes, and how teaching and learning in educational systems can be planned, measured, and evaluated (Richards, 2001). Due to from the three focuses of curriculum, there would be three components that must be consider namely the learning goals, contents, and methods.

CR Syllabus

Syllabus is not identical with a curriculum. Krahnke in 1987 wrote that there was unclear distinction between the two terminologies since the curriculum includes syllabus but not vice versa. The syllabus will be the parameters of curriculum therefore it will be more specific and more concrete for instance a curriculum may specify only the goals (what the learners will be able to do at the end of the instruction). It will be the job of syllabus to specify the content of the lessons used to move the learners toward the goals.

In ELT, there are six different types of syllabus namely a structural or formal syllabus, a notional/functional syllabus, a situational syllabus, a skill-based syllabus, a task-based syllabus, and a content-based syllabus (Krahnke, 1987:10-12). The three types of syllabus, structural or formal, notional/functional, and situational, emphasize on form. However, the three remain syllabus emphasize on meaning. Furthermore, the six types emerged because of the theory of language.

The teaching practice between secondary and tertiary school levels in the Indonesian context is different. The distinction might be seen from the instructional methodology being implemented. In accordance to this distinction, there will be two terminologies (pedagogy and andragogy) used to describe how they differ from each other under four assumptions (Monts, 2005:2). The pedagogyviews the learners as dependent and the teacher as the only one who determine the teaching materials. However, the andragogy sees that there is a natural maturation due to the students have to move from dependency onto increasing self-directness. Next, in

pedagogy, the validity of the learners' previous experiences is less taken into consideration due to they rely on the teachers' experience, textbook, or other instructional aids. On the other hand, andragogy views the learners' experience are primary, therefore the teaching and learning process is mostly done by utilizing experiential techniques. Further, pedagogy assumes that the students are ready to learn what society says that they have to learn. Meanwhile, andragogy asserts that they are ready to learn when they experience a need to learn, therefore they should focus on life-application categories and should be ordered based on their needs. At last, pedagogy views that learning has future orientation due to what is being learnt will be useful in the future times. However, andragogy sees education as a process of developing competencies. Thus, the goal is to learn something that can be applied to get a better life tomorrow.

KKNI

The process of curriculum development in the Indonesian context, particularly at the English Department of FPBS IKIP Mataram,has been changed since 2015 following the government's instruction.Due to, as one of the teaching staffs, the researchers intend to develop a syllabus for one particular subject that is critical reading. In developing the syllabus, the basic considerations are the curriculum itself and the students' needs.

KKNI as the basis for developing syllabus in this current research is chosen under twofundamental reasons. The first, a syllabus should be derived from curriculumand the graduates are able to compete in national level at this post-millennium era.

Critical Reading

Theoretically, the general purpose of critical reading is to be able to make appropriate judgements (Khabiri&Pakzad, 2012:78), to understand how writing persuades, and to determine whether one should celebrate or undo the text (McNeil, 1992:51), and to analyze, synthesize, and evaluate texts (Andreani, 2010:iii; Carnine,1990:313). In order get the critical reading skills, some activities can be done, for examples, skimming, scanning, paraphrasing, summarizing. These activities are commonly trained through reading strategies. Beside those activities, the top-down and bottom-up approaches can also be introduced to the students.

In conclusion, it is to achieve the goal of critical reading, the readers should start from the simplest to the highest cognitive system (BukuKurikulumPendidikanTinggi, 2014). In further, there are three well-known taxonomies used to explain such cognitive system namely Bloom (1956), Anderson and Krathwol (2002), and Marzano (2009). Each of these have their own strengths and characteristics.

Needs Analysis

Needs analysis is paramount in ELT curriculum and materials development. Wong & Wu in 1998 said that the rationale for the course has been heavily influenced by the findings of a needs analysis. In line with Wong & Wu, Richards (2001:51) uttered that the needs analysis in language teaching is really necessary when the curriculum planners intend an English teaching program for special purposes (ESP). Due to, theresearchers of this current research in developing the syllabus and materials should consider the research findings that will be conducted at the first year research.

In analyzing the learners' needs, it is very important for the researchers to see and consider the classification of needs, which is divided into two namely subjective and objective (Brindley, (1984:149, via Nunan, 1999). The subjective needs are the learners' needs, which cannot be observed easily by the teachers, even stated by them. Meanwhile, the objective needs are the needs, which can be observed by the teachers in the form their individual data including their language proficiency and their pattern of language use.

B. Method

This current research aimed at producing certain products, syllabus and textbook. The due two productswere developed based on needs analysis conducted in the early research. Due to, the appropriate research design wasEducational Research and Development (R&D) proposed by Borg and Gall (1983:775).The R&D required the researchers to conducts some steps. They are1) studying research findings pertinent to the product to be developed; 2) developing the products based on these findings; 3) field testing it in the setting where it will be used eventually;4) revising it to correct deficiencies found in the field-testing stage; and 5) the product meets its behaviorally defined objects.Due to theproducts of this current research would be used at the fourth semester students of the English Departmentof Faculty of Language and Art Education IKIPMataram. Therefore, the subjects would be taken from that institution.

The model of this current research was intended to use the ten major steps of R & D cycle proposed by Borg and Gall(1983:775). However, the researchers adapted them in order to be appropriate with their development needs. Due to, the developmentsteps of this current research are 1) early research (needs analysis), 2) development of products, 3) preliminaryfield-testing, 4) products revision, 5) main field-testing, 6) products revision, and 7) final products. The model of the development can be seen in diagram 3.2.

The first step of this development is conducting research to obtain information mainly about the students' perception on the critical reading, the learning context, the teachers' role in facilitating instruction, and reviewing the literatures. The data in this step will be in the form of quantitative and qualitative since the instruments

that will be administered are questionnaire, observation sheet, and interview. The data from questionnaire will be analyzed using Likert Scale while the other data from other instruments will be analyzed qualitatively as suggested by Cresswell (2012). The diagramis displayed below.

In the data display, the researchers will figure out the data in the form of words. The displaying data will be started when they begin color-coding and transcribing into drawing conclusion.In the data reduction, the researchers will use color-coding to parts of the text in the observation sheet, but in the interview, they will do transcribing first then followed by using color-coding. After doing color-coding and transcribing, they begin to explore it to obtain the general sense (memoing ideas, thinking about the organization of data, and considering whether they need more data). In addition, the researchers will reduce the data resulting from color coding and transcribing onto smaller number of themes.In drawing a conclusion, the researchers will firstly see the research questions and they will examine and develop the data in detail or themes to describe what they will have learnt. The conclusion will be written narratively, by which they summarize the findings from their data analysis. In order that the researchers feel sure on the accuracy of the findings, they plan to do triangulation and member checking.

The second step is the productsdevelopment bywhich it refers to develop the syllabus and materials. The syllabus will be developed by considering the findings obtained at the first year research and for the materials development, the researchers will consider both findings obtained at the first and the second year researches.

The third step is the preliminary field-testing. It will be done by asking some experts to validate the developed products. The aspects of the products that will be validated by three different experts with different jobs are the contents, organization, and design.

The next step is the products revision. This phase will be done by considering all information obtained from the experts including their comments, suggestion, and evaluation for the draft of products.

The fifth step is the main field-testing by which the revised draft of products will be implemented in a classroom setting. It also involves observation and reflection on how the products are applicable and appropriate to be used in classroom. In addition, the weaknesses on the use of the materials are jot down and become the main consideration in the revision. The implementation of the products will be trial out through making lesson plans which in turn to be implemented in classroom setting.

The last step is the final products. Before publishing and distributing the products, there will be some revision conducted by which the researchers consider the results of the main field-testing for both small and large groups of students.

C. Findings and Discussion

The findings of this current research were obtained on the basis of the analysis of the collected data firstly derived from two questionnaires.

Findings

Data on Needs Analysis

There were four aspects to be focused on in this part namely the students' necessities on critical reading, weaknesses on critical reading, the objective(s) of teaching critical reading, and the required classroom activities. The following were the detail raw data obtained from the instruments of this current research and it had been analyzed using *Likert* scale.

Table 1. the students' topic interest and expectation on having critical reading sub-skills

No	Items		Percentage			
			VN	N	NN	NVN
1	Topic interest on					
	a.	Culture	63	29	8	0
	b.	Social life	45	49	4	2
	c.	Education	72	28	0	0
	d.	Politics	0	4	39	57
	e.	Law	0	0	48	52
2	Expectation on having CR sub-skills					
	a.	Giving logical reasons	44	51	5	0
	b.	Paraphrasing and drawing conclusion	67	37	0	0
	c.	differentiating among facts, non-facts, and opinion	53	47	0	0
	d.	Evaluating the author's conclusion	46	64	0	0
	e.	Determining the evidence, trustworthiness, and faulty of arguments	29	56	11	4

The above table described two items regarding the students' necessities on critical reading. The first item dealing with the topic interest to be discussed by the students during the teaching learning process and or to be displayed on the students' textbook. The students' response showed that they were highly needed to talk about culture, social life, and education in the critical reading class. However, they did

not need to talk about politics and law. From the three topics, the students' highest response fell into education (72%), culture (63%), and social life (45%).

The second item was dealt with the students' needs on the required critical reading sub-skills. These sub-skills became the researchers' focus when developing the critical reading syllabus and textbook. The data showed that the students needed all sub-skills to be taught and or presented in the textbook.

Responses regarding the students' present reading ability, critical reading ability, and obstacles on critical reading were showed on the table below.

Table 2. the students' present ability on reading and critical reading and obstacles on having critical reading sub-skills

No	Items		Percentage			
			VG	G	NG	NVG
1	Critical reading prerequisites					
	a.	Reading Comprehension I	39	54	7	0
	b.	Reading Comprehension II	31	56	10	3
	c.	Reading Comprehension III	23	48	21	8
	d.	Extensive Reading	19	71	5	5
2	Current critical reading ability					
	a.	Drawing a conclusion	12	33	49	6
	b.	Evaluating issues	7	13	58	22
	c.	Distinguishing facts, non-facts, and opinion	17	19	47	17
3	Obstacles on having CR sub-skills		VA	A	NA	NVA
	a.	Finding multi point of views	61	31	8	0
	b.	Difficult to paraphrase and draw a conclusion	58	37	5	0
	c.	Insufficient knowledge on the issue	49	41	6	4
	d.	Difficult to scan the texts	19	27	52	2
	e.	Limited vocabularies to explore ideas	26	28	45	1

The above table shown that the students' present reading ability was mostly in good level (Reading Comprehension I (54%), Reading Comprehension II (56%), Reading Comprehension III (48%), and Extensive Reading (71%). However, the highest percentage fell onto Extensive Reading followed by Reading Comprehension II then I, and then III. The students who got very good score were Reading Comprehension I, II, III, and Extensive Reading. Moreover, only a few of them who were in not good and not very good score.

Regarding the students' current critical reading ability, the students' response was dominated in not good category. It could be seen from table 5.2 that the

students' ability in drawing conclusion was 49%. However, only a few of them who could be categorized into good (33%), very good (12%), and the remain percentage fell onto not very good (6%). It was not far from the students'ability in drawing conclusion, their ability in evaluating issues was mostly categorized in not good (58%) and (22%) of them in not very good level. The remain percentages fell onto good and not very good levels. Dealing with their own ability in distinguishing facts, non-facts, and opinion were also in not good category (47%) followed by good (19%).

The respondents of this research had obstacles on critically read English text mostly on finding the multi points of view (61%), paraphrasing and drawing conclusion with no bias (58%), insufficient knowledge on the issue (49%), limited of vocabularies (26%), and scanning the text (19%). From the table, there were only two items, limited of vocabularies and scanning the text, that supposed not to be dominant obstacles.

Regarding the critical reading objectives, the researcher devided into two along with the students' response which could be seen from the following table.

Table 3. Other interference made in critical reading class

No	Items		Percentage			
			VA	A	NA	NV A
1	Non sub-skills goals					
	a.	Vocabulary mastery	25	48	13	14
	b.	Writing skills	39	32	19	10
	c.	Grammar mastery	16	22	44	18
2	Sub-skills goals					
	a.	Knowing the English texts organization	21	38	40	1
	b.	Producing new ideas in the form of spoken and written	48	31	13	8
	c.	Synthesizing others ideas	71	21	8	0
	d.	Drawing good logical conclusion	79	19	2	0

It could be seen that the students had variety response to these two items. In term of the students' vocabulary mastery, they mostly (73%) agree and very agree however 27% of them were not (very) agree. It was the case dealing with their writing skills but their grammar mastery by which they did not agree (62%).

Different from non sub-skills, the sub-skills ones were dominated by those who were agree and very agree to the whole sub-skills. Dealing with knowing texts organization (59%), Producing new ideas (79%), Synthesizing (92%), and Drawing good logical conclusion (98%).

There were three aspects of teaching became the researchers' focus namely the teachers' role, the students' role, and learning model. The following table was the detail response taken from the respondents.

Table 4. The role of teachers and students in classroom and the learning model

No	Items		Percentage			
			VA	A	NA	NVA
1	Teachers' role					
	a.	Class controllers	11	27	34	28
	b.	Class organizers	41	21	30	2
	c.	Class collaborators	52	48	0	0
	d.	Information providers	60	40	0	0
	e.	Feedback givers	48	52	0	0
	f.	Class facilitators	35	49	16	0
2	Students' role					
	a.	Knowledge receivers	9	21	67	3
	b.	Knowledge informants	41	59	0	0
	c.	Knowledge providers	49	51	0	0
3	Learning model					
	a.	Self-working	18	22	33	27
	b.	Work in pair	36	64	0	0
	c.	Work in small group	48	52	0	0
	d.	Work in large group	7	4	67	22

Regarding the teachers' role, the respondents (62%) did not (very) agree when the teachers as the controllers. However, most of their response showed that they (very) agree when their teachers became Class organizers (62%), Class collaborators, (100%), Information providers (100%), Feedback givers (100%), and Class facilitators (84%).

Talking about the students' role, they really wanted to be the knowledge informants (100%) and providers (100%) rather than the knowledge receivers (30%).

In term of the teaching learning model applied in classroom, the respondents wanted to do the critical reading tasks by theirselver (40%), in-pair (100%), in small group discussion (100%), and in large group (11%).

Data on Learning Characteristics

The data found from this second type of instrument dealing with the students' learning characteristics.

Table 5. Data about the students' learning style in critical reading class

No	Respondents	Types of Learning			Remarks
		Audio	Visual	Khinesthetics	
1	132	26	67	39	-
Percentage		19.69	50.75	29.54	-

The table above showed that from 132 respondents, there were 26 or 19.69% who preferred learning something using picture or other visual media. However, the highest learning style fell on visual by which 67 out of 132 or 50.75% preferred to learn something through hearing and speaking. Moreover, there were 39 respondents or 29.54% who loved to be given something to accomplish.

Discussion

It had been elaborated that one of the aspects of needs analysis was dealt with the students' necessities. This kind of aspect focused on finding the students' topic interest to be discussed during the teaching learning process. The researchers found three main topics namely education, culture, and social life. In term of education, there was 72% of the students were interestedon it. That percentage indicated thatthe dominant materials to be taught and developed was about education followed by culture, and social life. In addition, by having the percentage of the three main topics interest, the students were really aware on their future carreer as the teachers alongwith their own coomunication, relationship, and adaptation with their society.

On the basis of the data found, the students' strenght was on the prerequisites of critical reading and it indicated that they were ready enough to learn the critical reading skills. However, when they were asked about their current critical reading ability, they had in low category on some sub-skills. Due to the objective(s) of teaching critical reading should cover the whole sub-skills with the required classroom activities.

D. Conclusion

Regarding the data analysis, the researchers could conclude that the students were ready enough to learn critical reading and the critical reading syllabus and materials should cover the whole objectives and three topics interest with the settled teachers and students' role**.**

E. References

Andreani, S. 2010. *Critical Reading.Unpublished Handout*.English Department, Faculty of Letters, State University of Malang.

Basri, Februari 2013.*UrgensiMelatihSiswaBerpikirKritis. Radar Mandalika,* p.8.

Borg, Walter R. and Gall, Meredith D. 1983. *Educational Research: An Introduction*. New York: Longman

Carnine, D. et.al. 1990. *Direct Instruction Reading*. (2nd Ed.). Columbus: MerillPublishng Company.

Cresswell, J., W. 2012. *Educational Research*: *Planning, Conducting and Evaluating Quantitative and Quantitative Research*. Boston. Pearson education

Errington, Alison. &Bubna, David. 2015. Management by Textbook: The Role of Textbooks in Developing Critical Thinking. *Journal of Management Education*. 39 (6): 774-800.

Ghajar, S. G. &Kafshgarsouteh, M. 2011. Recovering the Power Inside: A Qualitative Study of Critical Reading in an Iranian University.*Turkish Online Journal of Qualitative Inquiry*.2 (3). 26-39

Hidayatullah, Heri. 2015. *Utilizing Questioning Technique to Improve the Students' Comprehension Skills on Expository Texts.Journal of English Language Teaching (Jo-ELT)*.3 (1).17-22.

Hutchinson, T. & Torres, E. 1994.The Textbook as Agent of Change.*ELT Journal*.48 (4). 315-328

Khabiri, M. &Pakzad, M. 2012.*The Effect of Teaching Critical Reading Strategies on EFL Learners Vocabulary Retention.The Journal of Teaching Language Skills (JTLS)*. 4 (1) Spring, 73-106

Krahnke, K. 1987. *Approaches to Syllabus Design for Foreign Language Teaching*. New Jersey. Prentice-Hall, Inc.

McNeil, J.D. 1992.*Reading Comprehension: New Directions for Classroom Practice*. (3rded.). New York: HarperCollins Publishers.

Monts, Bob. 2005. *Andragogy or Pedagogy: A Discussion of Instructional Methodology for Adult learners*. http://www.coe.ilstu.edu/scienceed/jinks/ci538/papers/monts.htm. Accessed on 16th April 2016.

Nunan, D. (1999). *Second Language Teaching & Learning*. Boston. Heinle & Heinle Publisher.

Parkes, Jay & Harris, Mary.B. 2002. The Purposes of a Syllabus. (online). http://www.google.co.id/url?sa=t&source=web&rct=j&url=http://jan.ucc.nau.edu/~coesyl-p/syllabus_cline_article_2.pdf&ved=0ahUKEwjhkq_wpoTMAhUkGKY. Accessed in 10 April 2016.

Richards, J.C. 2001. Curriculum Development in Language Teaching. Cambridge. Cambridge University Press.

Tim Kurikulum & Pembelajaran Direktorat Pembelajaran dan Kemahasiswaan, Dirjen DIKTI, Kementerian Pendidikan & Kebudayaan. 2014. BukuKurikulum Pendidikan Tinggi. Direktorat Pembelajaran dan Kemahasiswaan, Dirjen DIKTI, KementerianPendidikan&Kebudayaan

Universitesi, Akdeniz. 2014. Critical Reading in EFL in Turkish High School Context. *International Journal of Language Academy*.vol.2/3 Autumn. 133-156.

Implementing Collaborative Learning Strategy By Using Mind Mapping To Increase Student'S Activeness And Understanding In Syntax

Habiburrahman[1], Rahmat Sulah Hardi[2], Baiq Desi Milandari[3], Sri Maryani[4]
Universitas Muhamadiyah Mataram[1], Universitas Muhamadiyah Mataram[2],Universitas Muhamadiyah Mataram[3], Universitas Muhamadiyah Mataram[4]
habibpemuda@gmail.com.[1]

Abstract

Collaborative learning able to provide change the successfulness of learning practices. As a technology for intstruction, collaborative learning involve student's activeness to participate and minimalize the individual differences. Collaborative learning strategy is supported by learning strategy using mind mapping. In order to design the lecturing material in one semester by using mind mapping there are some steps that must be don't by lectures. The purpose of this research is to describe the collaborative learning process by using mind mapping to increase the students activeness and understanding in syintax of Indonesia language program. This research used descriptive qualitative approach. Research object were 26 student at the fourth semester ini Indonesia language program. Method of collecting data were: observation, test, and documentation. Interactive analysis was used to analyze data. The result of this research showed that collaborative learning process by using mind mapping can increase students activeness and understanding in syntaxis. It prored by several reasons: 1) there is learning material prepared by student in mind mapping from that world be discussed, 2) there is significant effect of student activeness and understanding by providing learning material, learning media, which able to train student thingking such as: observe, identify, analyze, find a new thing, communication, and conclude the grammatical concept based on mind mapping and supported by a set of learning such as: lesson plan, syllabus, method, learning media, sources of learning, assessment, and then make chapter design and lesson design which is prepared by the lecturer.

Keywords:*collaborative learning, mind mapping, students, activeness and understanding*

A. Introduction

When talking about the quality or quality of education is inseparable from how the process of the education system is running including a more profound is how the learning occurs in the real classes in general. To overcome the condition of education quality improvement, in fact a lot of efforts that have been implemented including efforts undertaken to improve the quality of pre-service teachers. However, these programs seem to be less able to meet the real needs faced by teachers in the classroom (Joni, 200). Training programs that have been implemented tend to provide only insights in the form of information (lectures) and very little that touches the real class situation (Japan International Cooperation Agency [JICA], 2003). Therefore, preachers in Indonesia based on practical teaching needs from the classroom through collaboration with other teachers and it is done sustainably

Furthermore, in an effort to improve the quality of national education in 2005 the government has had legal payments in improving the quality of education by

issuing Law No. 14 on Teachers and Lecturers and Government Regulation No. 19 of 2005. Law No. 14 of 2005 requires adjustment of education and coaching teachers as professions. The impact of the law is, on the one hand, the work of teachers will earn higher rewards than ever before, but on the other hand the confession has to comply with a number of requirements to achieve minimum standards of professionals. Recognition of teachers as professionals will be provided when teachers have the required academic qualifications, competencies, and educator certificates (Article 8)

According to the description, the purpose of this research is to describe collaborative learning process with concept map to improve students' activeness and understanding in Indonesian language syntax. Collaborative learning can provide opportunities to lead to the success of learning practices. As a technology for instruction, collaborative learning involves the active participation of students and minimizing differences between individuals. Collaborative learning has added to the momentum of formal and informal education from the two forces that meet: 1) the realization of practice, that living outside the class requires collaborative activity in real life; 2) foster awareness of social interaction in the effort to realize meaningful learning.

The idea of collaborative learning stems from a philosophical perspective on the concept of learning. To be able to learn, one must have a partner. In 1916, John Dewey wrote a book "Democracy and Education" whose content was that the class was a reflection of society and functioned as a laboratory to learn about real life. Dewey's main ideas about education (Jacob et al., 1996), are: 1) students should be active, learning by doing, 2) learning should be based on intrinsic motivation. 3) knowledge is developed, not fixed, 4) learning activities should be in accordance with the needs and interests of students Education should include learning activities with the principle of mutual understanding and mutual respect to each other, meaning that democratic procedure is very important 5) Learning activities should be related to the world real and aims to develop the world

From the description above, we can know the things emphasized in collaborative learning is how to make students in group learning activities occur the cooperation, interaction, and exchange of information. In addition, it can be concluded that the purpose of collaborative learning is as follows: 1) Maximize the process of cooperation that takes place naturally among the students. 2) Creating a student-centered, contextual, integrated, and cooperative atmosphere of learning. 3) Appreciate the importance of student authenticity, contribution, and experience in relation to learning materials and learning process. 3) Giving opportunities to students become active participants in the learning process. 4) Develop critical thinking and problem-solving skills. 5) Encourage the exploration of lesson materials that involve multiple points of view. 6) Appreciate the importance of the social context for the learning process. 7) Growing mutually supportive and respectful relationships among students, and among students and teachers. 8) Build the spirit of lifelong learning.

This collaborative learning strategy is supported by learning strategies with concept maps. To design lecture materials for a semester in the form of a concept map, there are some steps that are absolutely done especially for beginner lecturer, lecturer assistant or lecturer. 1) Brainstorming or brainstorming ideas, 2) Determine 8-12 major (major) or major concepts (topics), 3) Writing and organizing concepts

in one form of drawing, 4) Connecting concepts with lines, Label over the arrow line

The first step of doing Brainstorming or brainstorming, you try to pour all the topics or concepts related to course material freely, freely without the burden of afraid of wrong. Like when doing Brainstorming or brainstorming for the course of Literary Criticism / Naqd al-Adab, the lecturer devotes as much as possible all the concepts, ideas, related topics.

The second step, after doing Brainstorming or brainstorming, you select the concepts or topics from twenty-eight to about 8 to 12 larger concepts. In the selection of concepts, there may be some concepts that can be looked for type or a larger concept. The concept of novels, short stories, drama, poetry and prose can be made into one larger concept of literary concepts. As a result of selection of larger concepts.

The third step, after selecting or sorting the concepts into larger ones consisting of about 8 to 12 concepts, you draw a concept map in one page. If you see a map of the earth that contains the names of big cities, then in the concept map you see the names of the concept be

Fourth step, after drawing a concept map, you are marking a directional relationship between concepts as you find on a map of the earth that contains the connecting line between the names of big cities. In concept map you see the arrow relationship between big concept names, as follows:

The fifth or final step, after marking a directional relationship between the concepts, you absolutely give meaning to the connecting line or a label above the arrow. This label explains the nature of the relationship between one concept and another. After all arrow lines have labels, a concept map is declared as a starting draft

B. Method

In this research, the researcher uses qualitative research method. The research of qualitative type aims to describe the data as it is. In this case, the researcher has no control over the direct manipulation of the independent variables (Sukardi, 2004: 24).

The subjects used as data sources in this study are students of semester IVA Indonesian Language and Literature Education Study Program amounted to 26 people. The implementation plan of Lesson study was conducted in three cycles, namely cycle I, II, and III. Each cycle consists of three stages: Plan (Plan), Do (perform), and See (reflecting) that is continuous and never-ending (continuous improvement). The stages will be described in detail as follows

1) The first step in Lesson Study starts from planning (Plan). Some people dosendi Prodi Language and Literature Indonesia plan a model that will be implemented in the learning of Indonesian language syntax. The lecturer of the syntax lecturer as the model lecturer and 7 lecturers as the observer gives input related to the lesson plan. Plan implemented in every cycle implemented with the following schedule: (1) plan cycle I held on Sunday, July 9, 2017; (2) cycle II plan implemented on Saturday, July 15, 2017; (3) plan cycle III is held on Thursday, July 9, 2017.
2) The second step in the Lesson Study is the implementation (Do), that is to implement the design of learning that has been formulated together in the real

class. In this activity, one of the educators acts as a model lecturer, while the other lecturer acts as a observer (observer) of learning. Unique Quality Control Faculty (UKMF) and faculty leaders and Tutors are involved in this activity as a guide for learning activities and observers. Do (implementation) carried out in every cycle implemented according to the schedule as follows: (1) do cycle I held on Monday, July 10, 2017; (2) do cycle II is held on Monday, July 17, 2017; (3) do cycle III is held on Monday, July 24, 2017.

3) The third step in Lesson Study is to do Reflection (See). After the lesson is completed, the discussion is held directly between the lecturers of the teaching model and the observer guided by the tutor or the person appointed to discuss the learning activities that have been implemented. See (reflection) is carried out in every cycle implemented according to schedule do (implementation) as follows: (1) Seesiklus I held on Monday, July 10, 2017; (2) See cycle II was held on Monday, July 17, 2017; (3) See cycle III was held on Monday, July 24, 2017.

Methods of data collection using observation, tests and documentation.

The method of qualitative data analysis in this study consists of three activities that occur simultaneously, namely data reduction activities, data presentation, and data verification or draw conclusions. The three activities are interacting each other, starting from data collection and ending on the completion of research report writing

C. Discussion

As mentioned above, to overcome the weaknesses in the learning process that is less emphasized on the activity of students in following the lecture then we need to look for alternative models that offer other in-service training model that focuses more on the effort of lecturers empowerment according to the capacity and the problems faced by each of them. respectively. The model is a Lesson Study that is a model of professional education through collaborative learning and continuous learning based on the principles of kolegalitas and mutual learning to build learning communities. Thus, Lesson Study is not a method or learning strategy but Lesson Study activities can apply various methods / strategies / learning models that are appropriate to the situation, condition, and problems faced by the lecturer.

Lesson Study for syntactical subject with title Implementation of Collaborative Learning Strategy with Concept Map to Increase Activity and Student Understanding at Indonesian Language Syntax is carried out in three stages: Plan (Plan), Do (implement), and See (reflect) ongoing. In other words Lesson Study is a way of improving the quality of education that never ends (continuous improvement).

Improving the quality of education through Lesson Study starts from the planning stage (Plan) which aims to design learning that can encourage students to learn in a fun atmosphere, so that the desired goals can be achieved effectively through active and creative learning activities. Good planning is not done alone but done together. Some lecturers can collaborate on this activity, so the ideas that develop are richer.

1) The first step is to plan a lesson (plan) that will be done in the classroom. This activity begins with an analysis of the problems encountered in learning. Problems can be lecture material or how to explain a concept. Problems may also involve pedagogical aspects of appropriate learning methods for effective

and efficient learning or learning facility problems, ie how to anticipate the lack of learning facilities. Furthermore, the lecturers collectively seek solutions to the problems encountered, then put into the lesson plans, teaching materials (in the form of learning media and student worksheets) and evaluation methods. Meetings often held by lecturers in the context of lesson planning led to the formation of a college or partnership between educators and other educators, so that no one feels higher or lower in rank. They share experiences and learn from each other, so through various activities in the framework of Lesson Study activities is expected to form a situation of mutual learning, the situation where the community can learn from each other.

2) The second step in the Lesson Study is the implementation of (Do) learning to implement the design of learning that has been formulated together in the real classroom. This step aims to test the effectiveness of the learning model that has been designed. In this activity, one of the educators acts as a model lecturer, while the other educator acts as an observer (observer) of learning. Faculty Leaders (Deans) or Captains may also be involved in this activity as a guide for learning activities and observers The focus of observation in Lesson Study is aimed at the interaction of learners, learners, educators, and environmental students. Observers can recording learning activities through video cameras or digital photos for documentation and further study materials. The presence of observers in the classroom in addition to collecting information is also intended to learn from ongoing learning rather than merely to evaluate the model's lecturers.
3) The third step in the Lesson Study is to reflect (See). After the lesson is completed, the discussion is held directly between lecturers who appear teaching (model lecturers) and observers guided by UKMF (Faculty Quality Control Unit) or appointed personnel to discuss the learning activities that have been implemented. Model lecturers who have appeared initiated the discussion by conveying impressions in carrying out learning activities. Furthermore, observers are asked to submit comments and lessons learned from the learning activities that have been implemented, especially with regard to the activities of learners. Of course, critics and suggestions from observers are conveyed wisely and constructively. Instead, the model lecturer should be able to receive input from observers for future learning improvements. Based on input in this discussion, the lecturer can design the next lesson that is better. In principle, everyone involved in Lesson Study activities should get lesson learned, thus building a learning community through Lesson Study.

He following will be presented in detail the results of the open lesson study syntax course as a form of Implementation of Collaborative Learning Strategy with Concept Map to Increase the Activity and Understanding of Students on Indonesian Language Syntax. In the following discussion will be presented a description of data that has been obtained in research. Description of the data referred to in this study is to provide an overview of the characteristics of the distribution of scores and research subjects for each subject studied. So in this study used the following stages:

1) Cycle I (One)

In cycle 1 consists of several observers, among others: 1) Rahmat Sulhan Hardi, M.A., 2) Dra. Titin Untari, M.Pd., 3) Siti Lamusiah, S.Pd., M.Si., 4) Baiq

Desi Milandari, M.Pd., 5) Syafrudin Muhdar, M.Pd., 6) Arpan Islami Bilal, M.Pd., 7) Ahyati Kurnia Mala Dewi, M.Pd., 8) Drs. H. Akhmad H. Mus, M.Hum.

Identity:

Model Lecturer Name : Habiburrahman, M.Pd.
Courses : Syntax
Study program : Indonesian language and literature education

Tabel: 01 Angket Evaluasi Pelaksanaan Lesson Studi dari Observer

No.	Observer	Cycle 1			
		Socialization	Plan	Do	See
1	Rahmat Sulhan Hardi, M.A.	20	23	30	28
2	Dra. Titin Untari, M.Pd.	20	25	28	30
3	Habiburrahman, M.Pd.	20	24	30	29
4	Baiq Desi Milandari, M.Pd.	22	28	29	30
5	Syafrudin Muhdar, M.Pd.	21	22	28	30
6	Arpan Islami Bilal, M.Pd.	20	26	29	27
7	Ahyati Kurniamaladewi, M.Pd.	20	20	27	29
8	Drs. H. Akhmad H. Mus, M.Hum.	21	20	30	30
Total		**164**	**188**	**231**	**233**

Table: 02 Student Assessment (Do)

No.	Student Code	Cycle 1	
		Teaching Skills	Supplies Fittings
1	BI. 1	75	24
2	BI. 2	78	24
3	BI. 3	70	24
4	BI. 4	82	33
5	BI. 5	81	29
6	BI. 6	77	29
7	BI. 7	77	29
8	BI. 8	72	29
9	BI. 9	80	26
10	BI. 10	65	24
11	BI. 11	75	19
12	BI. 12	68	22
13	BI. 13	53	22
14	BI. 14	63	23
15	BI. 15	72	26
16	BI. 16	76	23
17	BI. 17	69	21
18	BI. 18	73	25
19	BI. 19	66	21
20	BI. 20	65	20
21	BI. 21	53	16

22	BI. 22	74	27
23	BI. 23	60	23
24	BI. 24	50	23
25	BI. 25	50	23
amount		**1724**	**605**

2) **Cycle II (Two)**

In cycle 2 consists of several observers, among others: 1) Rahmat Sulhan Hardi, M.A., 2) Dra. Titin Untari, M.Pd., 3) Siti Lamusiah, M.Si, 4) Baiq Desi Milandari, M.Pd., 5) Syafrudin Muhdar, M.Pd., 6) Arpan Islami Bilal, M.Pd., 7) Ahyati Kurnia Mala, M.Pd., 8) Drs. H. Akhmad H. Mus, M.Hum.

Identitas:

Model Lecturer Name : Habiburrahman, M.Pd.
Courses : Syntax
Study program : Indonesian language and literature education

Tabel: 03 Angket Evaluasi Pelaksanaan Lesson Studi dari Observer

No	Observer	cycle 2			
		Socialization	Plan	Do	See
1	Rahmat Sulhan Hardi, M.A.	20	26	39	32
2	Dra. Titin Untari, M.Pd.	21	28	38	32
3	Habiburrahman, M.Pd.	20	28	37	31
4	Baiq Desi Milandari, M.Pd.	25	28	38	35
5	Syafrudin Muhdar, M.Pd.	24	23	45	36
6	Arpan Islami Bilal, M.Pd.	25	27	40	38
7	Ahyati Kurniamala, M.Pd.	24	26	40	33
8	Drs. H. Akhmad H. Mus, M.Hum.	20	28	38	32
Jumlah		**179**	**214**	**315**	**269**

Table: 04 Student Assessment (Do)

No.	Student Code	Cycle 2	
		Teaching Skills	Supplies Fittings
1	BI. 1	63	21
2	BI. 2	67	23
3	BI. 3	58	20
4	BI. 4	61	20
5	BI. 5	56	21
6	BI. 6	78	30
7	BI. 7	83	24
8	BI. 8	83	24
9	BI. 9	55	12
10	BI. 10	54	22
11	BI. 11	83	24

12	BI. 12	84	27
13	BI. 13	73	23
14	BI. 14	70	24
15	BI. 15	63	26
16	BI. 16	72	26
17	BI. 17	79	24
18	BI. 18	81	27
19	BI. 19	83	24
20	BI. 20	75	22
21	BI. 21	71	23
22	BI. 22	78	24
23	BI. 23	67	23
24	BI. 24	72	26
25	BI. 25	67	23
Total		**1776**	**583**

3) **CycleIII (Three)**

In cycle 3 consists of several observers, among others : 1) Rahmat Sulhan Hardi, M.A., 2) Dra. Titin Untari, M.Pd., 3) Siti Lamusiah, M.Si, 4) Baiq Desi Milandari, M.Pd., 5) Syafrudin Muhdar, M.Pd., 6) Arpan Islami Bilal, M.Pd., 7) Ahyati Kurnia Mala Dewi, M.Pd., 8) Drs. H. Akhmad H. Mus, M.Hum.

Identity:

Model Lecturer Name : Habiburrahman, M.Pd.

Courses : Syntax

Study program : Indonesian language and literature education

Table: 05 Questionnaire Evaluation of Lesson Study from Observer

No.	Observer	Cycle 3			
		Socialization	Plan	Do	See
1	Rahmat Sulhan Hardi, M.A.	20	26	39	28
2	Dra. Titin Untari, M.Pd.	21	28	38	32
3	Habiburrahman, M.Pd.	25	28	38	35
4	Baiq Desi Milandari, M.Pd.	25	28	38	32
5	Syafrudin Muhdar, M.Pd.	25	27	40	38
6	Arpan Islami Bilal, M.Pd.	32	28	43	34
7	Ahyati kurniamaladewi, M.Pd.	20	27	40	36
8	Drs. H. Akhmad H. Mus, M.Hum.	20	28	38	32
Jumlah		**188**	**220**	**314**	**267**

Table: 06 Student Assessment (DO)

No.	Student Code	Siklus 3	
		Teaching Skills	Supplies Fittings
1	BI. 1	83	29
2	BI. 2	83	30
3	BI. 3	82	29
4	BI. 4	82	29

5	BI. 5	74	25
6	BI. 6	80	26
7	BI. 7	66	26
8	BI. 8	64	20
9	BI. 9	57	20
10	BI. 10	81	24
11	BI. 11	60	22
12	BI. 12	65	21
13	BI. 13	87	28
14	BI. 14	74	26
15	BI. 15	72	28
16	BI. 16	72	25
17	BI. 17	84	25
18	BI. 18	67	23
19	BI. 19	63	22
20	BI. 20	67	24
21	BI. 21	73	23
22	BI. 22	85	28
23	BI. 23	63	23
24	BI. 24	68	21
25	BI. 25	62	19
Total		**1814**	**616**

If we look closely, the application of lesson study with the application of collaborative learning strategy with concept maps to improve students' activeness and understanding in the course of syntax The Indonesian language basically involves a group of people planning, implementing and reflecting on post-learning together, together to form a learning community that is synergistically expected to create breakthrough new breakthrough in creating innovative learning. In this way, each member of the community involved is potentially capable of self-development so that it has the independence to grow together with other members of the learning community.

The result of observer evaluation in the table can be explained about the process of implementation of open lesson study in the syntax course in 3 cycles as the result of recap of data below.

1. In cycle 1 the results of the observer show, among others: 1) Socialization(164), 2) *Plan* (188), 3) *Do* (231), 4) *See* (233),
2. In cycle 2 the results of the observer show, among others: 1) Socialization (179), 2) *Plan* (214), 3) *Do* (315), 4) *See* (269), dan
3. In cycle 3 the results of the observer show, among others: 1) Socialization (188), 2) *Plan* (220), 3) *Do* (314), 4) *See* (267).

The data shows the readiness of the lecturers in the proportion of learning is very measurable and directed to achieve the objectives of learning as expected with the Implementation of Collaborative Learning Strategies with Concept Map to Increase the Activity and Understanding of Students on Indonesian Language Syntax. Through Lesson Study activities are expected to be developed learning that can encourage students to learn actively, creatively, effectively, and fun through

learning activities that always consider the principles of learning, among others, efforts made hands-on and mind-on during the learning takes place . Learning cultivated can touch the problems associated with daily life of students (daily life). And, the learning planning tries to develop learning media based on local materials

D. Conclusion and Suggestions

Conclusion

Application of Lesson Study with Implementation of Collaborative Learning Strategy with Concept Map to Increase Activity and Student Understanding at Indonesian Language Syntax Study is divided into 3 (three) cycles. The results of the three cycles are as follows:

1) In cycle 1 the results of the observer show, among others: 1) Socialization(164), 2) *Plan* (188), 3) *Do* (231), 4) *See* (233),
2) In cycle 2 the results of the observer show, among others: 1) Socialization (179), 2) *Plan* (214), 3) *Do* (315), 4) *See* (269), dan
3) In cycle 3 the results of the observer show, among others: 1) Socialization (188), 2) *Plan* (220), 3) *Do* (314), 4) *See* (267).

Thus it can be concluded that through lesson study activities with the implementation of collaborative learning strategies with concept maps can improve the activity and understanding of students in the language of Indonesian syntax.

Suggestions

1) The lecturers should make the results of this lesson study implementation a reference to improve the effective and measurable learning outcomes in all courses.
2) Leaders at the school and college level are expected to make the results of the implementation of the lesson study as a reference to take policy in improving the quality of education in Indonesia that is based on the learners.

E. Reference

..... (2005). Law of the Republic of Indonesia Number 14 Year 2005 on National Education System

..... (2005). Government Regulation of the Republic of Indonesia Number 19 Year 2005 on National Education Standards

Sumar Hendayana., Et al. (2006). Lesson Study A Strategy for Improving Educational Proproption (IMSTEPJICA Experience). Bandung: UPI Press

Teaching Perspective of Pre-Service Mathematics Teachers

Fatimatul Khikmiyah

Universitas Muahammadiyah Gersik
fatimatulkhikmiyah@gmail.com

Abstract

The aims of this study are to describe the dominant teaching perspective of pre-service mathematics teacher at University of Muhammadiyah Gresik and to investigate whether there is a difference perspective teaching between pre-service teachers who know and are involved at lesson study and who do not. The subject of the study is pre-service mathematics teachers which are consist of 26 at lesson study class (A) and 11 at non lesson study class (B). The instrument used is online Teaching Perspective Inventory (TPI) as developed by Pratt and Colllins (2001) available at www.teachingperspective.com. The instrument consists of 45 questions which is divided into three parts and there are 15 statements each. The data analysis shows that 54,05 % of the subjects has one dominant perspective, 24,32% has two dominants perspective and the rest 21,62 % has no dominant perspectives. Meanwhile, there is a different perspective teaching of those two groups with the score of t-test or sig value = 0.037 < 0.05.

Keywords: *teaching perspective, lesson study, pre-service teacher*

A. Introduction

Faculty of Teacher Training and Education (FKIP) University of Muhammadiyah Gresik is one of the institutions that are highly committed in printing pre-service teachers. In addition to provide adequate facilities and infrastructure so that competent lecturers, the curriculum is developed and reviewed periodically in accordance with the development of the education and the rules that are set by the ministries of research, technology and higher education and the needs of the users (stakeholders). Broadly, the content of curriculum consists of science and education field. In addition, the pre-service teacher's learning experience is also a major concern because Menges (2000) states the experience of learning and knowledge during being a pre-service teacher contributes to the way they teach in the future.

FKIP, University of Muhammadiyah Gresik which one of them is Mathematics Education Department has implemented a lesson study since 2013 by the funding that is from the Ministry of Research, Technology and Higher Education. Although, the funding was only until the third year but we remain committed to implement lesson study until 2017. In its implementation, the lecturers work collaboratively in groups of 4 people for approximately 20 hours on each semester to plan learning together, teach, observe and reflect at the end of the lesson to discuss the learning process that has been implemented. Some of positive impacts that we have on the Department are: 1) learning is better planned because the lecturers also consider the advantages and disadvantages of the previous learning, 2) the lecturers' competence gradually developed in various aspects, 3) the number

of the lecturers' publications more increased than before, 4) learning instruments are fully documented.

In addition to the impact on the Department, the lecturers also often conduct a research on the impact of lesson study on students. The research finding's Fauziyah, Nur (2014) during the implementation of lesson study indicated that there is improvement of students' ability in proving the theorem through Jigsaw Type of cooperative learning model. Classroom Action Research by Khikmiyah, F (2014) shows the Peer Tutor model can improve students' mathematical communication skills both orally and written. Khikmiyah, F (2015) also shows Problem Based Learning applied to the Teachers' Profession course be able to increase the ability of high-level thinking that is in analyzing a problem. Nevertheless, no one has explained whether the implementation of the lesson study has an impact on the teaching perspective of pre-service teacher in higher education.

The Teaching Perspective is defined as what a teacher should do and how it is valuable to learners and why it is important to do (Pratt et al 1998: 10). Further, Pratt explains that there are 5 types of perspectives on teaching: Transmission, Apprentice, Developmental, Nurturing and Social Reform. Basically, every teacher and pre-service teacher has the five teaching perspectives as proposed. Even though, everyone has one or several tendencies on his teaching perspective generally. It is based on a commitment consisting of three components of action, intentions and beliefs, and it is not the same as the way of teaching. Nevertheless, the teaching perspective is considered to have a role in determining the orientation of learning. Whether the learning is carried out will be based on the theory of behaviorism, cognitivism, humanism, social learners and cognitivism.

There is a significant difference in the implementation of lesson study at University of Muhammadiyah Gresik, especially on the students of sixth semester academic year 2017/2018. There are two classes in the class of 2014 which are class A (morning) and class B (afternoon). In its implementation, lesson study is always implemented on the students of class A both in the field of science (mathematics) as well as in the subject of education. While, the students of class B has never been the object of lesson study. Besides, the students of class A ae introduced to the philosophy, principles and history of lesson study in the course of Microteaching on the even semester of academic year 2016/2017. They also conduct lesson study when composing the planning of learning intruments and implement peer teaching as well as reflection of peer teaching findings collectively. If the treatment that be given is different then the students' learning experience is too, especially if the differences are sustainable, so the researcher assumes that it will be possible for their teaching perspective is also different. Based on the background, the researcher is interested to carry out research on the teaching perspective of the pre-service mathematics teacher.

Research question

In order to this research to be more focused, the questions in this study are as follows:

1. What is the dominant teaching perspective of pre-service mathematics teacher at University of Muhammadiyah Gresik?

2. Is there any difference perspective teaching between pre-service teachers who have been the object of lesson study and not?

The Purpose of the Study

Based on the research questions, the purpose of this study are:

1. To describe the dominant teaching perspective of pre-service mathematics teacher at University of Muhammadiyah Gresik
2. To investigate whether there is a difference perspective teaching between pre-service teachers who know and are involved in lesson study and who do not?

Teaching Perspective

Some studies reveal that teaching for adult learners in universitty is complex and diverse. Nevertheless, Kember (1997) states that there are only five different perspectives on teaching in higher education substantially. Pratt & Associates (1998) define that the teaching perspective as "what is done as a teacher (when teaching) and why we think that what it does is meaningful". Furthermore, there are 5 (five) teaching perspectives: transmission, apprenticeship, developmental, nurturing and social reform.

The teachers who have the transmission perspective have a high mastery of teaching materials and they usually use time efficiently, clarify misunderstanding, answer the questions, give feedback periodically, correct mistake, summarize what has been presented and set high standards in achieving learning outcomes. The teachers who have apprenticeship perspective will show how to work competent. In the learning process, the teachers begin with something simple toward the complex and the teacher’s role in this view as an expert in their field. The teachers with the perspective of developmental consider that learning is planned and adapted to the way the learner views it. They understand how learners learn and reason about the material being studied. The teachers who have nurturing perspective think that the teachers can influence learners because they be able to achieve the success in learning if they do well, learners' learning outcomes are a result of their hard work and ability. Meanwhile, the teachers with a social reform perspective assume that effective learning is a learning which attempts to change society substantively. Deggs, David M (2008). The table below explains the philosophy and focus of the five teaching perspectives.

Table 1: Teaching Perspectives Model

Perspectives	Philosophy	Focus
Transmission	Effective learning requires a high commitment to the content or material	Proficiency on content and skills
Apprenticeship	Effective learning is the process of socializing the norms and ways of working	The investment of discipline

Developmental	Effective learning should be planned and executed based on the learners' point of view	Individual development
Nurturing	Effective learning is assumed to be something old, difficult, requires persistence, and comes from the heart	Students' happiness
Social reform	Effective learning attempts to change life in the real way	Influence on social changing

Adapted from Mahan, J.D (2012)

Furthermore, Mahan (2012) explained that the advantages and challenges must be faced by the teachers from each teaching perspective which is as follows:

Table 2. Advantages and Challenges of Teaching Perspective

Perspective	Practitioner	Advantage	Challenge
Transmission	High commitment to teach materials	Use clear learning objectives and align with the assessment	Spend a lot of time to explain
Apprenticeship (A)	Convert learners from beginners to experienced practitioners	Use the asks that help learners to achieve their competence	Explain the complicated things for beginners
Developmental (D)	Hone thinking and reasoning skills	Use questions gradually to spur learner	Choose good questions and make time to answer learners' questions
Nurturing (N)	Grow confidence	Listen to learners and create good relationship	Balance an attention and provide challenges, teaching and counseling
Social reform/ (S-R)	Provide opportunities for learners to achieve the ideal	Teaching materials relate to the life	It is difficult to assess students' learning outcomes

The teaching perspective is attached to a teacher's or pre-service teacher's commitments, actions, intentions, and beliefs. Action is defined as the routines and techniques used to involve others in the material. Intention is a statement of purpose, responsibility, commitment to learners, materials, and contexts. Meanwhile, beliefs is an understanding of the teaching perspective. (Pratt & Associates, 1998 at Deggs, D.M, 2008). To assess the perspective of one's teaching can be done with the Teaching Perspective Inventory (TPI).

The research conducted by Jarvis, S who implement TPI shows that perspective of pre-service mathematics and science teacher has a high value of transmission and developmental perspective compared to the pre-service art teacher. Further, in the college where the study is conducted learning focused on student centered learning, contructivism and in line with the process of transfer of knowledge to students. The study also shows the difference in teaching perspective by pre-service teachers is due to their different backgrounds as learners.

Factors that influence the teaching perspective

Effective teaching can be defined as teaching that leads to the development of learning achievement of learners. Coe, R et All (2014) explained that there are 6 components that influence effective teaching which are, 1) knowledge of pedagogic science, 2) quality of learning, 3) learning environment, 4) classroom management, 5) teacher belief, and 6) teacher professional behavior. One of the things that can be done to create effective learning is to assess the quality of teachers with varying judgments. Teaching Perspective Inventory (TPI) that is developed by Dan Pratt can be used by pre-service teachers to view not only their beliefs about effective learning but also their perspective on what needs to be done to create effective learning and reveal the reasons why the effort should do.

Perspectives in Indonesian dictionaries are defined as points of view or views. Joel M Charon (2010) defined perspective as a conceptual framework, assumption tool, value device and idea tool that affect a person's perceptions so that ultimately will affect one's actions in certain situations. While, Martono (2010) defined perspective as a way of looking at a problem that occurs, or point of view in seeing a phenomenon. A person's perspective on something is influenced by several factors: emotion (mentality), education and experience.

B. Method

The first objective of this study is to describe the dominant teaching perspective of pre-service mathematics teachers group who know and are involved at lesson study and who do not. While the second objective of this research is to describe whether there is a difference perspective teaching pre-service mathematics teachers. Therefore, this research is included in the type of comparative study while the results are described in descriptive quantitative.

The subject of this study is students of 6th semester in academic year 2017/2018 of Mathematics Education Department of University of Muhammadiyah Gresik, which amounted to 42 students. There are 31 students at lesson study class (A) and 11 students at non lesson study class (B).

To know the dominant teaching perspective of pre-service teachers, the Teaching Perspective Inventory (TPI) instrument which is developed by Pratt, et.al can be accessed online and free by the students in www.teachingperspective.com. This instrument is developed by Pratt and Collins (2001) and tested over 25 groups with the number of respondents exceeding 1000. It is a closed questionnaire consisting of 45 questions and divided into 3 sections which each section consists of 15 statements. The first to the third sections are consecutively themed about action, intent, and belief. After the students fill out online, they will get an analysis result about the dominance of their teaching perspective. The analysis results are presented in the form of 5 bar charts that describe the scores obtained for each type of perspective, mean score, standard deviation, dominant perspectives and recessive perspectives and explanations.

To assist the students in completing the questionnaire, the researcher gives directions and provides translation of each statement and answer from Indonesian instrument. Having obtained the dominance score of students' perspective, then the next step is to recap all scores, make groups based on the class then perform hypothesis test with t-test to see whether there is difference between the dominant teaching perspective of pre-service mathematics teachers group who know and are involved in lesson study and who do not.

C. Findings and Discussion

Findings

As explained in the previous section, the first objective of this study is to describe the dominant teaching perspective of pre-service teachers. There are 5 students of lesson study class (A) who do not fill questionnaire because they are absent so there are only 26 subjects from class A while all B-class students fill out an online questionnaire with the total of 37 students. The result of data analysis shows that there are 54.05% of students who have one dominant teaching perspective, 24,32% has two dominant perspectives while the rest 21,62% have no dominance of perspective. The description of the dominance of teaching perspective is presented in the following table.

Table 3. Teaching Perspective Dominance

Dominance Perspective	Number of Students	Percentage (%)
Single dominance	20	54,06
Double dominance	9	24,32
None of perspective dominance	8	21,62
Total	37	100

To answer the question of whether any difference perspective teaching between pre-service teachers group who know and involve at lesson study and not, so it is used t-test (independent sample t-test) by grouping pre-service teachers based kn their own class. While, mean and standard deviation from the two groups of the students score is provided in table 4 while the result of t-test is in table 5 as follows:

Table 4. Mean and Standard Deviation of Teaching Perspective Scores

Group Statistics

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
RATA	LESSON STUDY	26	36.3538	2.15504	.42264
	TANPA LESSON STUDY	11	34.0000	4.49444	1.35512

Table 5 Analysis Result of t-test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
RATA	Equal variances assumed	3.827	.058	2.171	35	.037	2.35385	1.08435	.15250	4.55519
	Equal variances not assumed			1.658	11.995	.123	2.35385	1.41950	-.73914	5.44683

Based on the output on the Levene's test, it is found that the sig = 0.058> 0.05 so that the two groups of data have the same variance. While the t-test results indicate that the value of sig = 0.037 <0.05 so it can be concluded that there are differences in teaching perspectives between groups of pre-service teachers who know and are involved in lesson study and who do not.

Discussion

The number of respondents with single dominance of teaching perspective in this study still dominates with a percentage of 54.05% that is almost similar to the results of research which is shown by Collins et al (nd) and Deggs. The students who have two dominant perspectives in this study are 24.32% while Collins, et.al is 25.8% and Deggs is 3.8%. Furthermore, the percentage of students who do not have a perspective dominance in this study is 21, 62% and Collins, et.al find that the percentage of this group is 3.4% while the percentage of the Deggs study is 23.7%.

The results of this study reinforce the notion that one dominant teaching perspective is still the largest part of a population. Meanwhile, the results of two and none the dominance of perspective cannot be matched against each other. This is possible because the research subjects of Collins, et.al and Deggs consist of teacher, pre-service teachers from different faculty while the respondents of this study only come from the Faculty of Teacher Training and Education, especially Mathematics Education Department.

The results of this study also indicate that there are differences in the perspective of pre-service mathematics teacher about what kind of good teaching, what efforts can be done to create good teaching and why the effort is valuable and important to do. This difference is due to the differences in the experience of pre-service teachers during lecturing. In the lesson study applied, the lecturers in the

Mathematics Education Department always implement student-based learning, train with problem-oriented learning and implemented in groups. This condition is certainly different from the class of non-lesson study. Although student centered learning has also been implemented but the intensity is different from the lesson study class.

D. Conclusions And Suggestions

Conclusions

Based on the results of data analysis in the previous section, then the conclusions of this study are as follows:

1. The total of respondents which are 37 students with 54.05% of students who have one dominant teaching perspective, 24.32% have two dominant perspectives while the rest 21.62% has no dominance of perspective.
2. There is a difference in teaching perspective between groups of pre-service mathematics teachers who know and are involved in lesson study and who do not.

Suggestion

Based on the above conclusions, the teaching in university especially in the Mathematics Education Department should be pursued by providing a varied learning experience and prioritizing the development of students mindset so that it is expected that mathematics learning will be implemented by the teachers of Secondary Education that not only oriented to the Transmission which considers that mathematics can only be taught by transferring knowledge.

E. References

Deggs, David M (2008). *The significance of Teaching Perspectives among Academic Disciplines.*College Teaching Methods & Styles Journal. Volume 4 Number 8

Doyle, Katherine (2007). *The teacher, The Tasks: Their Role in Students? Mathematical Literacy*. In Watson, Jane and Beswick, Kim, Eds. Proceedings 30th annual conference of the Mathematics Education Research Group of Australasia-Mathematics: Essential Research, Essential Practice, pages pp.264-254, Hobart, Tasmania.

Fauziyah, Nur. (2014). *Peningkatan Kemampuan Mahasiswa dalam pembuktian Teorema Melalui Model Pembelajaran Kooperatif Tipe Jigsaw*. DIDAKTIKA vol 19 No 2 Februari 2014 terdapat di journal.umg.ac.id

Jarvis, S., Collins, dan Pratt, D (2006). *Do Academic Origin Influence Perspectives On Teaching?*

Kember (1997). *A reconceptualisation of the research into university academics/conceptions of teaching.* Learning and instrustion. Vol 7 no 3, pp.255-275, New York: Pergamon Press.

Khikmiyah, F (2014). *Meningkatkan Kemampuan Komunikasi Matematik Mahasiswa Pada mata Kuliah teori Grup Melalui Pembelajaran Tutor Sebaya.* Prosiding Seminar Nasional Pendidikan Matematika Ahmad Dahlan (SENDIKMAD 2014), Yogyakarta 27 Desember 2014. ISSN: 9 772407 749004. Halaman 843- 853

Khikmiyah, F (2015). *Students' Higher Order Thinking Skills in Problem Based Learning*. Prosiding 6th International Conference on Lesson Study pada tanggal 17-19 September 2015 di Universitas Pendidikan Ganesha Bali-Indonesia.Pratt, D.D & Associates. (1998). Five Perspectives on Teaching in Adult and Higher Education. Malabar, F. L. Krieger Publishing Company

Mahan, J.D. (2012). *Understanding How Your Teaching Perspective Influence your Work.* Terdapat di https://medicine.osu.edu. Diunduh pada tanggal 12 Juni 2017

Menges (2000). *Shortcoming of research on evaluating and improving teaching in higher education.* New Directions for Teaching and Learning 83, 5-11

Pratt, D. D, Collins, J.B& Associates (1998). *Five Perspectives on Teaching in Adult and Higher Education.* Malabar, FL:Krieger Publishing Company

Pratt, D. D, Collins, J.B& Selinger, S. J (2001). *Development and Use of The Teaching Perspectives Inventory (TPI).* AERA 2001. Available at https://cvm.msu.edu diunduh pada tanggal 12 Juni 2017

Schoenfeld, A.H. (2002). *A highly interactive discourse structure*. Social constructivist teaching, 9, 131-169

The Implementation of Lesson Study Towards Students' Spatial Thinking Ability on Multivariable Calculus Subjects

Eko Andy Purnomo[1], HascaryoPramudibyanto[2] ,EnnyDwiLestariningsih[3]
University of Muhammadiyah Semarang
ekoandy@unimus.co.id, hascaryo@ecampus.ut.ac.id, ennydl@ecampus.ut.ac.id

Abstract

The Multivariable Calculus is an advanced course of Differential Calculus and Integral Calculus. In Multivariable Calculus material, there is Cartesian coordinate material R3. The material drawing a Cartesian coordinate graph of R3 requires a good spatial thinking ability. Based on the observations, the ability of spatial thinking students is still low. Low spatial thinking will affect the mastery of differential and integral subjects for variables. One of the learning models used to improve the ability ofspatial thinking is PjBL using inquiry approach. Based on those explanations, the researchers implemented lesson study using PjBL learning model and inquiry approach on Multivariable Calculus subjects. The purpose of this Lesson Study is to diagnose the students' ability of spatial thinking in the Multivariable Calculus subjects. The method of the research was qualitative approach using descriptive analysis. In addition, the instruments used Student's Activity Sheets, and spatial thinking ability as the evaluation sheet. The result obtained that the students had mastered the concept of drawing R3, determining the distance and applying the concept in drawing solid objects on linear and quadratic equations. Through the implementation of Lesson study, it can be concluded that the ability of students'spatial thinking is good through the PjBL using inquiry approach.

Keywords*: Multivariable calculus, Lesson Study, PjBL, Spatial Thinking*

A. Introduction

The current education system has not been able to make people have the ability and independence,resulting in weak competitiveness (Pramudibyanto&Purnomo, 2017).It needs to improve the Indonesian competitiveness to be able to be equalized with other countries. One of the keys of success in performance as well as professional work and learning is the spatial thinking ability (Prieto & Velasco, 2010) and the success of learning (Sorby, 2009). Spatial thinking is the ability to imagine forms and movements in different positions of our mind (Strong & Smith, 2002) while Clements (1998) defines a spatial view is the ability to move two or three dimensional objects in one's mind and to be able to understand them. One of the spatial capability of thinking application on the multivariable calculus subject.

The multivariable calculus subject discusses about the Cartesian coordinate material in R3, functions, derivatives, and integral n variables. Cartesian coordinate material in R3 is the first introduction of Cartesian coordinates, points, and distances on R3, drawing graphs of linear equations, and drawing graphs of quadratic equations. Based on the observations, students have mastered the introduction of Cartesian coordinates, dots, and spots in R3. Whereas, for drawing graphs of linear equations and squares, still much mastered. The ability of students in drawing R3 chart is determined by the spatial ability of thinking. Low spatial thinking ability on

quiz score and semester test score. Spatial thinking ability can be improved through practice but not directly (Nemeth, 2007). These skills can be trained and improved by applying the learning that has been designed.

One of the alternative ways to improve spatial thinking skills by applying the learning model of Project Based Learning (PjBL). PjBL learning is an innovative learning model, which emphasizescontextual learning through complex activities (Purnomo, Rohman&Budiharto, 2015) and ultimately results in (Thomas, 2000). Through PjBL students are required to complete projects that have been designed by lecturers. This project is designed in order to the students are more active in learning and have responsibility for completing the task. Student has responsibilities not only complete the assignment, but also make all members in the group to master the material provided. In addition, by applying PjBL can improve the students'ability to solve mathematical problems (Purnomo&Mawarsari, 2014).

In the lecture of differential calculus, integral calculus, and basic geometry the students have been introduced with Cartesian coordinate R2. Based on this, learning is made with an inquiry approach. The advantages of inquiry learning can significantly decrease the misconception of matter (Yunita et al, 2013), develop the ability of mathematical concepts (Chapman, 2011), and develop professionalism (Maab&Artique, 2013). Through the concepts and application of Cartesian coordinates in R2, students are expected to find the concepts and patterns in drawing on Cartesian coordinates in R3. In principle the material is almost identical, which distinguishes the addition of variables so that the drawings are made with three dimensions.

The application of PjBL and inquiry learning models are included in Lesson Study (LS) activities. Besides, to improve the quality of learning LS , it aims to prepare the future of children for a better life too (Supriatna, 2014). LS activities collaborate between the PjBL and the inquiry learning models applied to the Multivariable Calculus subjects. Through the application of PjBL and inquiry, it can improve Spatial Thinking ability,so it will improve the students'achievement and achievement of science, technology, engineering and mathematics (Wai, Lubinski&Benbow, 2009) and (Shea, Lubinski&Benbow, 2001).

B. Method

This research uses qualitative approach. It applies descriptive analysis. Creswell (2010) defines that the descriptive method analysis as a method that attempts to describe and interpret objects directly. LS consists of three stages, such as plan, do, see through application of learning model PJBL using inquiry approach. The focus of this LS is to determine the ability of students' spatial thinking. The instrument of this research used Students' Activity Sheet (LKM) and spatial thinking ability evaluation. The results obtained was described the implementation of LS activities and students' spatial thinking ability.

C. Findings and Discussion

Findings

In the implementation of lesson study, lecturers apply the learning model of PjBL, inquiry approach. The project given to students is in the form of Student Worksheet which contains Cartesian coordinate material in R3. Student Worksheet

are designed with the application of inquiry approach, from the beginning to the end of the student materials are given the opportunity to explore the capabilities they have to complete the Student Worksheet. Implementation of Lesson Study, lecturers divide the group by taking into account the ability of students and gender. Students are given the task to be able to complete the project given and each group is given responsibility for mastery of the material of the group members.

In the LS activity, the material is divided into introduces the R3 coordinate of Cartesians, determines the point and distance, draws a linear equation, and draws a quadratic equation. Cartesian coordinate recognition materials are applied to determine the point and distance in R3 students which do not have difficulties. The students do the MFIs quickly and all groups are correct when answering the questions. There are some students who have difficulties at stage of drawing linear equations in R3. The differences in drawing linear equations in R2 and R3 are not understood correctly. One linear equation in R3 becomes a plane or space, not a straight line. In the early stages, the students are asked to draw a simple equation with the problem 2x + 3y + 4z = 12 which the result can be seen on this figure below.

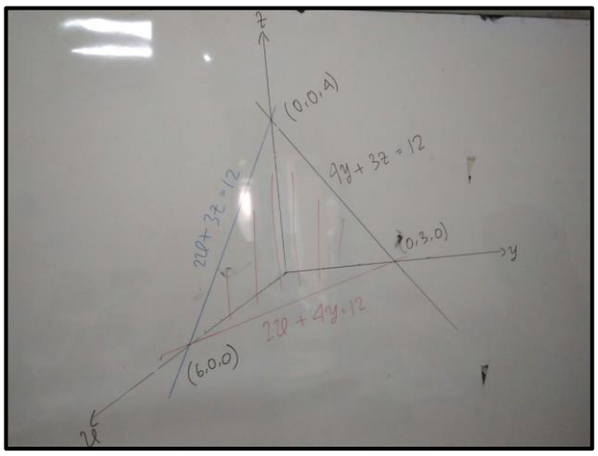


Figure 1. The graphic result of 2x + 3y + 4z = 12

The results of drawing 2x + 3y + 4z = 12 charts are well done by the students, in fact they can do it without having difficulties. The students draw according to the appropriate stages and steps. Doing this problem, there are three stages which are divided the equations into 3 sections such as; thexy plane, z = 0 equations being 2x + 3y = 12, the yz plane, x = 0 equations being 3y + 4z = 12, the xz plane, y = 0, the equation becomes 2x + 4z = 12. The next step draws the desired graph.

This understanding is quickly comprehended by the students, so there is no difficulty in drawing the equation. Furthermore, students are given a more complex problem that students are given the problem to draw the equation of solid objects that are limited some equations. Drawing solid objects on the surface in the first octane bounded by the surface of the fields: 2x + 2y + z = 12, y = x, z = 0 and x = 0! The result is as follows;

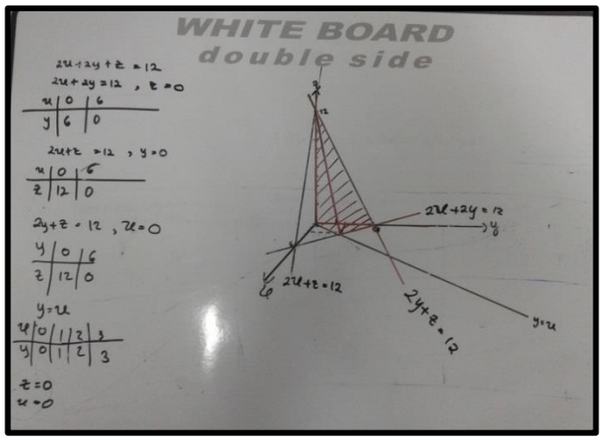


Figure 2. The figure of graphic result of2x + 2y + z = 12, y = x, z = 0 and x = 0

In drawing the graph, the student has gone through the desired stages with the equation 2x + 2y + z = 12 made into three stages, such as; the field xy, z = 0 equation becomes 2x + 2y = 12, the yz plane, x = 0 equation becomes 2y + z = 12, the plane xz, y = 0, the equation becomes 2x + z = 12. The next step draws the line y = x. Next, determining the solid region when through the intersection of regions 2x + 2y + z = 12 and y = x, z = 0 and x = 0. The stages have been done well, and the result of solid body is also true. Furthermore, the students are given a more complex problem of drawing solid objects with limits y + z = 4, x + y = 2, y = x, z = 0, and x = 0. The results can be seen in the picture below.

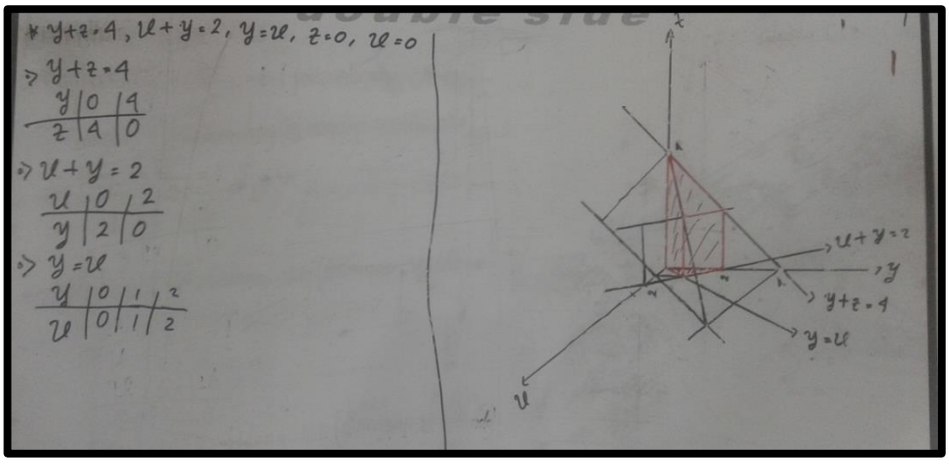


Figure 3. The graphic drawing result :y + z = 4, x + y = 2, y = x, z = 0, and x = 0

Drawing the graphic above, in describing each equation is no difficulty. First stage by drawing the equation y + z = 4, then proceed x + y = 2 and y = x. Students have no difficulty in this stage, but to determine the area of intersection there are some students who have not been able to. The assumption of the solid objects in question is not in accordance with the desired that is the limit z = 0, and x = 0.

Knowing the depth of student's ability is given in the following project: draw the first solid octane object bounded by the surface of the parabolic cylinder $x = y^2$, and $x = 2– y^2$, and the plane surface y + z = 4, by the xy plane and yz. The results are shown in the picture below.

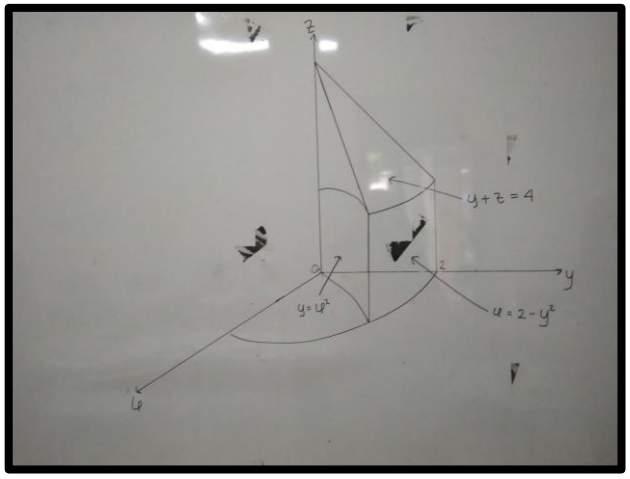


Figure 4. Paraboloida x = y^2, and x = 2– y^2, and the plane surface y + z = 4, by the xy plane, (z = 0) and yz (x = 0)

The matter of drawing the graph of this quadratic equation which becomes student has difficulties. Drawing a quadratic equation, there are some students get difficulties. Drawing the equation $x = y^2$ and $x = 2 - y^2$ students have difficulty. Many students have not been able to determine the graph's arch and its intersection. Drawing the surface of field $y + z = 4$ there is no difficulty for the student. The student has difficulty again when drawing the intersection area between the cylindrical surface of paraboloid$x = y^2$and $x = 2 - y^2$, and the plane surface $y + z = 4$. All groups have not been able to independently complete the assignment. Through the guidance of lecturers, students can determine the expected solid objects.

Discussion

Based on the learning process and evaluation, most students have good spatial thinking skills. This ability is reflected in drawing with equations more than 2 have been mastered well. The ability to determine the intersection of fields on linear equations, as well as determining solid objects has been comprehended by student well. Students' ability of spatial thinking well developed because the application of learning model PjBL requires students in completing the project provided (Purnomo, Rohman&Budiharto, 2015). When there is a group discussion, it can make the discussion more interesting and there are some creative ideas emerge from each member of the group. The member of the group is from the different gender, background and ability to make group performance better (Esmonde's, 2009). The competence demands to draw three equations by determining the intersection and the desired area of solid body makes the student challenged. This raises the motivation for students to complete the assigned task (Purnomo, Rohman&Budiharto, 2015).

Based on the group activities, the presentation and analysis of student work results have mastered the definition concept, determining the point and distance in R3. The students can also explain the stages in drawing at the coordinates of Cartesian R3. The mastery of student's concepts is well absorbed because of the inquiry application. Through the inquiry approach, students can recall the previously taught material and can construct a new concept that forms mathematical argumentation, this result is in harmony with Walshaw& Anthony's (2008) research. Derived from drawing concepts in R2, students inquiry find concept, pattern and gradually develop knowledge (Gee & Clinton, 2000).

Through the application of inquiry-minded PjBL, the project was completed well and the results were near perfect. Through group activities and responsibilities among members can improve their performance (Gresalfi, Martin, Hand &Greeno, 2009) Through mathematical modeling and student's worksheet can improve spatial capability of thinking (Keskin, 2008) & (Toptaş, 2008). The successful completion of the task is due to the application PjBL learning model of inquiry approaches well. Through the learning model can improve student's performance, it is in line with Gresalfi, Martin, Hand &Greeno (2009).

D. Conclusions and Suggestions

Based on the implementation of lesson study through the application of PjBL learning model using inquiry approach, it can be concluded that:

1. Through the application of PjBL learning model using inquiry approach can improve spatial thinking ability in Multivariable Calculus subject.
2. The ability of to draw a quadratic equation is the spatial ability of thinking which need to be improved in multivariable calculus.
3. The application of the PjBL learning model using inquiry approach can be applied to other subjects.
4. There is a need for further research on PjBL learning model using inquiry approach and spatial thinking ability.

References

Creswell. (2010). *Research Design: pendidikan kualitatif, kuantitatif, dan mixed*. Yogyakarta: Pustaka Pelajar

Chapman, O. (2011). *Elementary school teachers' growth in inquiry – based teaching of mathematics.* ZDM Mathematics Education, 43, 951-963.

Clements, D. H. (1998). *Geometric and spatial thinking in young children, State University of New York at Buffalo. Mathematics for the Young Children*, 3-29.

Esmonde, I. (2009). *Ideas and Identities: Supporting equity in cooperative mathematics learning.* Review of Educational Research, 79, 1008–1043.

Gee, J. P., & Clinton, K. (2000). *An African American child's science talk: Co-construction of meaning from the perspectives of multiple discourses. In M. A. Gallego & S. Hollingsworth (Eds.), What counts as literacy: Challenging the school standard (pp. 118–138).* New York: Teachers College Press.

Gresalfi, M., Martin, T., Hand, V., & Greeno, J. (2009). *Constructing competence: An analysis of student participation in the activity systems of mathematics classrooms.* Educational Studies in Mathematics, 70, 49–70.

Keskin, Ö. Ö. (2008). *Ortaöğretim Matematik öğretmen adaylarının matematiksel modelleme yapabilme becerilerinin geliştirilmesi üzerine bir araştırma, Gazi* Üniversitesi Eğitim Bilimleri Enstitüsü, Doktora Tezi, Ankara.

Maab, K. & Artigue, M. (2013). *Implementation of inquiry-based learning in day-to-day teaching*: a synthesis. ZDM, 45(6), 779-795.

Nemeth, B. (2007). *Measurement of the development of spatial ability by mental cutting test. Annales Mathematicae et Informaticae*, 34, 123–128.

Prieto, G., & Velasco, A. D. (2010). *Does spatial visualization ability improve after studying technical drawing? Quality and Quantity:* International Journal of Methodology, 44(1015), 1024

Pramudibyanto, H &Purnomo, E.A. (2017). *Character Education: The Analysis Of Archival Work Experiences Using Cipp Model At UPBJJ-UT Semarang.* Paper presented at International Seminar 3rd ISET at UNIMUS dated May 24, 2017

Purnomo, E.A & Mawarsari, V.D, (2014). *PeningkatanKemampuanPemecahanMasalahMelalui Model Pembelajaran IDEAL Problem Solving Berbasis Project Based Learning.* Jurnal Karya Pendidikan Matematika. 1 (1) : 24-31

Purnomo, E.A, Rohman, A & Budiharto, (2015). *Efektivitas Penerapan Model Pembelajaran Project Based Learning (PBL) Berbasis Maple Matakuliah Kalkulus Lanjut II.* Jurnal Karya Pendidikan Matematika. 2 (2) : 20-24

Shea, D. L., Lubinski, D., & Benbow, C. P. (2001). *Importance of assessing spatial ability in intellectually talented young adolescents: A 20-year longitudinal*

study. Journal of Educational Psychology, 93(3), 604–614. doi:10.1037/0022-0663.93.3.604

Sorby, S. A. (2009). "*Educational Research in Developing 3-D Spatial Skills for Engineering Students.*" International Journal of Science Education 31(3): 459-480.

Strong, S. & Smith, R. (2002). *Spatial visualization: fundamentals and trends in engineering graphics.* Journal of Industrial Technology, 18(1).

Supriatna, Asep (2014). *"Etika dan Profesionalisme Pendidik utuk Pendidikan Karakter dalam Implementasi Kurikulum 2013"*. Paper presented in National Character Education Seminar at Palopo May 3, 2014

Thomas, J.W. (2000). *A Review od Research on Project-Based Learning. California: The Autodesk Foundation.*avaliablein: http://www.autodesk.com/foundation.

Toptaş, V. (2008). *Geometri alt öğrenme alanlarının öğretiminde kullanılan öğretim materyalleri ile öğretme-öğrenme sürecinin bir birinci sınıfta incelenmesi*. Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, 41(1), 299-323.

Wai, J., D. Lubinski and C. P. Benbow (2009). *"Spatial Ability for STEM Domains: Aligning Over 50 Years of Cumulative Psychological Knowledge Solidifies Its Importance.*" Journal of Educational Psychology 101(4): 817-835.

Walshaw, M., & Anthony, G. (2008). *The role of pedagogy in classroom discourse: A review of recent research into mathematics.* Review of Educational Research, 78, 516–551.

Yusnita.R et al. (2014). *Pengembangan perangkat pembelajaran berbasis penemuan terbimbing (guided discovery) dengan pendekatan somatic, auditory, visual, intellectual (SAVI) pada materi pokok peluang Kelas IX SMP Tahun Pelajaran 2013/2014*. Jurnal PPs Universitas Sebelas Maret Surakarta.

The Effectiveness of Lesson Study on The Improvement Of Learning Quality

Nanang Rahman, Nurmiwati, Hidayati
Universitas Muhammadiyah Mataram
nangrhm87@gmail.com

Abstract

The purpose of this research is to know the effectiveness of lesson study implementation to improve the quality of learning in Faculty of Teacher Training and Education (FKIP) Muhammadiyah Mataram University (UM Mataram). The research was conducted on 3 study programs in FKIP UM Mataram. They are: Geography, Indonesian Language, and Civic Education. Activities of Lesson study are done in 3 cycles with 2 lecturers model in each study program. The instrument used questionnaire and the observation sheet about lesson study process. Questionnaire of process and observation sheet are filled by lecturers and students. They also responded in the form of questionnaire implementation of lesson study. Based on the results of questionnaires and observation sheets filled by lecturers as respondents, it is indicated that there is an increase of the quality in teaching conducted by the model-lecturers. The same results are also shown by the students' responses related to the implementation of lesson study. The most significant stages of improvement are during "do" and "see" stages. Lesson study provides opportunities for lecturers to develop the quality of learning that affects the quality of the students' thinking and acting. Lesson study implementation has a positive impact on the lecturers' model for the development of democratic, open attitude, and the desire to be better. The implementation of Lesson Study in 3 study programs in FKIP UM Mataram has been run in accordance with the plan; this is because the cooperation of all parties involved.

Keywords:*lesson study, quality of learning*

A. Introduction

Lesson Study (LS) is a learning quality improvement approach that originally came from Japan. The Japanese term for lesson study is "Jugyokenkyu" (Yoshida, 1999 in Lewis, 2002). The Lesson Study began to be studied in the United States since it reported the results of the Third International Mathematics and Science Study (TIMSS) in 1996. In the TIMSS report explains that Japanese students are highly ranked in mathematics and one of the supporting factors is Jugyokenkyu (Wang-Iverson, 2002). Lesson Study is a major form of quality improvement of learning and development of educator competencies selected by Japanese educators. In carrying out the LS, the educator collaboratively 1) studies

the curriculum, formulates the learning objectives and objectives of developing life skills of the students, 2) designs the learning to achieve the goal, 3) conducts and observes a research lesson 4) Doing reflection to discuss the study being studied and refining it, and planning the next lesson.

According to Styler and Hiebert (in Sparks, 1999) LS is a collaborative process in which a group of educators identifies a learning problem, designs a learning scenario (which includes searching for books and articles on topics to be learned); teaching students according to the scenario (one educator is doing the learning while others are watching), evaluating and revising the learning scenario, revising the revised learning scenario, re-evaluating the learning and sharing the results with other educators (disseminating).

According to Susilo (2013) implementing LS as a means of increasing the competence of educators, it is necessary commitment of a group of educators who intend to carry it out, made the rules of implementation, and arranged the scheduling of activities so that educators can be mutually love, teaser and foster. The precise recipe for carrying it out is summarized in 5D, namely desire, decision, determination, discipline, and deed (deeds, Actually implement it, not just a discourse).

Another study also explains that factors that can lead to teacher and student creativity increase in learning retell stories that have been read and commented on cherries: ta child readers of grade VII.5 MTs.N Lubuk Buaya Padang is a good learning planning, media learning the interesting, the cooperation of subject teachers and the observation of a thorough observer (Putri, Atmazaki, Syahrul: 2013)

Lesson study (LS) is a form of guidance to the educator profession in order to improve the competence of educators based on the principle of collaborative, sustainable, and build learning community (learning community). LS activities can be a vehicle for lecturers to improve the 4 main competencies that must be possessed by becoming a professional educator. Pedagogic competence can develop because of the reflection activity (see) done at the end of learning in order to improve the implementation of learning. The existence of interaction in reflection activities can increase social competence, because it can build mutual respect and find solutions to the improvement of learning next. Competence personality can be awakened by the motivation made by colleagues who encourage to innovate learning. Professional competence can be formed by improvements to the mastery of the material obtained through input provided by colleagues in reflection activities.

Lecturers should have started to abandon conventional routine ways in learning, but rather create professional development programs. These efforts are the implications of educational reforms in order to be able to achieve improved student

learning achievement adequately. Lecturers so far only enter the class, then give the task to the students for the presentation. Such activities are conducted monotonically, without any significant changes in the learning process due to the absence of reflection activities in learning. As a result learning becomes less attractive and leads to saturation of students, so that the impact on the value of students is low.

The existence of problems arising due to low learning innovations conducted by lecturers led to the need for research to improve the quality of learning conducted by lecturers *FKIP* UM Mataram. The purpose of this study is to determine the effectiveness of LS implementation on the quality of learning in the Faculty of Teacher Training and Education (*FKIP*) Muhammadiyah Mataram University (UM Mataram).

B. Research Methode

The research was conducted on 3 study programs in *FKIP* UM Mataram, they are: Geography, Indonesia language, and civic education. LS activity is done 3 cycles with 2 lecturer model in each study program. The instrument used is the evaluation questionnaire and the observation sheet of LS implementation. Questionnaire evaluation and observation sheet filled by lecturers and students respond in form of questionnaire of LS implementation.

Observations were made on three main aspects in the lesson study stage which included: plan, Do and See (reflection). While the questionnaires assessed by the students include 2 aspects, namely, the ability to teach lecturers and the completeness of props used in learning. The result of the assessment is then analyzed by using the standard gain. To see the improvement in the quality of learning at each learning stage a standard gain calculation is used. The standard gain calculation refers to equation 1 (Hake, 1998: 3).

The equations for the standard gain technique are as follows:$Gain\ standar = \frac{Post\ score - pre\ score}{maximum\ score - pre\ score}$

The result of gain calculation is then determined the amount of increase in the following table:

Tabel 1. Standar gain level

Gain value (g)	Deskripsion
≥ 0,7	Height
0,7 > g ≥0,3	Medium
<0,3	Low

C. Research Result

The result of observation plan

Assessment of the model lecturer was conducted by observers from the study program. Here are the results of the stages of the plan that has been done as follows.

Table 2. Average results of observation plan

No	Study Programs	Siklus		
		I	II	III
1	Indonesia language education	27,19	27,24	28.15
2	Civic education	25,26	25,12	26,15
3	Geography education	24,15	23,92	24,56
Average		25,53	25,42	26,28

Based on the results of the assessment that has been done then calculated the amount of increased implementation of the implementation of the plan that occurs by comparing the cycle of beginning and end. Based on the calculation results obtained value of gain of 0.08 with the category of low increase. This is because still terkendalanya in learning device design and development of learning media. Model lecturers prefer to use conventional media that is easy to obtain. The design of learning also has not focused on the problems faced by students.

At the time of the plan on 3 courses, all model and observer lecturers were present in the event. There is a discussion of the material, the weight of academic achievement that is expected to discuss methods, strategies, has not been discussed evaluation and media. Learning devices produced by RPP, Student work sheet, evaluation instruments exist but not yet complete, learning media have not been brought. At the time of the discussion plan, there was an interesting discussion between the lecturers of the model and the LS team, especially in determining the strategies and learning methods that will be used at the time of Do that will be included in the design of learning and preparation of the material.

The results of observation do

Assessment of the model lecturer was conducted by observers from the study program. Here are the steps done do as follows

Table 3. Average observation results do

No	Study Programs	Siklus		
		I	II	III
1	Indonesia language education	39.22	45,64	53,34

2	Civic education	39,68	43,12	52,67
3	Geography education	40,33	46,54	48,34
Average		39,74	45,10	51,45

Based on the results of the assessment that has been done then calculated the amount of increase in the implementation of activities that occur by comparing the start and end cycles. Based on the calculation results obtained a gain value of 0.57 with medium improvement category. Based on the results of these observations obtained information that the lecturer is able to help students who have difficulty in learning and able to adjust the lesson plans with real conditions in class.

a) Readiness in spatial management

Space used for learning front-row seats / whiteboards, with arrangement of seats in small groups for learning by discussion method. For learning by lecture and question and answer method, there is no change of seat.

b) Classroom learning and interaction activities

Aspects observed in the learning activities originated from the classroom atmosphere in learning, the atmosphere of the class at the beginning of the less crowded, students have not fully concentrated, there are still looking for books in the bag, put on the table, just flipping through books and handouts given by model lecturers. In the first 10-15 minutes the students begin to concentrate on the material and begin to understand what the tasks in the learning process, student interaction with students takes place well, the range of lecturers in the interaction with students has not been maximal there are still students who are not observed by lecturers, The lecturer explains the material, when his friend answers the lecturers' questions or asks the lecturer, there are students still chatting by themselves. The observation of monevin at the time do find the still of student who seems not yet understand the material given by the lecturer, so when asked to fill the worksheet, the student do not immediately do. In general, the media used by lecturers to utilize LCD is good, but there is still not maximal.

At the time of material learning all prepared hand-out and already given to the students a week before the implementation of learning with topics to be discussed next week at the time do, a democratic atmosphere began to be created when the model lecturers gave students the opportunity to ask, in the 20th minute - 60 at the time of discussion both group discussion and class discussion, students began to actively ask and answer, interaction began

c) Evaluation during the learning process and learning outcomes

Based on the observation result, the evaluation was carried out during the learning process with question and answer, doing the student worksheet which then the result was discussed, the feedback was given by the lecturer at that time. During

the observation evaluation of learning outcomes at the end of learning has not been implemented.

d) The involvement of the observer

The involvement of LS team that became observer showed seriousness in observing the implementation of LS in his group. Although it appears at the beginning does not have the courage to move, after the open lesson with the companion and the discussion with the companion of the observer is more motivated and doing moving observing the learning activities and writing in the observation sheet during learning do.

The results of observation see (reflection)

Observations made at the time of see is to observe the process of reflection after the learning process ends. All LS teams in the study program perform see. At the moment see, the LS team designates the moderator to lead the way see as a reflection effort for the model lecturer and input from the observer's observation. Moderators invite model lecturers to convey what felt at the time of learning, then take turns of the observer and members of the monev team given time to convey the results of his observations. From observation and following the path see, there is a democratic and open atmosphere, meaning the observer who at the beginning hesitate to convey the results of his observation, because lessons learned less than the maximum, but with the passage of time and open lesson cycle, awkwardness is reduced and model lecturers can accept with the openness of the heart, this looks a sense of humor and words of fun. There is a willingness of the model lecturer to carry out the follow-up with the revision of RPP by the model lecturer. Assessment of the model lecturer was conducted by observers from the study program. Here are the results of the see stage (reflection) that has been done as follows:

Table 4. Average observation results see

No	Study Programs	Siklus		
		I	II	III
1	Indonesia language education	33,56	33,78	38,25
2	Civic education	28,13	29.24	37,68
3	Geography education	29,76	28,00	34,23
Average		30,48	30.34	36.72

Based on the results of the assessment that has been done then calculated the amount of increase in implementation activities see that occurred by comparing the cycle of beginning and end. Based on the calculation results obtained a gain value of 0.65 with the category of moderate increase.

Results Student Questionnaire

Results of student responses to the implementation of learning conducted by lecturers, as in the following table.

Table 5. Average response of students

No	Study Programs	Siklus I		Siklus II		Siklus III	
		Ability to teach	Completeness of props	Ability to teach	Completeness of props	Ability to teach	Completeness of props
1	Indonesia language education	65,42	20,34	69,62	23,50	72,14	24,28
2	Civic education	72,34	19,21	74,62	20,24	82,78	24,89
3	Geography education	74,22	26,76	77,35	28,12	81,24	29,14
Average		70,66	22,11	73,86	23,95	78,72	26,13

Based on the results of questionnaires given to students, it can be determined the amount of improvements in the quality of learning perceived by students. An increase value of 0.56 is included in the moderate category. The results of the observations made by the students as follows:

1. Lectures raised in LS student activities give positive appreciation
2. LS provides benefits because it can know the ability of model-lecturers and students in the lecture and add insight in teaching techniques for students.
3. LS appeals to students, because it is useful in the learning process.
4. LS atmosphere is different from lectures so far, at the beginning of LS a little awkward because many lecturers who observe, but after a while become a regular even motivate to be active in learning and learning more directed
5. LS socialized by lecturer of course that will be used as model LS
6. Student suggestion, LS should be socialized at the beginning of semester / beginning of lecture, build LS community to be useful for prospective teacher students.

D. Conclusion

1. Lesson study provides opportunities for lecturers to develop the quality of learning that affects the quality of thinking and acting students
2. Implementation of LS on 3 courses in *FKIP* UM Mataram has been run in accordance with the plan, this is because the cooperation of all parties involved
3. The implementation of LS has a positive impact on model-lecturers for the development of democratic, open attitude and desire to be better.

E. Suggestions / Recommendations

1. There needs to be a continuous extension of LS to other study program so that the program of learning quality improvement can be achieved
2. The existence of support from institutions to ensure the sustainability of the implementation of lesson study in FKIP UM Mataram

F. References

Lewis, Catherine C. 2002. Lesson study: A Handbook of Teacher-Led Instructional

Spark, Dennis. 1999. Using Lesson Study to Improve Teaching. (Online). http://www.learningpt.org/msc/products/tot.htm

Susilo, 2013. Lesson study to improve the competence of educators. Paper presented in PLEASE 2013 Seminar and Workshop at Aletheia Theological High School,StreetArgopuro 28-34 Lawang, dated July 9, 2013.

Formative Assessment Used By Pre-Service Teachers in Classroom Teaching Practice Through Lesson Study

Rahmawati Upa'
Cokroaminoto Palopo University
rahmawatiupa@uncp.ac.id

Abstract

This research aims at exploring the kinds and the techniques of formative assessment used by the pre-service teacher in their teaching process at school which was done thought Lesson Study. This research is qualitative descriptive obtained through observation check list, interview, and video recording. The subjects of this study were three pre-service teachers who did their teaching practice in one of the state school in Palopo. From the data analysis, it was found that from eight formative assessment types proposed in the observation checklist, there were six types used by those three pre-service teachers in their teaching, including observation, giving question, giving test, classroom discussion, giving homework, and peer assessment. No students were found using the summary and portfolio. From these six formative assessment types, they were done in different techniques. Observation is done by observing students, coming to students both in groups and individuals, helping students to learn, and examining students' outcomes while questions are conducted orally. In addition, the provision of tests were also done orally through reading and rearrange random sentences into text in groups. While discussion is done in groups by giving the task of rearranging the sentence into text, assigning homework is done by assigning the students to write a dialogue and peer assessment is done by assessing a friend who is reading aloud text.

Keywords:*formative assessment, pre-service teachers, and lesson study*

A. Introduction

Assessment is one of the most vital things in the learning process. Through the assessment, a teacher can find out how far the target of teaching and learning can be understood and applied by students. Due to the importance of assessment, current research studies require teachers to have in-depth knowledge of assessments in the learning process including pre-service teachers (Beziat and Coleman, 2015). Not only know but the teachers are also required to be able to implement the form of assessment in their teaching process. Based on this explanation, the teachers' knowledge and skills must be prepared earlier in order that they have already known and been able to apply various forms of assessment in their teaching process. Various efforts are made by the campus specially Faculty of Teacher Training and Education to prepare their students as pre-service teachers so that they can become professional teachers including able to do assessment in learning. Among the things to do is to conduct internshipcourses. This course requares students to directly

practice teaching at school to apply the knowledge and skill they got from the campus.

Abundance of articles related to pre-service teachers' assessment have been conducted including assessment for learning in preservice teacher aducation (Wei and Pecheone, 2010), assessment method preferred by pre-service teacher (Hamdan, 2013), how pre-service techer think about students' assessment issue (Simon. at all, 2010), evaluating pre-service techers' konowledge on classroom assessment (Beziat and Coleman, 2015), but those researches were conducting in abroad. In Indonesia, the researcher found scant specific information on how pre-service teacher do their assessments in their teaching practice especially teaching practice through lesson study. Most of them who studied on the teaching practice of pre-service teacher based Lesson Studyonly focused their researches on how to improve the competence and teaching strategies of pre-service teachers through lesson study (Sujana and Narasintawati, 2012; Anwar and Rahmawati, 2014; Vitantri dan Asriningsih, 2016; and Rustono, 2008).Therefore it is necessary to conduct this research as an information and input to the campus especially the lecturerof assessment and evaluation.In this research, the researcher will focus on the teaching practice by the pre-service teachers at school which was done through lesson study activities which consist of three phases; plan, do, and see.

Based on this explanation, the purposes of this research are to know the types and techniques of formative assessment used and performed by the pre-service teacher in their practice of teaching in schools which was done through lesson study.

Formative Assessment

Formative assessment is a form of assessment conducted during learning and teaching process to monitor students' progress, to obtain information and evidence of learning from students as a reference for planning the next instructional activity as well as providing feedback for improvement of learning program, usually in informal and can be in the form ofquiz and question and answer orally in classroom (Arifin, 2009; Black, 2004; Bakula, 2010; and Shute, 2007). The outcomes of formative assessment will be used by teachers and students to improve students' learning achievement and to make decisions about the steps in learning and teaching to achieve better learning outcomes. According to Hann & Dettmer (2004), the primary focus of formative assessment is to identify areas that may need improvement. This assessment is usually not assessed and as a measuring tool for student learning progress and for knowing the effectiveness of teaching. Related to this research, the formative assessment in question is the appraisal conducted by pre-service teachers in the teaching practice process they undertook in schools to monitor students' learning progress and in an effort to improve their learning process.

According to Black and Wiliam in Carol (2002) formative assessment can be done through: observation, questions, class discussions, tests, homework, summary, and portfolio. Related to questions, they suggest asking a reflective and factual question rather than a simple question, then give the students enough time to respond to the question. While Jones (2005) states that the question is one of the most common methods to know students' understanding. Furthermore, Black and Wiliam in Carol (2002) argue more that a strategy that can be used to involve all students is to invite students to discuss their opinions on a question or topic in pairs or groups and ask representatives to express their opinions in a larger group of so-called thinks Pair share. Give some answers that may be related to the question and ask students to select it, then have students write the answer and read it aloud. Another way teachers can use is to have students write their knowledge of vocabulary or concepts before or after instruction and ask students to summarize key ideas from lessons, discussions or from reading assignments. In addition, other techniques that can be done are to ask students to complete some of the problems or questions at the end of the lesson, check their answers and interview students individually or in groups regarding to their views when solving problems and provide short writing assignments in the classroom. This activity can be done by giving a "why" question. They also suggested to teachers that a short, frequent test would be better than the other way around. Furthermore, new learning should be tested in the first week of learning and taking into account the quality of test items and discussing them with teachers as well as finding other sources for better information. Related to homework, Falch and Ronning (2012)say that giving homework to all lessons than never increases the student's test score by 3 points, which is about 4 percent of the standard deviation.

Lesson Study

According to Hendayana, et al. (2006), lesson study is a model of professional development of teachers conducted through collaborative learning and continuous learning based on the principles of collegiality and mutual learning as an effort to build a learning community.

Referring to the phases of implementing lesson study, there are some different phases between one another. Among of them are Susilo (2011) who said that the learning cycle that conducted in Indonesia consisting of three phases, namely the planning phase (plan), the implementation phase (do), and the phase of observation and reflection (see). Meanwhile, other says that the phase of implementating of Lesson Study consists of four phases, namely Plan, Do, Check, and Act (PDCA)(Mulyana:2007). But in the implementation of Lesson Study in this study, the phases used by the pre-service teachers were plan (planning), do and see (reflection).

Lesson Study has several advantages including: (1) improving the quality of the lesson plan including all the components in it, such as teaching materials, teaching methods, assessment, etc., (2) increasing teacher's motivation to be more developed, (3) Strengthening the relationship between the implementation of daily learning with the objectives of long-term learning, (4) Strengthening the relationship of kolegalities between teachers with other observers, (5) Increase teachers' knowledge about how to observe student activities and (6) Increase teacher's knowledge about teaching and learning materials (Rusman , 2010). Furthermore, it is said by Dusley (2011) that there are several reasons to use Lesson Study, such as assisting teachers to: (1) see the learning process happening to the students more deeply than usual, (2) to see the gap between what is expected happened when students learn and what actually happens, and (3) knowing how to plan lessons that are more appropriate to the needs of the students. Besides that Chotimah and Anggara (2012), says that Lesson Study makes teachers become more professional in teaching so as to create a conducive learning atmosphere for students.

B. Research Methods

This research is a qualitative descriptive research. The subjects in this study were 3 pre-service teachers of English Education Study Program, Faculty of Teacher Training and Education, Cokroaminoto Palopo University who do teaching practice in one of the State Junior High School in Palopo city and observed by lecturers, supervising lecturer, supervising teacher, and other pre-service teachers. The main instruments of this research are observation check list, video recording, and interview. Observation check list and video recordin were used to obtain data about the type of formative assessment used by pre-service teachers menawhile semi structuredinterviews was as a supporting data. The learning process was done on English in 90 minutes for 2 meetings. In analyzing the data, the researcher refers to 6 formative assessment techniques proposed by Black and Wiliamin Carol (2002).

C. Result and Discussion

After doing research through observation check list and vdeo recording supported by interviews, he data shows that there are six types formative assessment used by the three pre-service teachers in their teaching process and those can be seen the type of formative assessment can be seen in the table below:

Table 1. Type of formative assessment used by pre-service teachers

No	Formative Assessment Types	Pre-service Teacher 1		Pre-service Teacher 2		Pre-service Teacher 3	
		Yes	No	Yes	No	Yes	No
1.	Question	✓		✓		✓	
2.	Test	✓		✓		✓	
3.	Classroom		✓		✓	✓	
4.	Discussion	✓			✓		✓
5.	Homework		✓		✓		✓
6.	Summarizing		✓		✓		✓
7.	Portfolio		✓		✓	✓	
8.	Peer Assessment Observation	✓		✓		✓	

The data in table 1 indicates that in the teaching process, pre-service teacher 1 uses four types of formative assessment, such as question, test, observation, and homework, and student 2 uses three types of assessment, they are observation, question and test, while student 3 uses five types of fomative assessment, including: question, test, classroom discussion, observation, and peer assessment. But none of them used summaring and portfolios.

The types and technique of formative assessment which the researcher suggests has evolved in this reseach shares some, but not all that described by Black and Wiliamin Carol (2002). The following will discuss formative assessment techniques used by pre-service teachers in their teaching process.

Question

Giving questions wasapplied by students 1 and 3 by asking the students about the material they have been learning. It was done at the beginning, middle and at the end of the lesson. Based on the results of the interviews, they did it in order to find out how far students understand the teaching materials have been being taught and this is in line with what Jones (2005) pointed out thatthe most common ways of checking students' understanding is giving question, but in asking questions sometimes the questions were answered by the pre-service teachers themselves,not the student, whereas according to Wiliam in Carol (2002), the teacher should give enough time to the student to respond the question and invite them to discuss their opinions about the question or topic in pairs or groups. This happened to the two pre-service teachers in the first meeting.Nevertheless,it was not happened anymore after getting input from the observers on reflection (see) phase. Both of those pre-service teachers had started to be patient waiting for students' answers and even they

were directing the students in answering the given questions. This means that these pre-service teacher heve got some improvement from the first to the seconde meeting. The idea of Chotimah and Anggara (2012) related to the use of Lesson Study, that Lesson Study makes teachers more professional in teaching, thus creating a conducive learning environment for students, wassupported by this reseach as well. While the 2nd pre-service teacher give some questions orally at the beginning of lesson related to the students' understanding of teaching material.

Test

From three pre-service teachers who became the subjects in this study, all all them use tests in their teaching process and it was conducted orally. Pre-service teacher 1 performed an oral test by asking students in pairs to read the given dialogue, providing questions related to teaching material and asking students to write answers on the whiteboard, while Pre-service teacher 2 asked each group member who gets the turn to stand up and read the text simultaneously (parallel) and in the middle of the lesson, she gave the quiz but it was not related to the material being studied and when it was confirmed in the interview, the pre- service teacher said "it was just to make the students relax to avoid getting sleepy during the learning process, moreover the learning hours was in the afternoon". Pre-service teacher 3 provided test by asking the students torearrange sentences into a text in group and asking the group representatives to read the text that has been prepared. From formative assessment in the form of tests conducted by students in their learning, no test was found in written form.

Classroom Discussion

Classroom discussiononly occured in teaching process of pre-service teacher 3 while the other didn't. This happened when she gave some random sentences to students and askedthem to compose the sentence into text by discussing with the group members first. Meanwhile, discussion is one of theastrategy which can be used to involve all students in teaching process to discuss their opinions on questions or topics in pairs or groups and ask the representative to express the opinion in a larger group called think pair share (Wiliam in Carol: 2002).

Homework

Providing homework (PR) done by student 1 by assigning students to make conversations about asking for and giving direction but this is not seen in the learning process conducted by pre-service teacher 2 and 3. When askingthem the reasons,both of themsaid "actually we plan to give the task but the time ran out and the bell rang, so we immediately concluded and ended the class". Though based on

the results of research conducted by Falch and Ronning (2012) said that giving homework is very important because it can increase student test score about 4% of standard deviation.

Peer Assessment

Peer assessment is done by students 3 by asking students to rate their friends after reading the text, but in this type of assessment, she did not provide a scoring rubric to students and the students were asked to rate using“good or very good” category and there was no feedback either from students or pre-service teacher. Whereas according to Shute (2007), giving feedback in formative assessment is very important because it can improve students' knowledge and skills. In the interview session the pre-service teacher 3said that this peer assessment was an unplanned assessment so that the students concentrated on the text being read.

Observation

The observation was conducted by the three pre-service teachers by observing the students while performing the tasks and visiting them from group to group. It was done to monitor students when composing text, help students who have difficulty in understanding the given text and check student work.

Future researcher should explore more on the most efective formative assessment technique used in teaching process and abserve the class for some meetings since this research was done for two meetings only.

D. Conclusion

From the results and discussion can be concluded that there are six types of formative assessment used by pre-service teachers in the teaching process. Those are observation, question, test, class discussion, giving homework, and peer assessment. Nobody used summary and portfolio. Observation was done by observing students, coming to students both in group and individual, helping students relate learning and examining student outcomes while questions were conducted orally. The test was also done orally through reading and arrange random sentences into text in groups. Discussion is done in groups by giving the task of composing a sentence into text. Giving homework is done by assigning students o write dialogue meanwhile peer assessment was done by assessing friends who are reading aloud text.

E. References

Anwar, B.R. and Rahmawati, D. (2014). Pengembangan Model Pembinaan Kompetensi Calon Guru Matematika Melalui *Lesson Study*. *Jurnal Pendidikan Matematika FKIP Univ. Muhammadiyah Metro. ISSN 2442-5419. Vol.3,No.1*.

Arifin, Z. (2009). *Evaluasi Pembelajaran*. Bandung: PT Remaja Rosdakarya

Bakula, N. (2010). The Benefits of Formative Assessments for Teaching and Learning. *Science Scope, 34(1).*

Beziat, R.L.T. and Coleman, K.B. (2015). Classroom Assessment Literacy: Evaluating Pre-Service Teacher. *The Researcher*, *27*(1), 25-30.

Black, P. (2004). *The Nature and Value of Formative Assessment for Learning.* King's College London

Carol, Boston. (2002). *The Concept of Formative Assessment*. ERIC Development Team.

Chotimah, U. and Anggara, R. (2012). Penerapan Lesson StudyBerbasis Musyawarah Guru Mata Pelajaran (Mgmp) Terhadap Peningkatan Kompetensi Profesional Guru Pkn Smp Se-Kabupaten Ogan Ilir. *Jurnal Forum Sosial*, Vol. V, No.02.

Dusley, P. (2011). *Lesson Study: a Handbook.*www.lessonstudy.co.uk

Hamdan, A. (2013). Pre-Service Teahers' Preferred Methods of Assessment: A Perspective from Saudi Arabia. *Australian Journal of Teacher Education. Vol 38.No.4.*

Hanna, G. S., & Dettmer, P. A. (2004). *Assessment for effective teaching: Using context-adaptive planning*. Boston, MA: Pearson A&B.

Hendayana, S, at al. 2006. *Lesson Study, Suatu Strategi untuk Meningkatkan Keprofesionalan Pendidik* (Pengalaman IMSTEP-JICA). Bandung:UPI Press.

Jones, A.C. (2005). *Assessment for Learning. Learning and Skills Development Agency*.

Falch, T. and Ronning, M. (2012). *Homework Assignment and Students Achievement in OECD Countries*.Statistics Norway Research Department.

Mulyana S. 2007. *Lesson Study* (Paper) Kuningan: LPMP-West Java

Rusman. (2010). *Mode-Model Pembelajaran Mengembangkan Profesionalisme Guru*. Bandung. Raja Grafindo Persada

Rustono, (2008). Meningkatkan kemampuan Mahasiswa Menerapkan Strategi Pembelajaran Melalui Lesson Study di Sekolah Dasar. *Jurnal Pendidikan Dasar " Nomor: 10*.

Shute, J.V. (2007). *Fokus on Formative Feedback*. Educational Testing Service.

Simon, M., Chitpin, S., and Yahya, R. (2010). Pre-Service Teahers' Thinking about Student Assessment Issue. *International Journal of Education. ISSN 1948-5476. Vol 2, No.2.*

Sujana, Made. I, (2012). Lesson Study sebagai Alternatif Peningkatan Kompetensi Calon guru di LPTK. *Jurnal Ilmu Pendidikan FKIP UNRAM, Vol. 20, No 1.*

Susilo, H, Chotimah, H, Joharmawan, R, Jumiati, Dwita Sari, Y, and Sunarjo. (2011). *Lesson StudyBerbasis Sekolah*. Malang: Bayumedia Publishing

Vitantri, A.C. (2016). Efektivitas Lesson Study Pada Peningkatan Kompetensi Calon Guru Matematika. *Jurnal Pendidikan Matematika Vol.1 No.1.*

Wei, C.R. and Pecheone, L.R. (2010). *Assessment for Learning in Preservice Teacher Education Permance-Based Asssessment*

Implementation of Leasson Study in Spatial Analysis Course

Abdul Karim[1]
[1] *Statistics, Muhammadiyah University of Semarang, Indonesia*
abdulkarim@unimus.ac.id

Abstract

Studying statistics in universities generally involves high-level thinking skills such as analytical and evaluation skills, rather than simply remembering factual knowledge and simple application. One of the strategies in learning that provides opportunities for students to develop problem-solving skills is problem-based learning. Problem-based learning is a learning process that becomes the starting point of problem-based learning. From this problem, students are stimulated to study problems based on their prior knowledge so that new knowledge and experience can be formed. This study aims at describing the application of problem-based learning strategy based on Lesson Study to improve students' problem solving ability of study program Statistics on Spatial Analysis course in academic year2017/2018. This research was done by integrating Lesson Study. The research was done in one class which consists of four stages, namely planning, implementation, observation, and reflection. Each open class of Lesson Study was done by including the stages of plan, do, and see. The implementation of problem-based learning strategy with computer assistedwas done effectively through Lesson Study can improve problem solving ability.

Keywords: *Lesson Study, Problem Based Learning, Spatial Analysis*

A. Introduction

Education plays a very important role to ensure the survival of the state and nation because education is a vehicle to improve and develop the quality of human resources (Pradhan et al., 2014). Universities as an educational institution cannot be separated from the improvement and development of human resources because universities can produce a more ready and professional output.Statistics are knowledge or science formed through thinking. Studying statistics in universities generally, involves high-level thinking skills such as analytical and evaluation skills, rather than simply remembering factual knowledge and simple application. Students who study statistics especially in Department Statistics Muhammadiyah University of Semarang (Unimus) need to get challenges in the form of challenging problems, in order to prepare them to work after graduation later. But we do not know what statistical problems need to be given to the students because we never know exactly what statistics will be faced by students later on after graduation. Therefore, students need to be given the ability to solve problems.

Students are people who are not yet fully adults, they still need a lot of procedures as a guide to solve a statistical problem to find a way out of the core of a problem. Sometimes students are frustrated when faced with a statistical problem. Students need direction from lecturers so they will want to do creations that help to find ideas(Schoenfeld, 2014). One of the strategies in learning that provides opportunities for students to develop problem-solving skills is problem-based learning (Choi, Lindquist, & Song, 2014)(Yew & Goh, 2016). Problem-based learning is a learning strategy that challenges students to "learn to learn", this problem is used to link the curiosity and students' analysis and initiative skills to the subject matter. This learning prepares students to think critically and analytically and to seek and use appropriate learning resources (Savery, 2015)(Wiek, Xiong, Brundiers, & van der Leeuw, 2014)(Wijnia, Loyens, Derous, & Schmidt, 2016).

Learning in the Prodi S1 Statistics Unimus generally takes the form of lectures or expository, giving assignments to make papers, presentations, and then end with a test. This kind of routine lecture activity can make the students less challenged to solve the problem. This condition does not support the development of capability in solving their problems in the future. In addition to being less able to solve problems, regular learning above can make them less creative in facing problems in the field. Thus, it takes activities that provide an opportunity for them to be able to use the power of thought, develop ideas, find solutions to a problem that they may develop themselves and express opinions. Furthermore, for students to do the job better, then they need tools that can facilitate their tasks. In this case, for complicated and repetitive calculations, the computer is one of the suitable alternatives as a tool.

With the advent of computer technology nowadays, it can be designed a problem based learning by utilizing thecomputer as a tool in learning. Through computer help in statistical learning, the students earn time savings that are typically used for counting repetitive processes or drawing graphs. With learning that gives many students the opportunity to explore the problem better be expected that students' math problem solving ability can increase.Application of problem-based learning strategy with computer help can be done effectively by applying Lesson Study. Application of Lesson Study in learning not only provide benefits for students but also able to improve the professionalism of teachers concerned. This is done so that the teacher's teaching skills can develop to become independent learners, responsible, skilled communicating, and collaborating.(Tlili, Essalmi, Jemni, Kinshuk, & Chen, 2016)(Koray & Koray, 2013)(McLaren, van Gog, Ganoe, Karabinos, & Yaron, 2016)

This study aims to describe the application of problem-based learning with the help of computers through the Lesson Study-based to improve the problem solving skills of Unimus Statistics Study program students in Spatial Analysis courses, so it

can be used as variations in learning, and used to improve the quality and effectiveness of the lectures.

B. Method

This study was conducted by integrating Lesson Study. Research is done in one class, in the class consists of four stages, namely planning, implementation, observation, and reflection. In each open class Lesson Study is done which includes stages plan, do, and see.The presence of researchers in this study is as a lecturer model and observer who designed the learning activities or actions undertaken together with the team of lesson study. The study was conducted at the Muhammadiyah University of Semarang (Unimus) on Spatial Analysis 2017/2018 from August to September. The subjects of this study are all students of StatisticsMuhammadiyah University of Semarang who take Spatial Analysis courses about 20 students.

The technique of data collecting is done by observation technique which is done by anobserver which is directly involved in data about student activity and lecturer activity of model in process of learning in class. The data collected by observation technique are 1) learning implementation data, 2) data implementation of Lesson Study, 3) data ability to implement learning and 4) data management ability of theclass.

C. Findings and Discussion

Preliminary observation activities conducted to find the problems that occurred in the class of Spatial Analysis of academic year 2017/2018. The observation was conducted during two meetings on Friday, August 25, 2017, Spatial Analysis lecture schedule is for two hours of lectures at the University of Muhammadiyah Semarang (Unimus). The observations obtained during the two hours of learning include the presentation of the structure of spatial data can be seen that PBL combined with the help of computers with the case of Gross Regional Domestic Product (GRDP) in Central Java to make students the spirit of learning. Student's enthusiasm in processing data provided by Lecturers and do the job seriously. The observer notes the existence of atwo-way interaction between students and lecturers that occur with very effective and interactive. Learning media is very good because it is displayed in several LED TVs in the computing lab.

Table 1 summary of research activities through lesson study

Material	Model lecturer	Observer	Time		
			Plan	Do	See
Spatial Dependency	Abdul Karim	Rochdi Wasono,	July 20th 2017	September 5th 2017	September 5th 2017

	Eny Winaryati, Indah Manfaati Nur, Tiani Wahyu Utami

The Implementation of Problem Based Learning with Computer Help

Based on table 2, it can be seen that the syntax execution has been done well. The average of implementation both in Lesson Study 1 and Lesson Study 1 is 100% which is included in the criteria very well implemented.

Table 2 results of PBL learning monitoring with computer assistance

Learning implementation		**Criteria**
Percent	**Criteria**	
100	Very well done	Very well done

The Implementation of the Lesson Study Stages

Based on Table 4 it can be seen that all the stages of Lesson Study have been done well. The average of the implementation of the planning phase is 100% which is included in the criteria very well implemented. The average of performing stage do is 100% which is included in the criteria very well implemented. The average implementation phase of the see stage is 100% which falls into the criteria very well implemented.

Table 3 Results of Monitoring the Implementation of Lesson Study

	Lesson Study Phase Performance Scor			
Criteria	***Do* (%)**	**Criteria**	***See* (%)**	**Criteria**
Very well done	100	Very well done	100	Very well done

Figure 1 shows the distribution of final test result data from the lesson study class where the data indicates following the normal distribution, the p-value value of Anderson Darling of 0.624 has the mean of normally distributed data.

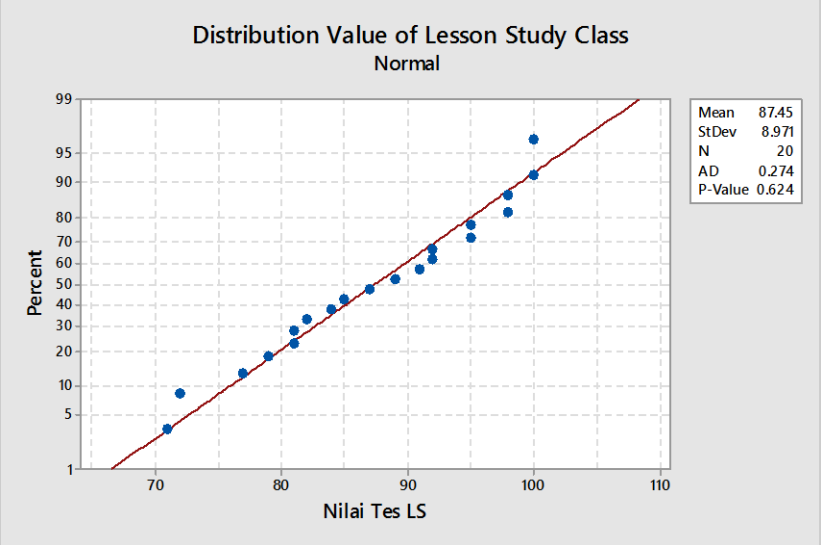


Figure 1 Distribution class value of lesson study

Table 4 one sample test

Variable	N	Mean	StDev	SE Mean	95% CI	T	P
Value test LS	20	87.45	8.97	2.01	(83.25, 91.65)	6.21	0.00

Table 4 shows the comparative test results of the average test results that occurred in the group of students using problem-based learning with the help of computers with the average value of the class in the previous year which has an average value about 75. From the result of one sample test, the p value of the t test about 0.00 has meant that there is a significant difference between the classes using lesson-based computer-based problem-based learning with the class without the lesson study.

The implementation of PBL syntax has been accomplished with very well implemented criteria. This reveals that learning is as expected. The presence of improved skills to analyze problems with computer help is expected to derive from the strategy used. This result shows that learning by applying PBL based on lesson study can help students to improve and practice problem solving skills.The implementation of PBL syntax has been accomplished with very well implemented criteria. This reveals that learning is as expected. The presence of improved skills to analyze problems with computer help is expected to derive from the strategy used. This result shows that learning by applying PBL based on lesson study can help students to improve and practice metacognitive skills.

D. Conclusion

Implementation of problem-based learning strategy with computer help done effectively through Lesson Study can improve problem solving ability.

Reference

Choi, E., Lindquist, R., & Song, Y. (2014). Effects of problem-based learning vs. traditional lecture on Korean nursing students' critical thinking, problem-solving, and self-directed learning. *Nurse Education Today*, *34*(1), 52–56.

Koray, Ö., & Koray, A. (2013). The Effectiveness of Problem-based Learning Supported with Computer Simulations on Reasoning Ability. *Procedia - Social and Behavioral Sciences*, *106*, 2746–2755. http://doi.org/http://dx.doi.org/10.1016/j.sbspro.2013.12.315

McLaren, B. M., van Gog, T., Ganoe, C., Karabinos, M., & Yaron, D. (2016). The efficiency of worked examples compared to erroneous examples, tutored problem solving, and problem solving in computer-based learning environments. *Computers in Human Behavior*, *55*, *Part A*, 87–99. http://doi.org/https://doi.org/10.1016/j.chb.2015.08.038

Pradhan, M., Suryadarma, D., Beatty, A., Wong, M., Gaduh, A., Alisjahbana, A., & Artha, R. P. (2014). Improving educational quality through enhancing community participation: Results from a randomized field experiment in Indonesia. *American Economic Journal: Applied Economics*, 105–126.

Savery, J. R. (2015). Overview of problem-based learning: Definitions and distinctions. *Essential Readings in Problem-Based Learning: Exploring and Extending the Legacy of Howard S. Barrows*, *9*, 5–15.

Schoenfeld, A. H. (2014). *Mathematical problem solving*. Elsevier.

Tlili, A., Essalmi, F., Jemni, M., Kinshuk, & Chen, N.-S. (2016). Role of personality in computer based learning. *Computers in Human Behavior*, *64*, 805–813. http://doi.org/http://dx.doi.org/10.1016/j.chb.2016.07.043

Wiek, A., Xiong, A., Brundiers, K., & van der Leeuw, S. (2014). Integrating problem- and project-based learning into sustainability programs: A case study on the School of Sustainability at Arizona State University. *International Journal of Sustainability in Higher Education*, *15*(4), 431–449.

Wijnia, L., Loyens, S. M. M., Derous, E., & Schmidt, H. G. (2016). University teacher judgments in problem-based learning: Their accuracy and reasoning. *Teaching and Teacher Education*, *59*, 203–212.

Yew, E. H. J., & Goh, K. (2016). Problem-Based Learning: An Overview of its Process and Impact on Learning. *Health Professions Education*, *2*(2), 75–79.

Improving Multicultural Learning Through Brainstorming Method by Students Group Discussions in Civic Education and Pancasila Program

[(1)]Abdul Sakban, [(2)]Maemunah, [(3)]WayanResmini,
[(4)]ZainiBidaya&[(5)]AchmadDjunaidi
Muhammadiyah University of Mataram[(1,2,3,4 & 5)]
sakban.elfath@yahoo.co.id

Abstract

The purposes of this research is to explain multicultural learning process by using brainstorming method through students group discussion and to understand the improvement of students ability in multicultural learning through brainstorming method bystudents group discussion at the sixth semester students of civic education and pancasila program. The method used in this research is descriptive qualitative method and action approach, the research subject was thesixth semester students of civic education and pancasila programwith 24 students.Method of collecting data were: observation, test and documentation.Interactive analysiswas usedto analyze data. The results of this research showed that: (1) multicultural learning process by using brainstorming method and students group discussion can be done by preparing of learning set like:lesson plan, syllabus method, learning media, learning sources, assessment, and then co,pose the chapter design, and lesson design. (2) there is significant improvement of students skill effected by maximizing the learning materials, and learning media which is able to sharpen students thinking such as, observer, identification, analysis, finding a new thing, communication, and concluding the multicultural concepts and learning method.

Word Key: *Multicultural Learning, Brainstorming and Group Discussons*

A. Introduction

Multicultural learning is a learning that discusses the diversity of cultures, cultural diversity are various religions, ethnic, ethnic, linguistic, social and cultural. But the fact that the ability of students to understand multicultural materials is still problematic, especially the ability of students to identify, analyze, communicate, and find ideas, the notion of multicultural concepts is still very less, but also the occurrence of horizontal conflict is influenced by the lack of knowledge of students about tolerating life in Multicultural country.Ibrahim (2013) states that cultural diversity in Indonesia is a historical and social reality that no one can deny.The uniqueness of these diverse cultures provides the implications of their own mindset, behavior and personal character as a living tradition in society and the region.The traditions formed will vary from one tribe / area to another tribe / region.Intercultural struggles provide conflict opportunities when there is no mutual understanding and respect for each other.Similarly,Basri (2012) states that the conflicts that occur in Indonesia is generally developed around the multicultural line society.The nuances of ethnic, ethnic, religious, and social coatings color the conflicts of violence as well as

vandals.Conflict that drew primordial discourse was common in conflicts in Kalimantan (between ethnic Madurese, Malay, and Dayak), in Ambon, Poso and Halmahera (migrants, indigenous, Muslim, Christian, elite political clients), social unrest and ethnic May 1998 in Jakarta, the Aceh conflict, and the 1966 massacre in Java and Bali, are some of the conflicts within this level.To understand multicultural education requires effective concepts that between students are not mutually reproachful, conflicting and hostile, therefore learning militultural education requires effective means. One effective way to improve student achievement in multicultural learning is to use brainstorming and group discussions.

Brainstorming method is a method that can be used to activate students, students are asked to give an idea or to mention examples as much as possible in a short time (Nurgayah, 2011).Fatmaryanti (2014) shows that the use of these second methods of brainstorming and peer tutoring can improve learning activities and achievement.In line with Ardian and Djatmiko (2008) stated that there is a significant increase in student creativity after being treated with a brainstorming learning model.hen the method of group discussion, group discussion method is a learning method with the terms of discussion in the learning process. Group discussions are designed so that learning does not seem rigid and boring. This group discussion was conducted in analyzing the properties of each waking space (Satrianawati, 2015).The steps of group discussion applied in this research are: 1) Students are given a topic that will be discussed in the group presentation; 2) Lecturers divide students into groups. No student working alone. Within the group students begin to discuss the topics they will be discussing; 3) Students conduct discussions before presentation including meeting the lecturers to confirm the clarity of the material. 4) Students make group presentations according to the material already given; 5)Students give each group a problem for discussion; 6) Discussion results of student answers are presented (including frequently asked questions in them); 7) The lecturer explains and re-asks the material that has not been understood and is unclear at the time of the discussion.Likewise Romlah (2006) "group discussion is a planned conversation between three or more people in order to solve a problem or to clarify a problem under the leadership of a leader."

The advantages of group discussion methods are:1) Become a place for group members who are usually silent and can discuss with friends more openly;2) In group of students cooperating;3) students helping each other;4) Problems can be solved quickly;5) Building friendships;6) Establish the character of appreciating opinions.While the lack of group discussion methods are:1) Generally in one group active only one or two people;2) Students wastheir consider friends better tend to be silent;3) Only a few people are always active (Satrianawati, 2015).

The purposes of this research is to explain multicultural learning process by using brainstorming method through students group discussion and to understand the improvement of students ability in multicultural learning through brainstorming method by students group discussion at the sixth semester students of civic education and Pancasila program.

B. Method

The research was conducted at the sixth semester students of civic education and Pancasila program of Muhammadiyah University of Mataram. Research subjects were 24 students of civic education and Pancasila program.The study was conducted start atthree to untilthreethinof July 2017.This research type is qualitative research with approach of action through lesson study activity.

The stages of the implementation of this study were conducted with 3 (three) stages: Plan (Planning), Do (implementation) and See (reflection) in each cycle.The first cycle (open lesson 1) consists of 3 (three) stages of activity that is the Plan (planning) by using :syllabus planning, learning plan, way of teaching, learning media, assessment, and discussion activities. The Do stage (implementation) by using : the implementation of learning in accordance with activities that have been planned previously, observation activities conducted by observer lecturers to the learning activities of students and lecturers model.TheSee stage (reflection) includes reviewing the results of the implementation of learning, discussing, giving suggestions, criticism of the nature of building the quality of learning in each cycle is getting better, providing recommendations for improving the learning process.

The second cycle (open lesson 2) consists of 3 (three) stages of activity, the Plan stage (planning) by using : syllabus planning, lesson plans, teaching methods, learning media, assessment, discussion activities and planning focusing on students who are not active yet complete study in accordance with the first open lesson recommendations or cycle 1. The Do stage (implementation) by using: the implementation of learning in accordance with activities that have been planned previously, observation activities conducted by observer lecturers to the learning activities of students and lecturers model, and more focus on students who lack learning activities.The See stage (reflection) includes reviewing the results of the implementation of learning, discussing, giving suggestions, criticisms that build the quality of learning in every cycle improved, provide recommendations for improvement of learning process.Similarly, the third cycle of activities (open lesson 3) continues to implement the Plan, Do and See stages.Open lesson threeth is that the learning process has improved by using prioritizing student-centered learning that is critical thinking, communicative, collaborative and creative.

Methods of data collection using observation techniques, tests and documentation.Observation technique is observing the activities undertaken by students during the learning process and the activities of the stages to able to Plan, Do and See in each cycle.The test used in the form of a written test and group discussion learning activities with the aim to measure the ability of students in answering questions and group discussions activity.Documentation is by using to review how the learning process starts from Plan, Do and See with the documentation makes it easier for us to improve the quality of learning, especially observing

individual students. The analysis techniques used in this research was interactive analysis model.

C. Finding and Discussion

1. The "Plan"activity in Multicultural Learning Process

Planning stage is implemented to compile and produce lesson plan.Planning is done in collaboration between model lecturer, observer lecturer, and lesson study monitoring team to convey suggestions, constructive thoughts in developing lesson design, and identify 24 students of civic education and Pancasila programs targeted for learning achievement.Planning discusses lesson planning, lessons learned, and assessments.In this planning activity, model lecturers together with observer lecturer of civic education and Pancasila program and monitoring team of lesson study do activities and record the activities they achieve.

In the learning process conducted in lesson study activities, there are some activities that must be prepared before the implementation of learning in the classroom.As a model lecturer that needs to be prepared is learning tools such as syllabus, learning plan, methods, learning media, learning resources, assessment, then make chapter design, lesson design.

a. Setting up learning tools

   As a model lecturer, which needs to be prepared is a learning tools starting from Semester Learning Plan (RPS), Lesson Planning Plan (RPP), learning method must be in accordance with the depth and output of learning materials, the media used are the image media, visual image, laptop, LCD and the student work sheet with the media facilitate the thinking process of students ranging from identifying, analyzing, finding, communicating and responding and conveying ideas of ideas. The next, learning resources can be using printed books, articles, videos, newspapers, and magazines.Assessment is to evaluated the ability of students in understanding the material that has been dierikan already understood or not. The assessment used during the lesson study is the assessment of process and attitudes assessment.Assessment process in the form of question/questionsgive directly to student, whereas attitude assessment in the form of assessment of group discussion.It also creates a class plan or class design that will be used during the implementationactivity.

b. Prepare chapter design

   Chapter design is made in accordance with chapters and sub-chapters of learning materials for the first semester.This chapter design serves as a frame of mind to facilitate model and student lecturers in studying the course and preparing concept maps for each sub chapter of learning materials.

c. Setting up lesson design

   The preparation of lesson design is one of the lecturers' duties before implementing open lesson.Lesson design activities are conducted together with the team of observer lecturers, the lesson study monitoring team, the teams discuss to give input and suggestions until the learning process runs effectively.Before the

discussion, the lecturers of the model first present and present the lesson plans presented in the first, second and third open lesson activities.Furthermore, the observer lecturer and the monitoring team provide input and suggestions to the model lecturer.Lesson design aims to develop a series of learning activities that are oriented towards learning critical thinking, discovering, communication and creativity.

2. The "Do"activity (Implementation) in Multicultural Learning Process

The implementation activities to implement learning implementation plan (RPP) that has been made by a group of lecturers who in the preparation activities have been agreed by the group to become "lecturers model" on campus that has been agreed also.Observer lecturers and group members act as observering (observers) of learning. Observer lecturers and monitoring teams also act as learning observers. So learning is doning openly (open lesson).Observers should not interfere with learning and do not interfere with the fluency of learning.The observer's task observed the activity of lecturer model and student intensively. Observer uses pre-designed observation sheets centered on student activities, student interaction with students, students with teaching materials, students with lecturers, and students with environment. The observers not only evaluate lecturers' performance but preferably evaluate a fun learning process. Usually the observers stand on the left and right of the class and do not communicate with each other during the lesson. For further study or observer documentation can do video-shooting or photographing with a digital camera.

Implementation of the Do stage in the multicultural learning process is before the learning is done, the classroom in the setting in accordance with the plan planned during the Plan activities, based on the results of multicultural learning in the sixth semester students of Civic Education and Pancasila Program of Teacher Training and Education Faculty Muhammadiyah University of Mataram can described as follows :

a. The design of the spatial layout of learning space by using brainstorming method with group discussion method.

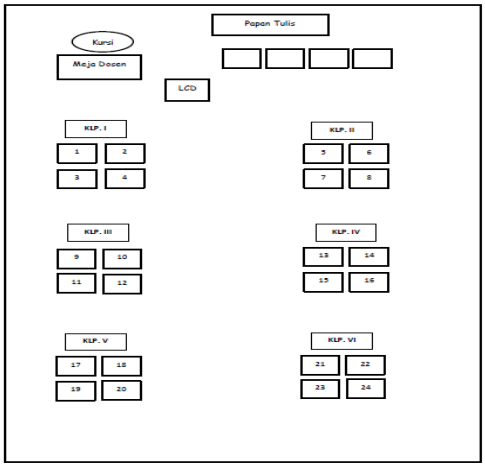


Figure 1. Plan Room Brainstorming Learning with Group Discussion

The design of the brainstorming learning room with the group discussion should be designed by the model lecturer by informing the chairperson first to design the space and desk before the learning process begins, it is done to streamline the time. Each group consists at 4 people, the design of the room can help lecturers to coordinate the learning process by identifying students who are actively inquiring, communicating, collaborating and expressing their opinions in front and in their respective groups.

b. Use of brainstorming methods with group discussions

Brainstorming method is a way that can be used to activate students, students are asked to give ideas or to mention examples as much as possible in a short time (Nurgayah, 2011).Brainstorming is Brainstorming, in which every student is required to convey ideas or answers to the problems given (Martinho and Ponte, 2008) that questions provided by the teacher train students' communication skills.Discussion methods can encourage students to dialogue and exchange opinions with both teachers and friends so that they can participate optimally without any rules that are too harsh but still follow the agreed ethics.According Suparlan (2007) discussion can be held two forms of small group discussion and class discussion. In Indonesian language learning, discussion is very helpful for two-way communication.

According to Zaini, et al. (2004), other advantages of group discussion methods include: (1) helping students learn to think from the point of view of a subject by giving students freedom in the practice of thinking, (2) helping students evaluate logic and evidence for their position or other positions, (3) giving students the opportunity to formulate the application of a principle, (4) helping students to be aware of a problem and formulating it using information obtained from reading or lecturing, (5) using materials from other members in group, and (6) developing motivation to learn better.

Satrianawati (2015) explains there are several steps of group discussion applied in this research are: 1) Students are given a topic which will be discussed in group presentation; 2) Lecturers divide students into groups. No student working alone. In the group the students begin to discuss the topics they will

discuss; 3) Students conduct discussions before presenting. Including finding the lecturer to conform the material clarity. 4) Students make group presentations in accordance with the material given; 5) Students give a problem to each group to be discussed; 6) Discussion results of student answers are presented (including frequently asked questions in them); 7) The lecturer explains and re-asks the material that has not been understood and is unclear at the time of the discussion.

c. Interaction between students and students, students with lecturers and students with the environment

Students are guided by lecturers when completing group assignments. The lecturer approaches each group and gives greater attention to the group asking or finding difficulties. Students have shown good interaction with lecturers. They are willing to go forward voluntarily to write the results on the board as group representatives, ieA (male) and BJ (female) students.This presentation has been going well and successfully describes the group work very well.According to observers, for the size of college students at higher education levels dare to appear calm, not nervous, self-controlled, and confident has been very good enough. It needs to be improved in capabilities when explaining with words to be more varied by increasing the frequency of presentations.Here are the results of the interaction between students and students, lecturers with students and students with the environment or other learning resources during lesson study activities.

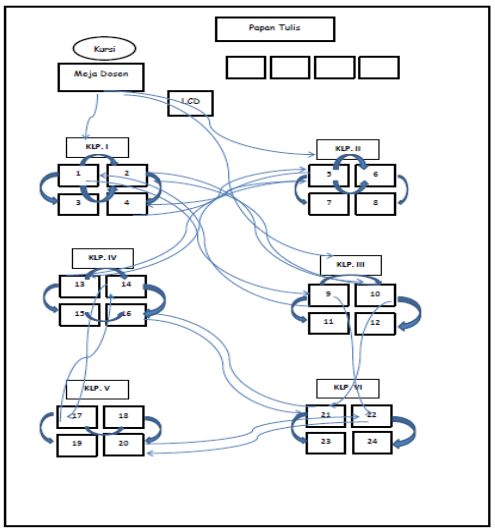


Figure 2. Student Learning Interaction Results Using Brainstorming Methodswith Group Discussion

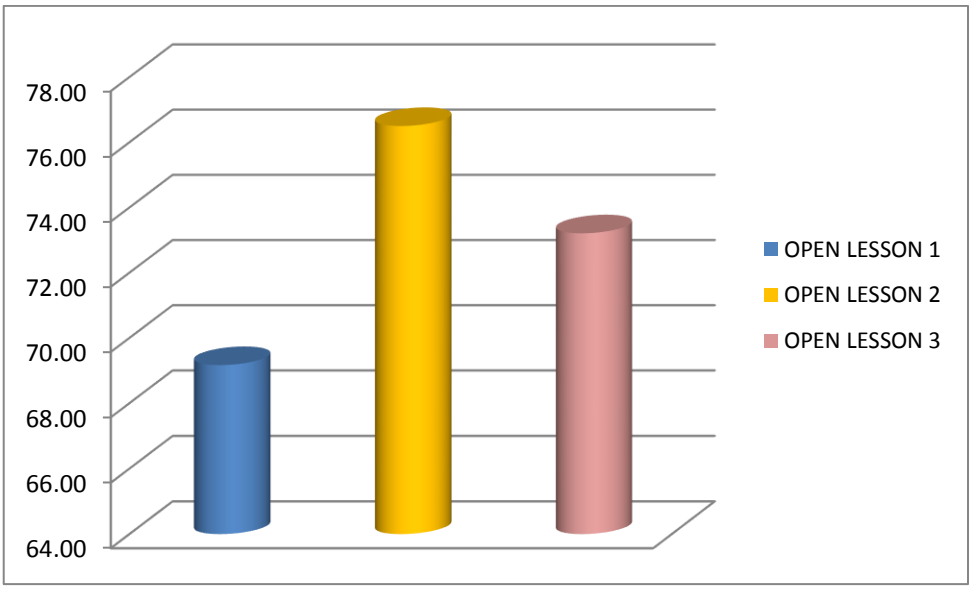
3. The Seeactivity (reflection) in Multicultural Learning Process

This activity is a discussion guided by lesson study team or authorized person to discuss learning, for example monitoring team or lesson study committee.At first the model lecturer conveyed the impression of the learning he was carrying out. Then the observers are asked to submit comments, criticisms, suggestions and lessons learned from the learning that has been going on, especially those related to student

learning activities.Model lecturers receive input from observers to make improvements in subsequent learning plans.Based on the input in the learning reflection phase it is designed the next lesson that will improve the deficiencies in the learning that has been done. Thus, learning improvements will continue, and the quality of learning is always enhanced over time.

4. The Improving of Student Ability in Multicultural Learning Through by Using Brainstorming Methodswith Group Discussion

The increase of students' learning ability is influenced by the availability of the optimal learning tools, learning media that can hone student mindset such as observing, identifying, analyzing, finding new, communicating, and summarizing multicultural concepts.Based on the data of students' learning ability, the average value of multicultural learning through the brainstorming method described in Graph 1 is following as:

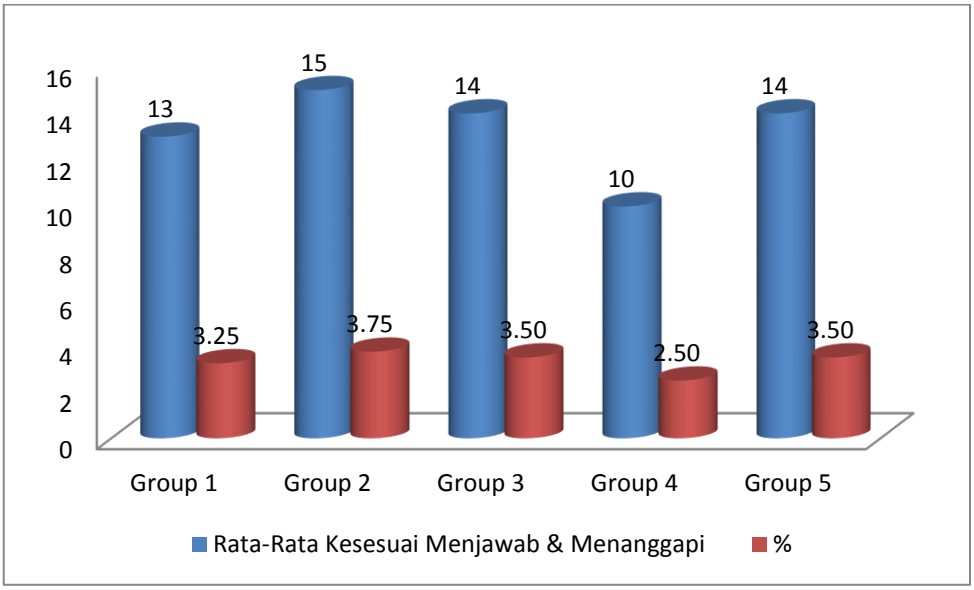


Graph 1. The Average Value of Multicultural Learning Through Brainstorming Methods

Based on graph 1 above shows that the average scores obtained by students from open lesso 1, 2 and 3 show varying results. For open lesson 1 the average score of students' ability to explain the concepts of multicultural problems is 69.17%, open lesson 2 equal to 76,50%, and open lesson 3 equal to 73, 21%.So it can be concluded that the average value of multicultural learning ability of Citizenship Education and Pancasila students by using brainstorming method has increased every student although every open lesson there is a significant difference.The improvingis students' multicultural learning ability is driven by the availability of adequate learning tools, learning media that can hone student mind-set such as observing, identifying, analyzing, finding new, communicating, and summarizing multicultural concepts.This is similar to the statement from Ardian and Djatmiko (2008) stated that there is significant creativity difference between treatment group and control group

after treatment with brainstorming learning model.Likewise, according to Fatmaryanti (2014), there is an increase in learning activity from 37.54% to 51% and the increase of learning outcomes is from the average grade grade 58.7 (C-) to 65.4 (B-).

While the average score of conformity answers and responds to the questions the student undertakes by using the group discussion method, then for more details can be illustrated in Graph 2, isfollowing as:



Graph 2. Ability to Answer and Respond to Questions by using Group Discussion Methods

Graph 2 above shows that students' ability in conducting group discussions is very communicative, it is known and obtained the average scores achieved by each different group.The mean score if it is assigned to each group either group 1 gets 3.25%, group 2 gets 3.75%, group 3 gets 3.50%, group 4 gets 2.50%, and group 5 gets 3.50 %.The existence of differences achieved by each group is influenced by internal and external factors. Internal factors related to the ability of intelligence, psychological, motivation, nutritious food, and genetic. External factors are concerned with factors from outside the personal person such as environment, technology and information, society, and friends mingle.

In relation to the results of the above research, it is shown that the use of group discussion method in multicultural learning resulted in a learning that can increase motivation, intelligence, and able to arouse students' passion, especially encouraging students to learn to identify, communicate, collaborate and be able to analyze various problems- multicultural issues, and conveying resolution concepts in resolving multiclutural conflicts and falsifying multicultural concepts.This is in accordance with Rochimatun's (2016) explanation that the application of group discussion methods can improve learning outcomes and students' learning abilities that have improved each cycle.Likewise Kisworo, Ilyas&Kriswanto (2016) that with the participative learning model through the discussion group discussion techniques,

students can prepare and create discussions that will be implemented in the classroom, and they have strategies to be used in creating class-mannered discussion.

The multicultural learning using brainstorming methods with group discussions leads to a learning that can sharpen the mindset of students such as observing, identifying, analyzing, finding new things, then encouraging students to always communicate with fellow students, and concluding multicultural concepts.In addition, this learning provides a considerable impact with the increase in student learning motivation to analyze reveal multicultural problems and be able to convey the concept of resolution in solving multiklutural conflicts.

D. Conclusions and Suggestions

The results of this research showed that: (1) multicultural learning process by using brainstorming method and students group discussion can be done by preparing of learning set like: lesson plan, syllabus method, learning media, learning sources, assessment, and then co,pose the chapter design, and lesson design. (2) there is significant improvement of students skill effected by maximalizing the learning materials, and learning media which is able to sharpen students thinking such as, observer, identifity, analyze, find a new thing, communication, and conclude the multicultural concepts and learning method.

It is suggested that the use of brainstorming method with group discussion can be used as guidance for lecturer of pancasila and civic education to use in learning process especially social science and cultural sciences.In multicultural learning in by using brainstorming methods with group discussions do not just discuss but will be able to collaborate with other learning methods as one of the development of learning methods.

References

Ardian, A and Djatmiko, D. R. 2008. Implementation of Brainstorming Learning Model to Improve Student Creativity In Practice Practice Courses. JPTK, Vol. 17, No.1, (61-76).

Basri, S. 2012. Vertical and Horizontal Conflict in Indonesia, <http://setabasri01.blogspot.com/ 2012/05 / p-approach-in.html>, accessed on September 12, 2012.

Fatmaryanti, D. S. 2014. The Improving of Mathematical Physics Activities and Learning Outcomes 1 with Brainstorming Methods and Peer Tutors. JRKPF UAD Vol.1 No.1 (19-21).

Ibrahim, R. 2013. Multicultural Education: Understanding, Principles, and Relevance with the Purpose of Islamic Education. Journal ADDIN, Vol. 7, No. 1, (129-154).

Kisworo B, Ilyas&Kriswanto, D. H. 2016. Participatory Learning Model Through Mentoring Technique on Student Group Discussion in Shaping Character Discussion. Journal of Nonformal Education, Vol. 2 No. 1, (99-106).

Nurgayah. 2011. *Strategies & Learning Methods*. Bandung Ciptapustaka.

Matrinho, M. H dan Ponte, J.P. (2008).A Collaborative Project as a Learning Opportunity for Mathematics Teachers.The International Congress on Mathematical Education.eds 11. Monterrey

Romlah, T. 2006. *Theory and Practice of Group Guidance*. Malang: State University of Malang.

Rochimatun, S. 2016. Optimizing the Application of Group Discussion Methods to Increase Economic Learning Outcomes with Basic Matter of Economics and Economic System on Students of Class X3 Semester One SMA Negeri 3 Sukoharjo Lesson Year 2014/2015. Journal of Social Science Education, Vol. 26, No. 2, (12-23).

Satrianawati. 2015. Influence of Group Discussion Methods In Evaluating Student Results Using Mindmap. Basic Education Profession Vol. 2, No. 2, (141 - 147)

Suparlan. 2007. *Becoming an Effective Teacher*, Jakarta: Hikayat Publishing.

Zaini, H. et al. 2004. *Active Learning Strategy*. Yogyakarta: CSTD.

Developing A Model of Intercultural-Based Language Learning for Teaching English Speaking Skill

Aprianoto and M. Asrul Hasby
aprianoto@ikipmataram.ac.id[1], asrulhasby@yahoo.com[2]
English lecturers of FPBS IKIP Mataram

Abstract

This research aims at developing product Intercultural-Based English Speaking (IBES) Learning Material for English department students of FPBS IKIP Mataram. This research applied the research and development. Observation is for need analysis. Questionnaire is to measure the quality of the product. The study presented the need analysis result in the working field, to design the learning material namely (1) various contexts, (2) language elements, and (3) foreign culture. The study also presented the need analysis result in class to design the learning material namely (1) various context of language function, (2) language function for specific purpose, (3) grammar, (4) pronunciation, (5) vocabularies for specific purpose, (6) intercultural competence and (7) various speaking activities. The product comprises of two units; Unit one and Unit two. The results were; (a) the quality of the first product is acceptable to be disseminated with some revisions and without any revision on grammatical errors, (b) The quality is based on the degree of acceptability, (c) The description of the second product was similar to that of the first product after being revised, (d) The description of the final product was similar to that of the first and second product after being revised and it was implemented, (e) The quality of the product was assessed by the students by asking them to fill in the questionnaires. Based on the result of the assessment, the product is acceptable to use without any revision.

***Keywords**: Intercultural-Based English Speaking Learning Material*

A. Introduction

The ability to speak a foreign language fluently presupposes not only a good knowledge of language features, but also the ability to process information based on target culture. A good knowledge of target culture will get easy to process information from speaker. Without the understanding of language target culture gets difficulties both in their receptive and productive skill. Dobrovol'skij & Piirainen (2006), Colson (2008) and Williams (2010) claim that language is inseparable from its culture. Therefore, teaching any language will inevitably involve teaching its culture. Only through understanding the culture of the target language will a language learner be able to function properly in the language s/he is learning.

Language is the most important communication tool for human beings, and is an important component of culture. The application of a language is influenced by its cultural background to a certain degree. When people communicate with a language, it always involves other cultural factors beyond the language itself, including social system, customs and habits, values, life style and norms of behavior, etc. Hence, the learning of a language cannot be running well without the understanding of its culture,

and only when the teacher goes deep into the cultural connotation implied by a language, that is, "the deep structure of culture" (covert culture) (Gu Jiazu, 2000), can he better guide students to generate a desirable communication schema, understand the cultural information contained in the text in the process of learning and ultimately improve their intercultural communicative competence.

The purpose of learning a foreign language is to learn to communicate in the target language, to learn the customs and traditions of the speech community and to promote one's study and work. Teachers of English at FPBS IKIP Mataram need to teach target culture. The basic goal of learning a foreign language is to acquire the communicative competence and the best way to get communicative competence is intercultural teaching in speaking learning as a subject matter. The materials of teaching speaking have to add target culture in some certain parts of language target.

This research concern on developing intercultural learning-based English speaking learning material for English department students of IKIP Mataram. The English department students of FPBS IKIP Mataram need English speaking proficiency in their future working field. They are going to be the people in charge of building relation with foreigners who have difference culture to get comprehension. Thus, they might communicate with the foreigners sharing the different first language. As a consequence, English will serve as the means of communication among them. Therefore, sufficient English speaking proficiency in the intercultural competence which they should acquire. Unfortunately, the English department students for third semester have not yet reached the sufficient level of intercultural competence to communicate. Nonetheless, there has not been the learning material thoroughly developed to improve the English department students' English speaking competence integrated with the intercultural teaching.

B. Method

Product Developmental Model

The model of product development follows Research and Development model as it is proposed by Borg and Gall (1983: 775). Research and development refers to the method attempted to develop the product in the educational field. The product can be the module or the instructional material, learning material, the product aimed to develop students 'behavior and the product for the management system. There are some steps to follow for developing the educational product. The Research and Development consists of some major steps to follow namely the definition, planning, development, and dissemination (Thiangarajan and Semmel, 1974: 4-9). There are four main steps namely Defining, Planning, Developing, and Dissemination.

Conducting the need analysis which includes the literature review, review of related research and conducting needs analysis in the field. The needs analysis in the field contain some components such as (1) identification of the needs (2) situation need as it has been proposed by (3) the review of the literature and (4) the review of the related research.

The planning consists of some elements as follows (1) formulating the learning objectives (2) deciding the task (3) deciding type of the teaching learning activity (4) deciding the assessment (5) deciding kinds of supporting services to be used.

The developing process consists of some steps as follows (1) developing the instructional design (2) developing the task and (3) developing the teaching learning activity (4) developing the assessment (5) developing the supporting services.

The dissemination process consists of some elements as follows (1) obtaining the feedback of the product and (2) revising the design.

Product Development Procedures

The product development procedure offered the steps for developing the product. The development of the product follows the step proposed by Borg and Gall (1983: 775). Thus, the product development procedure follows some steps namely (1) conducting pre observation at class, (2) conducting pre observation for some foreigners at tourism, (3) conducting observation for some foreigners at tourism, (4) conducting interview for some foreigners at tourism, (5) conducting observation at class, (6) exploring language found from some foreigners of observation match to those found at class speaking, (7) exploring the context found from tourism observation to be employed as the context for learning material development, (8) pedagogical realization, (9) physical production of the learning material, (10) validation of the learning material, (11) the use of the learning material, (12) evaluation of the learning material, and (13) revised learning material.

C. Findings and discussion

This research was concerned to develop a model of intercultural-based English speaking (IBES) at English department students. Needs analysis was conducted on March 2017. The aim of need analysis was to find what needs to be learned by students and how to learn. The respondents were 32 students and 5 lecturers of English language education in the speaking classes. The instruments used to collect the data of needs analysis were the questionnaires and the interview. In doing needs analysis, it was focused on target needs and learning needs.

Target Needs

Concerning their level of English proficiency the students are at the position of *Basic level* in which the students know a limited number of common cultural topics of foreign country and local cultures, cultural expression, and common words; are able to control limited and short conversation on a few predictable topics, survival level knowledge of vocabulary, grammar, and idiom expression; pronunciation heavily influenced by mother tongue. This level was chosen by students by 45% respondents, going to the next was at the *Intermediate level* which was 35%. The data represented that the level of students' English proficiency was at the Basic level up

to intermediate level. Consequently, the materials of vocabulary for speaking should cover the first 1000 to the second 1000 of the most used word in English conversation.

Intercultural materials were considered very important by 54% of students and by 49% in important category. This led students to improve their ability in speaking 59.5%, writing 48.4%, reading 47.4%, and listening 31.7%. This data indicated that the objective of their learning of intercultural topics they preferred was to support their speaking as the utmost, and less than that was writing and reading, and went to the least was listening.

Considering the learners' lacks of English learning, they found difficulty in speaking because they have lacks of learning of English to apply the appropriate grammar. In this point, the students are 72%, 54% students found difficulty to apply the correct vocabulary, 47% difficulty to pronounce the word correctly, and 21% to others. Based on data, it can be assumed that to increase their ability to speak they preferred to improve the application of appropriate grammar, correct vocabulary, and correct pronunciation.

The students' target needs in learning of speaking skills in the long run would be to enrich their vocabulary which is 92%, to comprehend the nature of vocabulary and its usage was 75%, to understand the patterns of the native speakers' daily life which are usually represented in their conversation was 76%, and to set up the interpersonal relationship through cultural topics, the exchange of information, thought, opinion, attitude, feeling, and how something is done was 74%. The data showed that in the long run the students' target needs are to enrich useful vocabulary through showing intercultural materials, everyday life activities, comprehend the nature of vocabulary and its usage, set up interpersonal relationship through information exchange, thought, opinion, attitude, and feeling.

Learning Needs

The learning needs of students in learning of speaking showed that the students wanted cultural materials through dialogue which is 72%, interview which is 58%. It could be assumed that for speaking materials they preferred to learn dialogue and interview forms as their input to improve their speaking. To increase students' proficiency in English speaking they needed discussion with their classmate in 60%.

The procedure of learning classroom showed that the students need the learning activities that they want to do and enjoyable activities for them. They need some technique to strengthen their memory to remember some vocabularies that they learn. The data of the learning needs is 56%. The cultural text used to improve their vocabulary should consist of activities such finding the opposite word (70%), by identifying the meaning of words in sentence context (71%), by identifying the meaning of words in paragraph context (72%). Finding the synonyms of the words is not interesting for students because it was only chosen by 48%. Based on the data, it showed that the students preferred the way of finding the opposite words, identifying

the meaning of words in sentence context and in paragraph context is more interesting in learning of speaking activities.

In the classroom, a lecturer should help the students recognize their mistakes that they make in using English (82%) which is very significant percentage, the next choice was to find out the best way to increase their vocabulary mastery (70%). This showed that the percentage is the same choices of facilitating active learning through asking, discussion, reading different texts, and writing (70%). The all data showed that the students preferred that the lecturer should help them to recognize their mistakes in English speaking and then to find the best way for them to increase their vocabulary mastery. The students also preferred that a lecturer could facilitate students actively through asking activities, discussion with cultural topics, reading different texts and writing texts.

As language learners, the students keened to participate actively their learning classroom (76%) and to increase their speaking skill with vocabulary mastery personally (69%), the students also wanted to involve in social interaction in English practice (62%). Form those data, the data represented that the students preferred to be involved in learning process actively and to increase their speaking skills with mastering vocabulary personally.

The settings of classroom learning chosen by students are working together with whole class (54%), small group of 4-6 students (42%), and independent or personal (40%). The choices of activities in classroom, the students chose to get interaction and opportunity with others by using English in out of class (86%) and to get chance to practice out of class (56%). The students are better using media to learn (96%).

Design of Instructional Materials

The speaking materials of interculture-based language learning here for third semester of FPBS IKIP Mataram comprise of three units; ***Unit One*** and ***Unit Two***. The unit one consists of some topics to support speaking activities such as meeting someone new through some tasks as the illustration showing various conventional ways of meeting someone new from some countries, introducing yourself and friend, talking about interests and hobbies, talking about families, and talking about jobs.

Each topic serves some learning speaking activities. The speaking activities are designed related to local cultures and foreign cultures. The topics are used to support students' competences about cultures and languages. The knowledge of intercultural competences needed to enhance students' knowledge to express their ideas in English spoken.

The second unit consists of some topics designed to foster students' intercultural competences for speaking skills. This unit deals with discovering way of the historical buildings and things around towns in Lombok and other popular towns in Indonesia. The towns presented here is Mataram, but the students may prefer to provide students with information about their local area, using ideas and exercises in English spoken.

To help the students in finding one's way of historical buildings and things is served some topics such as using a map, how understanding directions, discussing with the partner about historical building by drawing lines and read the description, and imagining the locations of celebrations and buildings. For this unit of each subtopic, there are some learning activities that should be created and conducted by students as intercultural language learning. These activities are served as supporting students to gain intercultural competences.

D. Conclusion and Suggestion

Conclusion

This research was done to develop a model interculture-based language learning for teaching speaking skill for third semester of higher education students of IKIP Mataram in English language. There were some steps to do until the materials were ready to use in class. The research uncover the target needs, the learning needs, the components to develop learning materials based on intercultures for the teaching of speaking skill, and the model of organizing lessons to design learning materials. The findings of the research are as follows.

The target needs of the students to learn interculture-based speaking materials are: (1) the level of proficiency should be in the basic (upper) to intermediate (lower). The materials of vocabulary in cultural texts cover 1000 to 2500 most used words.; (2) the goal considering topics of cultural texts to support speaking, writing, listening and reading.; (3) the learners' lacks of vocabulary should be improved by reading continuously.; (4) the learners' lacks of reading skill should be improved by vocabulary mastery and cultural text comprehension.; (5) the learners' lacks of speaking should be improved by the use of appropriate grammar, the use of correct vocabulary, and the correct pronunciation.; and (6) the objective of interculture-based speaking materials is preferred to learn through using the topics of family, travelling, hobby, people appearance of local culture and foreign culture, education, fashion, culture, healthy life, foreign culture. The objective of vocabulary of cultural texts in the long run should be to enhance useful vocabulary for everyday life as cultural orientation, to comprehend the nature of vocabulary and its usage to understand native speakers' conversation, to set the interpersonal relationship through the exchange of cultural understanding, exchange of information, thought, opinion, attitude, and feeling.

In the mean times, the learning needs of students to learn cultural materials are as follows: (1) resources of materials should be selected, adapted, or created in relation to current understanding of intercultural language learning which promote the active construction of knowledge in context, making connection, social interaction, reflection, and responsibility, (2) the range of goals, objectives, and outcomes should be related to tasks and texts, (3) the materials should be served as input of learner differences in culture and language, (4) for speaking, the procedures of learning preferred is discussion in pairs or small group, (5) the role of teachers

should be as observer and feedback giver by helping learners reorganize the mistakes, finding out the best way to increase their speaking skills, facilitating active learning through; asking, discussion, reading different texts and writings, (6) the role of learners in the learning process should give attention to the active learning and personal learning process.

Suggestion

There are some suggestions for other research relating with the study of intercultural-based speaking materials. To develop speaking materials, it would be better to develop also the additional vocabulary, grading and sequencing tasks. It would help students to understand the contents and memorize it as well. One side, the speaking lecturer develops his/her own materials and tasks because she/he knows the characteristics of students. The materials would be appropriate for students' level and interest. Moreover, the students are able to update them relating to condition and time whenever needed.

The institution of education also should facilitate to lecturers to create their teaching materials. The facilities here can be financial addition, new books as references, more internet access, and good policy. These things can motivate the lecturers to be creative in doing their teaching works. Hopefully the lecturers will become appropriate lecturers for their learners.

References

Borg, W.R., Gall, M.R. 1983. *Educational research*. New York: Longman.

Byram, M. & Feng, A. (2005). Teaching and researching intercultural competence. Edited by Eli Hinkel in *Handbook of research in second language teaching and learning*. Mahwah: Lawrance Erlbaum Assosiate Publisher.

Byram, M. (1997). *Teaching and assessing intercultural communicative competence*. UK: Clevedon Hall.

Brown, D.H. 2007. *Teaching by principles*. New York: Pearson Education, Inc.

Dobrovol'skij, D. and E. Piirainen. 2006. Cultural knowledge and idioms. *International Journal of English Studies*, 6 (1), 27-41.

Gu, Jiazu & Lu, Sheng. 1990. *Language and Culture*. Shanghai: Shanghai Foreign Language Education Press.

Gu, Jiazu. 2000. *Covert Culture in Foreign Languages and Literature*. Nanjing: Nanjing Normal University Press.

Hillier, Y. 2005. *Reflective teaching in further and adult education.* New York: Continuum.

Huda, M. 2012. *Cooperative learning*. Yogyakarta: Pustaka Pelajar.

Johnson, E.B. 2007. *Contextual teaching and learning*. Bandung: MLC. Jolly, D., Bolitho, R., in Tomlinson, B. (1998). *Materials development in language teaching*. New York: Cambridge University Press.

Liddicoat & Cs. (2003). *Report on Intercultural language learning*. Austrlian Government, Department of Education, Science and Training. The university of South Australia. Australia: Commenwealth of Australia.

Mol, H., Tin,Tomlinson, B., 2008. *English language learning materials.* London. Continuum.

Oxford, R.L. 2000. *Language learning*. Massachusetts: Heinle & Heinle Publishers.

Ornstein, A .C.,Pajak,E.F.,Ornstein.,S.C. 2011. *Contemporary issues of curriculum.* New Jersey: Pearson.

Popov, L.K. 2000. *The virtue's project*. Texas: Pro.ed.

Posner, G.J. 2004. *Analyzing the curriculum*. New York: Mc Graw Hill.

Richard, J.C., Lockhart, C. 2005. *Reflective teaching in second language classrooms*. New York: Cambridge University Press.

Slavin, R.E. 2005. *Cooperative learning*. Bandung: Nusa Media.

Sugiyono. 2011. *Metode penelitian kuantitatif, kualitatif dan RnD*. Bandung: Alfabeta.

Sun, L. 2013. *Culture teaching in foreign language teaching*. International journal of theory and practices in language studies. Vol. 3. No.2, pp 371-375.

Tomlinson, B. 1998. *Materials development in language teaching*. New York: Cambridge University Press.

Zhang, X. 2010. *Developing students' intercultural competence in western etiquette teaching.* English language teaching international journal, Vol.3 No.4. 224-227.

Implementation of Lesson Study on Tematics Learning Based Local Wisdom of Paticulture

Ika Oktavianti, Yuni Ratnasari
Primary School Teacher Department
Muria Kudus University

Abstract

This study was based on the lack of teacher understanding about lesson study cause less of collaboration among teachers in developing an innovative thematic learning. In addition, the implementation of thematic learning did not introduce local wisdom of Pati culture. Therefore, the research conducted in Elementary School in Pati Regency was aimed to develop of thematic learning design based on local wisdom of Pati culture and to review the implementation of lesson study on thematic learning based local wisdom of Pati culture. The results showed that the thematic learning design based on local wisdom of Pati culture was developed by using game media. Implementation of lesson study on thematic learning based local wisdom of Pati culture could improve the quality of thematic learning.
Keywords*: lesson study, thematic learning, local wisdom of Pati culture*

A. Introduction

Law No. 14 on Teachers and Lecturers and Government Regulation Number 19 Year 2005 requires educators to always improve the quality of learning. One effort can be made to improve the quality of learning through lesson study. According to Suzuki (2017: 8) lesson study is the processes undertaken to improve the ability of teachers for children to get learning quality.

In Indonesia, the lesson study was introduced in 2006 through the cooperation of the Government of Indonesia and Japan International Coorporation Agency (JICA) in the Strengthening In-Service Teacher Training in Mathematics and Science (SISTTEMS) program. Through this program, the dissemination of lesson study is growing more rapidly in Indonesia, although it has not been yet comprehensive throughout the regions in Indonesia, for example in Pati Regency.

Lesson study for teachers in Pati, especially primary school teachers, is not well known. The term lesson study itself is still unfamiliar in elementary school teachers. When the researcher explains the lesson study and its levels, the teacher assumes that the lesson study is the same as the classroom action research. Although the levels are almost identical with plan, do, see in the lesson study and plan, implementation, observation, and reflection on the second classroom action research remains different. Lesson study is a philosophy whereas classroom action research is a research method. Based on the condition of the teacher's lack of understanding about this lesson study, this research is directed to socialize and give experience to the teacher about lesson study.

The need for elementary school teachers to recognize and apply lesson study in order to improve the quality of thematic learning, as explained by Rusman (2010:

294) that one of the benefits of lesson study is the increased of quality of learning plans including its components such as teaching materials, teaching materials (hands on) and learning strategies.

The observation results of initial research, in the implementation of thematic learning both in Curriculum 2006 and Curriculum 2013, teachers experience constraints in the planning, implementation, up to the evaluation level. Innovation of learning is also still not implemented with the reasons for the socialization of thematic lessons which are still minimal and infrastructure facilities that have not been adequate.

Teachers are the main facilitators in learning, therefore teachers need to innovate on thematic learning that not only emphasizes knowledge and skills but also attitudes based on the character of local cultural wisdom.

Based on this background, this research focuses on the implementation of lesson study on thematic learning based on local wisdom of Pati culture.

B. Method

This research was descriptive qualitative research. Bungin (2008: 93) describes that descriptive qualitative research is a study that records all phenomena seen and heard and read (via interview or not, field notes, photos, video tapes, personal documents or memos, official documents or not, etc.), and researchers must compare, combine, abstract, and draw conclusions.

This research was conducted at SD Sukoharjo 01 MargorejoPati and SD Widorokandang 01 Pati with research subjects of teachers and students especially class IV in both research locations.

Data analysis techniques used interactive analysis techniques consisting of three flow of activities carried out in the same time that is data reduction, data presentation and verification.

C. Findings and Discussion

The research conducted based on the lesson study level that is plan (compile learning design), do (implement open class), and see (consist of reflection and redesigning activities).

Before implementing the plan, the implementation of the research began with the socialization of lesson study. The background of this lesson study was socialized because the teachers in the primary school partner had not understood the lesson study that appeared from the teacher's view of the lesson study with the classroom action research was considered the same because it had the same levels. The result of this socializationwas that the teachers in elementary school partners had understood the lesson study, how it was implemented, and able to distinguish the lesson study with the research of class action, and the end of this socialization was the formation of lesson study group.

The plan phase began with discussions with teachers in primary schools research partners about the needs of students and issues related to integrated thematic

learning and learning based on the wisdom of Pati culture. The results of the discussion showed that integrated thematic learning based on wisdom of Pati culture was still minimally implemented due to the limitations of the literature about Pati culture.

Still at the level of the plan, next activities createdlearning (learning design), made the goal of integrated thematic learning, created learning stories about what will be discussed between students and teachers, and expected success from the learning that had been designed. The result was learning design as follows.

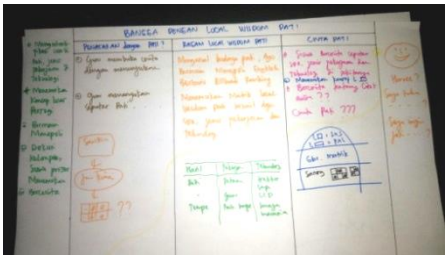


Figure 1. Learning thematic teaching design based on Pati Culture Wisdom

Learning design showed that the goal of integrated thematic learning based on wisdom of Pati culture was the students were proud of the wisdom of Pati culture. The determination of the goal was based on the core competencies and basic competencies of the fourth grade of elementary school that was 3.4 describes various forms of ethnic, social, and cultural diversity in Indonesia which was bound by unity and unity (Pancasila and Citizenship Education), 3.1 examined the main ideas and supporting ideas obtained of oral, written, or visual texts (Bahasa Indonesia), 3.9 described and determined the circumference and area of the square, rectangular, and triangular (3.3) areas, 3.8 understood the importance of equilibrium and conservation of natural resources in the environment (Natural Science), and 3.3 identifiedd economic activities in improving the life of the community in the occupational, social, and cultural field in the neighborhood up to the province (Social Sciences).

Implementation of thematic learning based on the wisdom of Pati culture, at the level of designing the learning design inserted PAKEM concept, which will be applied using media and games that was is MonekBillking Wisdom of PatiCulture.

MonekBillking was a collaboration of Monopoly and Engklek game with Billboard Rank. In the implementation of monopoly game media was made as a game box of the crank. Billboard Rankof PatiWisdom was a strategy to stimulate reflection and discussion about the values, ideas and choices that existed in the community, especially the cultural wisdom of Pati district, namely Gandulrice, Soto Kemiri, PetisRunting, superior market, brass production, batik bakaran industry, TPI and KetoprakJuwana (Oktavianti and Ratnasari, 2017: 5).

The concept of PAKEM implemented through MonekBillkingwas in line with the demands of Law No. 20 on Section 40 of the National Education System which states that "teachers and education personnel are obliged to create meaningful, fun, creative, informal and dialogical education". In addition Government Regulation Number 19 paragraph (1) states that the learning process in the education unit is held

interactively, inspiration, fun, challenging, motivating students to participate actively, giving enough space for initiative, creativity and independence according to talents, interests and physical development as well as student psychology.

Based on this matter, MonekBillking requirement with the demand of learning is regulated in Law Number 20 article 40 and Government Regulation Number 19 paragraph (1).

The *do* level of this research was carried out at different times in the two elementary schools of research. This levelwas carried out at SD Sukoharjo 01 and SD Widorokandang 01 Pati. This activity started from the initial activities, core activities, and the end of learning activities.

Initial learning activity began with praying and continued with the teacher giving a question as apperception to the students about the typical food, Pati traditional clothing, Pati traditional house, and Pati typical products. This activity received a positive response because all students in both partner schools could answer teacher apperception questions. This showed the students have known Pati culture.

Entering the core activities at the beginning, teachers formed groups. Group formation in the two partner schools was different because the student's characteristic also differed in both, especially with respect to the number of students and gender.

The learning activities continued with the teacher distributing proprietary cards to each group with different colors in each group, distributing memory matrices, whiteboards, erasers and markers in each group.

In the memory matrix division activities, whiteboard and markers some students were still confused about the usefulness expressed with the questions asked to the teacher. The confusion was answered after the teacher gave an explanation of the usefulness of matrices, whiteboard paper, erasers and markers in each group.

The explanation given by the teacher got the idea as response but in the form of the sentence asked by one of the train students (SD Sukoharjo 01) "can fill the matrix in whiteboard?". The teacher responded to the question by asking questions about why KA asked the question. The reason given was quite simple, because students wanted to try new things in doing the task of using different media. The other students responded to the idea of a train so that an agreement between the students and the teacher in filling the memory matrix on the whiteboard was provided.

The next learning activity was playing MonekBillkingas Wisdom of Pati Culture. The implementation of the game was carried out under different conditions, ie the teacher directed the students of SD Widorokandang 01 to play MonekBillkingas Wisdom of Pati Culture in the school field, while the students of SD Sukoharjo 01 played it in class. Although the learning locations were different, this id not change the students' enthusiasm when learning thematic learning using the MonekBillkingas Wisdom of Pati Culture.

Figure 2. Implementation of Thematic Learning Using MonekBillkingPati Culture Wisdom

After installing the MonekBillking Board of Pati Culture Wisdom, the students begin to play the monopoly game of the crank which began with the students throwing the dice first and then the students jumped with one foot (jerk) toward the plot according to the number when rolling the dice. After the students arrived at the designated plot, the next task was to read the cultural cards according to the occupied cultural plot, while the other members listened to the cultural cards read and continued by noting the things listed in accordance with the matrix of the memory given earlier. The activity continued with students from other group members playing the monopoly of the crank. This activity showed active learning that was learning colored by various learning activities with teacher as facilitator.

In the activities of playing MonekBillkingby students, there were several different group members occupying the same plot so that the group that owned the cultural plot was entitled to punish as agreed by the group members. Punishment that gave groups that had a cultural plot against another cultural plot was singing or imitating the style. This showed one of the character of creative learning that was giving freedom to students to develop new idea or knowledge (Indrawati and Setiawan, 2009: 14).

The game stoped when all the cultural plots were all owned. Groups with ownership of the Cultural Card were the winners in this game. The teacher asked the students to sit on the monopoly board of the crank and together with the students do a reflection of the game MonekBillking of Pati Culture Wisdom.

Implementing activities to fill the memory matrix, each group member looked compact to do the tasks together. Division of tasks among members of a structured group although sometimes accompanied by some members' disagreements in filling the memory matrix. But with the discussion together to make some group members to make agreement about the concepts of Pati culture that must be filled in the memory matrix. The results of the charging task could be seen in the following figure.

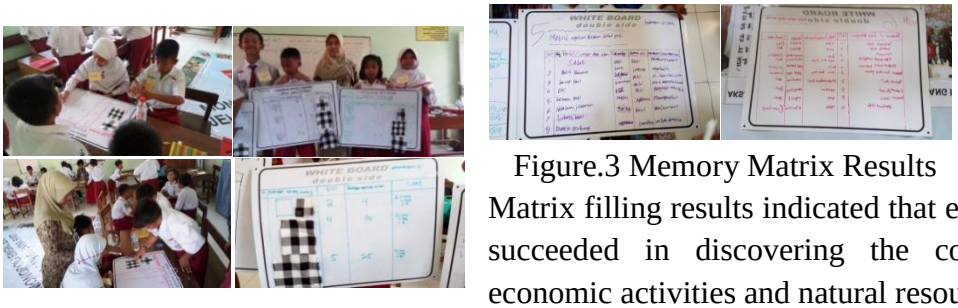


Figure.3 Memory Matrix Results

Matrix filling results indicated that each group succeeded in discovering the concept of economic activities and natural resources from Pati's cultural wisdom.

After filling in the memory matrix, the teacher gave an evaluation of questions. In the process, each group was given a billboard ranking to explore and discover the concept of learning contained in the material of Pati cultural wisdom that was the religious activities of the tomb of MbahSaridin as seen in the following figure. The concept unearthed from the tomb of MbahSaridinwas the type of work and clothing caretaker of the grave was a sarong for the concept of waking up space, as shown below.

Figure 4. Result of Billboard Rangking Pati Culture Wisdom

The results of billboards rank showed students could understand the wrong concepts of the circumference and the area of space that was rectangular, rectangular, and triangular from one of the cultural wisdom of Pati that was religious tourism Tomb of MbahSaridin.

The stage of see was a reflection of the lesson. Researchers and teachers together reflected the learning activities that had been done. The result of the reflection showed that the students were able to explore the thematic concepts from the study of the wisdom of Pati culture. These results indicated that effective learning was implemented. According to Indrawatiand Setiawan (2009: 15), effective learning is a learning that create what should be mastered students after the learning process takes place. In this study the students master concept of type of work, natural resources, as well as circumference and area of square, rectangle and triangle.

The results of reflection also showed the goal learning of integrated thematic design design using MonekBillkingas Wisdom of Pati Culture showed that students were proud of the wisdom of Pati culture achieve success, shown through the impression sheet and learning messages that had been filled with students who show that students were proud to be people Pati and students loved on Pati products. Some students even aspired to become entrepreneurs of soy sauce with the reason of deliciousness of Pati soy sauce and wanted to keep preserving soy sauce Pati, a fisherman with the simple reason that wanted to eat fish every day, and became batik entrepreneurs because like to wear batik. Those were the simple reasons that students gave as a proud expression of Pati culture.

The impression given about thematic learning using MonekBillking showed that students were able to accept learning and understand the concept of teaching thematic lessons, and wish each day to learn while playing. This indicated integrated

thematic learning using MonekBillkingPati Culture Wisdom successfully implemented and had achieved learning goals.

The results of reflection indicated that at the time of implementation of integrated thematic learning by using MonekBillking Wisdom of Pati Culture there were still some observer that guided students who did not understand what was delivered by teacher or answer questions intended for teacher. In the lesson study observer activities should not interfere in the learning activities because the observer's task only observed and collected learning process information undertaken by teachers, observing student learning activities during learning activities, learning from ongoing learning, and evaluating teacher models that appear

D. Conclusion

Thematic learning based on Pati cultural wisdom that was implemented by using MonekBillking made students enthusiastic in following the learning and students could understand the concept of learning that was matched through the material of local cultural wisdom. Goal of learning designwas achieved that students were proud of the wisdom of Pati culture.

These results indicated that to achieve teacher learning success should be able to create learning activities that were able to motivate students. Fun learning applications could reduce the pressure of learning so that students could explore the ability, interest in learning, and also encourage the potential and talent of students. In addition, the use of learning media with the concept of play could develop an understanding of learning concepts and critical thinking skills of students.

References

Bungin, B. (2008). *Metodologi Penelitian Kualitatif.* Jakarta: Raja Grafindo Persada

Indrawarti dan Wanwan S. (2009). *Pembelajaran Aktif, Kreatif, Efektif dan Menyenangkan*. Jakarta: Pusat Pengembangan dan Pemberdayaan Pendidik dan Tenaga Kependidikan Ilmu Pengetahuan Alam

Oktavianti, I. Yuni R. (2017). *Peningkatan Multiple Intellegences Siswa Pada pembelajaran Tematik Melalui Lesson Study Berbantu Monek Billking Kearifan Budaya Pati.* Laporan Kemajuan Penelitian Dosen Pemula Ristekdikti 2017.

Rusman. (2010). *Model-Model Pemebelajaran Mengembangkan Profesionalisme Guru*. Bandung: Raja Grafindo Persada

Suzuki, R. (2017). *Mari Membuat Learning Community: Reformasi Pendidikan Kota Malang*. Malang: PT. Bennese Indosesia

Undang-Undang Republik Indonesia Nomor 20 Pasal 40 Ayat (2) Tahun 2003 tentang Sistem Pendidikan Nasional

Undang-Undang Republik Indonesia Nomor 14 tahun 2005 Tentang Sistem Pendidikan Nasional

Peraturan Pemerintah Republik Indonesia Nomor 19 Tahun 2005 Tentang Standar Pendidikan Nasional

Imansyah, H.(TT). *Konsep dan Prinsip-Prinsip Lesson Study*. FPMIPA UPI

Reconstruction of Mathematical Concept through Guided Discovery Learning

Nur Fauziyah
University of Muhammadiyah Gresik
nur_fauzia@yahoo.co.id

Abstract

Mathematics is the most effective knowledge to develop a person's cognitivebecause the object is abstract and exists only in the human mind. The concept of mathematics is a concept that has been built by experts or mathematicians before. Learning by providing opportunities for learners to reconstruct the concept of mathematics is a learning that will be able to provide a significant impact in developing the cognitive of the learners themselves. Guided discovery learning method is one of the methods that can be used. In the effort to reconstruct the concept of mathematics required the learning media and worksheet that became guided in the reconstruction process.This study aimsto know the increased activities enhancement of learners in reconstructing mathematical concepts through guided discovery learning. This study used Classroom Action Research design with 4 cycles. The data in this research areactivities enhancement of learners in reconstructing the mathematical concept. The data is taken during the learning process through classroom observation. The instrument used is the observation sheet. The results of this study indicates that through guided discovery learning we get the increase of learner activities in every cycle. The activitiesare: (1) understanding the concept to be reconstructed, (2) making observations and experiments using the media in concept reconstruction efforts, (3) discussing reconstructed concepts, (4) communicating reconstructed concepts.

Keywords*: reconstruction, mathematical concepts, guided discovery learning.*

A. Introduction

Mathematics is one of knowledge that has an important role in various other fields of knowledge. Mathematics is also a knowledge that is able to develop cognition effectively, this is because that the object of mathematics is abstract and only exist in mind. Therefore, mathematics learning needs to be given starting from elementary school as stated in standard of content for elementary and middle education of mathematics subject (Minister of National Education Regulation No. 22 of 2006 on content standard), that mathematics subjects are given to all students starting from elementary schools to equip learners with logical, analytical, systematic, critical and creative thinking and collaborative skills.

In fact, there are still many learners who are reluctant to learn mathematics, they are less motivated or less interested in learning mathematics. It was also happened in midle school of Muhammadiyah Gresik, students were less interested to learn mathematics because they view mathematics full of calculations, so they become lazy to learn mathematics. The lessons learned have not been able to arouse students' interest because they still use the lecture model. Learning is still

passive or one-way, that is only active teachers explain while students just listen and after the teacher finished explaining they are asked to do the problem individually. In the learning has not been using group discussion so that does not awaken the culture of asking each other among learners, there is no culture of cooperation among learners, so that learning becomes dull for learners. In learning only a few active learners, which is about 30% of the number of learners in one class.

The use of media in learning is also still not effective, and only on certain materials and not yet on the use of media to find formulas or concepts. The amount of media used is also limited so that not all learners can use the media. As for student worksheet, teachers do not compose themselves only using in the books. Whereas in the finished studentsworksheet only in the form of questions. Thus all concepts or formulas in mathematics are not constructed by the students themselves. This is one of the causes of learning objectives mathematics is not achieved. Students' understanding of mathematical concepts is memorized so that mathematics learning is not able to provide a meaningful impact for students. Learning becomes boring and students are less motivated to learn mathematics.

Thus, itis important to solve this problem.It is necessary a learning method that can enable learners to think in rebuilding or reconstructing the concept through media to discuss among learners. Furthermore, to increase their courage, they are asked to present their concept findings in front of the class. The media used is also a medium that helps learners to reconstruct concepts. While the students worksheet is used to direct learners in the process of reconstructing the concept as well. The teacher only acts as a facilitator. This kind of learning is very different from the previous learning. So that with different learning and carefully planned will be able to give positive impact to the students, good understanding of matter, courage express opinion in front of class, cooperation in discussion, motivation learn and especially activeness in learning.

To overcome this problem, one of the learning method that can be used is guided discovery learning method. Guided discovery learning requires students to use information to construct their own understanding so that the understanding of the material is more traceable in the student. According to David et al (2009), when applying the guided discovery learning method, teachers explain less and more to ask questions so that students tend to be active and motivate students in learning activities. Akinbobola and Afolabi (2010), a teacher should strive to use a guided discovery approach to engage students in problem-solving activities, self-study, critical thinking and understanding, and creative learning. Learning activities not only use the ability to memorize, so the concepts and principles obtained easy to remember longer by students.

The steps in guided discovery learning are: (1) communicating goals and motivating, (2) organizing learners into small learning groups, (3) reconstructing concepts or formulas, (4) guiding groups for presentations, (5) evaluate the findings.

Based on the above background, then the question of this research is formulated as follow "whether guided discovery learning can enhance students' activities in reconstructing the concept of mathematics?" Thus the purpose of this research is to determine whether guided discovery learning can enhance students' activities in reconstructing mathematical concepts.

The focus of students' activities in this research arestudent' activities in: (1) understanding the concept will be reconstructed, (2) doing observation and experiment using media in concept reconstruction effort, (3) discussingabout concept reconstruction, (4) communicating the concept that has been reconstructed.

B. Method

This research used Classroom Action Research through lesson study. Lesson study activities used in each cycle were plan, do (action and observing), and see (reflection). this study consistof 4 cycles.

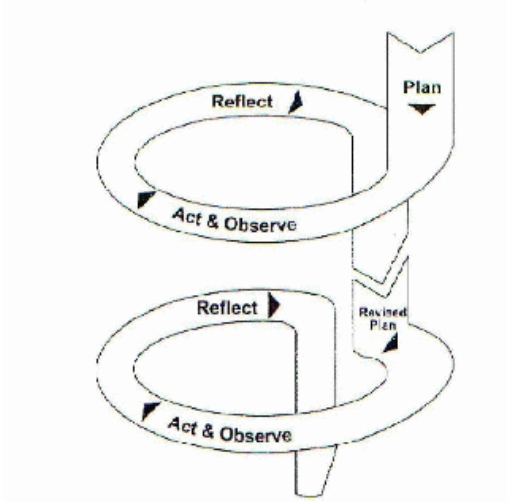


Figure 2.1 Design PTK Kemmis and Taggart

Subjects in this study were8th graders of the midle school of Muhammadiyah 1 Gresikconsist of 28 students. This study focuses on the material of even semesters, for each cycle of the material are: (1) finding the elements of cube and cuboid, (2) Finding the formula of the surface area of the cube and the cuboid, (3) Finding the formula of volume of cube and cuboid, (4) Finding the formula of volume of pyramid.

The data in this research are data about the students' activities in reconstructing the concept of mathematics concept which is divided into two, namely quantitative and qualitative data. Qualitative data is the students' activities in reconstructing mathematical concepts obtained through class observation.

To obtain data about the students' activities using instrument in the form of observation sheet. Observer can provide an assessment using likert scale: 1 (less), 2 (enough), 3 (good) and 4 (very good).

C. Findings and Discusion

The results of the discussions on the current plan and see for 4-cyclesaimedto improve the quality of learning by improvingthe teaching media that include: (1) Lesson Plan (RPP), (2) LKS (Student Worksheet), (3) media, (4) observation sheets and (5) evaluation or test. The followingtableshows thechanges in thelesson planbased on the discussionin plan activities.

Table 3.1The changes inthe lesson planbasedon discussionin plan activities

No	Lesson plancomponentbefore revision	Lesson plancomponentafter revision
1	Learning indicator has not detailed	Indicatorlearningalreadydetailedand in accordancewith thesyllabus
2	Teaching methodis direct instruction	Teaching method is *guideddiscovery learning*with group discussion.
3	Learningsteplessdetailed	Learningstephas beendetailed
4	At the Beginning ofThe teaching, teacher explains aim of learning	At the Beginning ofThe teaching, teacher explains aim of learning, motivation and apperception.
5	In the core activities, teacher explains the material in the form of concepts or formulas	At the beginning of the core activities, teacher dividesstudents into 5 groups and give them worksheet and learning media.
6	Learners are not asked to find concepts / formulas	Students are in a group discuss to reconstruct the concept through worksheet using learning media.
7	There is no class presentation	Students are asked to present the result of discussion about conceptual reconstruction.
8	Teaching planis not designedtouse theworksheet and media	Teaching planis designedtouse theworksheet and media
9	There is noallocation of timeineach stage (introduction, core activities and closing activities)	There is allocation of time ineach stage (introduction, core activities and closing activities)

Figure 3.1 The studentsdiscussto reconstructmathematics concept using learning media

For previous worksheet usesworksheet in the books. But in accordance with the purpose of research is to increase the students' activities in reconstructing the concept through guided dicovery learning then is needed special different worksheet. The worksheet can be used the student to reconstruct mathematics concept. The followingTableis adescription ofthe componentsworksheetthathave been preparedbased on the discussioninplan activities

Table 3.4Description ofworksheet

No	Komponen LKS	Komponen LKS setelah direvisi
1	Contents of the worksheet	- A form of structured question that conforms to the concept to be reconstructed. - The question is a guided question that is used to reconstruct concepts. - In answering each question through observation or experiment with the media. - At the end of the question is a question to conclude a reconstructed concept.
2	Number question in the worksheet	Developed in the two activities in each worksheet
3	Answer sheet	- Provide answer each the end of worksheet

Figure 3.2 The students present using learning media

Learning media used in each cycle is different based on topic which is discussed. The following is learning media can be used each cycle in the class.

Cycle 1: The media are a cube and a cuboid frame to reconstruct the concept of elements in cube and cuboid 

Cycle 2 : The media are cube and cuboid nets to reconstruct the formula of the surface area of the cube and the cuboid. 

Cycle 3: The media are unit of cubes, cube and cuboid to reconstruct the cube and cuboid volume formula.

Cycle 4: The media are corn smooth, pyramid and cube to reconstruct the pyramid volume formula.

Figure 3.3 The Learning media each cycle

The above Tables and figures show that lesson study activities are conducted with the aim of improving the students activities in reconstructing mathematical concepts through guided discovery learning usedseveral media and worksheet. Plan 1 produces learning plan 1, implemented in class with observation (do 1), observation result is discussed at the time to improve the next learning device that is at the time of Plan 2, learning tool result of discussion plan 2 implemented with observation (do 2) next observation result discussed at a later time to improve the next learning device. This activity is done continuously or continuously until the 4th cycle.

Here are the results of observations of students activities in: (1) understanding the concept to be reconstructed, (2) making observations and experiments using the media in concept reconstruction efforts, (3) discussing reconstructed concepts, (4) communicating reconstructed concepts .

Tabel 3.3The average of students activities in constructing mathematical concept

No	Students activities	Average per cycle			
		1	2	3	4
1	Understanding the concept to be reconstructed	1.33	2.67	3.33	3.67
2	Making observations and experiments using the media in concept reconstruction efforts	2.33	3.00	3.67	3.67
3	Discussing reconstructed concepts	2.67	2.33	3.00	3.33
4	Communicating reconstructed concepts	1.67	2.33	3.33	3.33
Average		1.80	2.40	3.20	3.40
Category		Less	enough	good	good

Table 3.4 Description of students activities in contructing mathematical concept

No	Students activities	Cycle			
		1	2	3	4
1	Understanding the concept to be reconstructed	Students are reluctant to read worksheet, they choose to ask the teacher	On average each group only 2 students who read worksheet	Almost all of student in each group begin to understand the concepts they need to reconstruct	All students in each group try to read the worksheet and understand the concepts they need to reconstruct
2	Making observations and experiments using the media in concept reconstruction efforts	On average in each group there are only 2 learners who make observations of the cube and cuboid framework	On average in each group there are only 4 students who make observations or experiments on the media in the form of cube nets to reconstruct the formula of the surface area of the cube and the cuboid	All students in each group that make observations or experiments on the media in the form of unit cubes by filling unit cubes into cubes and cuboid to reconstruct the formula of cube and cuboid volume	All students in each group conducted an experiment to reconstruct the pyramid formula using corn smoothand cube media
3	Discussing reconstructed concepts	In each group there is only 1 student who writes the answer in the worksheet to reconstruct the concept of cube and	In each group there is only 1 student who writes the answer in the LKS to reconstruct the formula	All students in each group discussed to reconstruct the formula of cube and cuboid volume	All students in each group discussed to reconstruct the pyramid volume formula

		cuboid elements	of the surface area of the cube and the cuboid, but the other students try to answer the worksheet		
4	Communicating reconstructed concepts	There is only one student who presents the results of the discussion in the presentation	There are only 2 students who present the results of the discussion in the presentation	There are only 3 students who present the results of the discussion in the presentation	There are only 3 students who present the results of the discussion in the presentation

From the Table above, it appears that there is an increase in students' activities in constructing mathematical concept through guided discovery learning method from cycle 1 to cycle 4. In cycle 1 students are still reluctant to read worksheet, they are more interested to ask directly to the teacher, this is because the students not yet read the instructions in the worksheet. Also at the beginning of the cycle students have not been able to cooperate, so that in each group there are only 2 to 3 students who work on worksheet and the other just passive silent. At the beginning of the cycle there is no student in making observations or experiments in using media to reconstruct concepts or formulas. But in the 3rd and 4th cycles of student activity have started up, they already understand their respective duties so that there are no passive learners.

D. Conclusions and Suggestion

Based on the above discussion can be concluded that efforts to improve the quality of learning through guided discovery learning method can improve the student activity in reconstructing mathematicalconcept.

Thus it can be suggested that improving the quality of learning is necessary in an effort to improve the student activity in learning. Increasing the activity of students in learning will impact many things on the students, such as learning motivation, ability to work together, the ability to communicate opinions and others. Improving the quality of learning can be done by improving learning tools in a collaborative and sustainable (lesson study).

References

Akinbobola, A.O & Afolabi, F.O. (2010). Constructivist practices through guided discovery approach: The effect on students' cognitive achievement in Nigerian senior secondary school physics. *Eurasian Journal of Physics and Chemistry Education*, 2(1):16-25

Direktorat Pembelajaran dan Kemahasiswaan, 2011, *Pedoman Penulisan Makalah Lesson Study Untuk Seminar Exchange Experience*, Dirjen Dikti, Kementrian Pendidikan Nasional, Jakarta.

David, A., Paul, E., & Donald Kauchak. (2009). *Methods for Teaching*. Jogjakarta: Pustaka Pelajar

Ibrohim, 2011, *Lesson Study untuk Meningkatkan Kompetensi Pendidik, Kualitas Pembelajaran dan Perkembangannya Di Indonesia*, Makalah disajikan dalam Seminar Nasional Lesson Study di UNTAD Palu, 28 Oktober 2011.

Hudoyo, Herman. (1988). *Mengajar Belajar Matematika*. Jakarta: Departemen Pendidikan dan Kebudayaan.

Kirkley, Jamie. (2003). *Principles for Teaching Problem Solving*. Plato Learning, inc.

Suherman, Eman, dkk. (2003). *Strategi Pembelajaran Matematika Kontemporer*. Bandung: UPI dan IMSTEP JICA.

Suryosubroto. (2002). *Proses Belajar Mengajar di Sekolah*. Jakarta: Rineka Cipta.

Improving Lecturer's Professionalism Using Lesson Study Based on Computer-Supported Collaborative Learning With Moddle

Fhela Vhantoria Ningrum
STKIP Muhammadiyah Kotabumi Lampung
riavhantoria@yahoo.com

Abstract

The aim of lesson study is to imrpove lecturer's knowledge related to lesson plan, learning materials, ability to observe learning activities, ability to relate the learning process and long-term goal, professional collegiality relationship and motivation to develop learning quality. The implementation of lesson study was done by the 5 lecturers from 3 study programs. The lesson study stages was done at least 3 cycles by using Moddle based collaborative learning. The results of this program are the improvement of pedagogy, social, and professional competence. Then, professional learning community is created to identify and to find out the problems which appear during learning process and students' readiness will improve through lesson study, implementing lesson study accompaniment in the schools to increase learning quality, fullfilling students' learning rights, the lecturer found innovative learning model and digital media which can control and accomodate students' learning improvement. Besides, the improvement of students' cognitive, affective, and psycomotor ability, a solid and professional community in term of developing learning quality by using lesson study. Finally, it can create sustainable learning quality improvement.

Key words: *lesson study; computer-supported collaborative learning; Moddle.*

A. Introduction

STKIP Muhammadiyah Kotabumi is advanced education institute which has association Muhammadiyah inNorth Lampung. STKIP Muhammadiyah Kotabumi was built on March, 09th1975, that at the first was called Sekolah Tinggi Ilmu Pendidikan (STIP) Muhammadiyah Kotabumi as attached in decision letter of Mapendapwil Muhammadiyah Provinsi Lampung No. E.2/187/1975 and was strengthened with letter of center management of Muhammadiyah which was attached in founding charter of advanced education Muhammadiyah No. 023/III.I.P.75/1979 on September, 19th1979.

The curriculum currently used in STKIP Muhammadiyah Kotabumi refers to Kerangka Kurikulum Nasional Indonesia (KKNI). One of long period advantages in applying KKNIis quantity increase of Indonesia human resource that have good quality and competent both in National degree and International degree. ThereforSTKIP Muhammadiyah Kotabumi is expected producing graduate who have good competent.

In KKNI curriculumof level 6, the students are demanded to be able applying, investigating, making design, taking advantage of science, technology and art (IPTEKS)and solving problem. Therefore, learning process has to be designed optimally to fulfill demand of the curriculum. However, in real situation of learning system in STKIP Muhammadiyah Kotabumi is not yet applied optimally because of

some factors. First, the majority of lecturers in STKIP Muhammadiyah Kotabumi are young lecturers so that need much training about how manage learning effectively. Second, the decrease of lecture's awareness to do obligation of Catur Dharma Perguruan Tinggi Muhammadiyah collaboratively so that causes less of interaction among lectures in doing the obligation especially in teaching sector. Third, research about increase of learning quality has been done by several lecturers by applying innovative learning models. But, the research results could not yet increase learning quality significantly because there is no effective reaction and continuity.

Besides that, according to the research's result about analysis of students' think construction which is done by one of the lecturers of STKIP Muhammadiyah Kotabumi (Nugroho, 2015) shows that most of students' think construction in STKIP Muhammadiyah Kotabumi Kotabumi is still in low level. This research result is also supported by research result about analysis of students' think mathematical critical ability which is done by Ningrum (2016)—lecturer of STKIP Muhammadiyah Kotabumi Kotabumi, who concluded that think critical with cognitive style of field-dependent,is low. This shows that students' think critical ability in STKIP Muhammadiyah Kotabumi generally still need to be increased.

Based on that problem, it needs an effort in changing learning in STKIP Muhammadiyah Kotabumi. However, Lesson Studyis an effort in increasing learning quality that is done by lecturer collaboratively. Main steps of LessonStudyare design learning to reach the purpose, implement learning, observe implementation of learning and do reflection to discuss the learning as completing material in next learning plan. By applying Lesson Studyin STKIP Muhammadiyah Kotabumi is expected create openness and increase of Accountability College that is done by lecturer so that create better learning quality.

The purposes which want to be reached through Lesson Studyfor Learning Community activity are: increasing knowledge and lecturer's skill of STKIP Muhammadiyah Kotabumi Kotabumi about concept, principle, and practical of Lesson Studyfor Learning Communityin developing learning, building learning community between lecturer, between student and among students and lecturers in STKIP Muhammadiyah Kotabumi Kotabumi, increasing effort of learning right fulfillment each student in STKIP Muhammadiyah Kotabumi Kotabumi to develop their optimal potential, increasing students' learning ability in STKIP Muhammadiyah Kotabumi Kotabumi, especially in developing think critical ability, communicating, collaborating and creating, finding innovative learning models which are suitable with learning condition and situation in STKIP Muhammadiyah Kotabumi Kotabumi, and increasing lecturers' scientific publication in STKIP Muhammadiyah Kotabumi Kotabumi from the result of learning development through LessonStudy.

B. Implementing of Lesson Study

1. In 2017, STKIP Muhammadiyah Kotabumi receives grant Lesson Study for Learning Comunity(LSLC) as calculation Rp 120.196.000,00. There are activities in LSLC are technical guidance of LSLC in Surabaya, socialization of Lesson Study, development workshop ofchapter design,lesson design, andexposure of open lesson, implementation ofopen lessonand reflectionin 3 cycles, documentation and publication of lesson study, and result seminar and monevin.

   Technical guidance of LSLC was attended by 15 advanced institutes that as grant receiver in Surabaya for 3 days. The event was opened byMadam Dr. Ir. Paristiyanti Nurwardani, MP as Learning Director, then the directive about Lesson studywas delivered by Prof. Dra. Herawati Susilo, M.Sc,. Ph.D dan Dr. Iwa Kuntadi, M.Pd. The directive of technical guidance was related with revision of Term of Reference (TOR), Plan of Program Implementation, and Calculation Plan of LSLC Program.

   Next activity is socialization Lesson Studywhich is related with concept, principle, purpose, and practical of Lesson Studyfor Learning Community in develop learning. The resource person in that event was Narasumber Mr. Dr. Iwa Kuntadi, M.Pd who was accompanied by Mr. Afriyudianto, S.T.P., M.Mfrom Belmawa. The participants in this activity were 5 lecturers from each study program, the head of STKIP Muhammadiyah Kotabumi and the line, and lecturer from out of LSLC lecturer model, and the staff who helped the event. The implementation of event was done in one day. Mechanism order of implementation socialization activity of lesson studyare 1) determining of schedule, place, and resource person, 2) inviting the participants include: lecturer model of LSLC, head of STKIP Muhammadiyah Kotabumi and the line, lecturer, and staff, 3) implementing socialization activity of lesson study, 4) doing documentation and publication socialization activity of lesson study,and 5) making activity report.

   Development workshop of chapter design, lesson design, andexposure open lessonwas done after socialization activity of lesson studywith Mr. Dr. Iwa Kuntadi, M.Pd. implementation of the workshop was done as long 2 days with the participants: lecturer model of LSLC, head of study program, and lecture from out of LSLC. In this activity, the participants make chapter design andlesson designin group then it was presented and discussed to be done revision which was suitable with RPS, and learning material that had been made before.On the last activity, one lecturer model applied chapter design and lesson designwhich had been made on exposure open lesson activity in real class. On exposure open lesson, the participants acted as observer then the result observation was reflected for a while after open lesson was done. Mechanisms of workshop implementation are 1) determining schedule and place, 2) inviting the participants include: lecturer model of LSLC, head of STKIP Muhammadiyah Kotabumi and the line, lecturer and

staff, 3) doing workshop as the schedule, 4) making learning evaluation tool based on lesson study, and 5) documentation and publication result of development workshop chapter design, lesson design, and exposure open lesson.

Implementing first step of lesson study is Plan. In this step, lecturer model made lesson design which had been arranged before. Then the lecturers collaborated to understand deeply from content side, the way of learning, and assessment of learning success. Learning model which was used was computer supportedcollaborative learningthat means each lecturer's learning model used collaborative learningmodel with support application of moddle. The reason of this model selection of collaborative learningcould create mathematical communication among students. It is supported by Widjajanti (2008) who concluded that collaborative learning model makes students study in small group to break the limit through problem given by lecturer. Studying in group emphasizes in social interaction to increase understanding, reasoning, ability in thinking critical, ability in solving problem, and ability mathematical communication. On plan activity, the lecturers acted open and democratic to design maximal learning. Plan step had done in 15 minutes before learning began.

Second step of open lesson is do.The activityin this step was implementing lesson design for lecturer model and giving other lecturers lesson learn. Lecturer model did learning, while others acted as observer who took note all the events in the field without assessed how the lecturer taught. This activity has to be done before, such as students' seat, the way of dividing groups, and observer's manner in observing in the class. Lecturer model has to ensure learning right of each student by giving problem to be solved by students as think critical practice in order that can create the creativity, observing all of students' learning activities, even listening students' conversation. When there is a student who are not involved in learning, lecturer model facilitates the student in order that he/she wants to ask to his/her friend, and make sure that they learn each other (collaborative learning). After the last learning activity, so the next step is see.

In the step see is to reflect learning effectiveness learning by sharing observer's finding about how students learn. This activity was leaded by a moderator, then pleased lecturer model to do self reflection, how far learning reach the target, why if it does not yet reach the target. Moderator gave chance to every observer and discussed issues (clarification or solution)for sharing sharing.Lecturer model and observer did sharing of finding about activity of students study after learning, how students learn. The comment could be categorized into 5: learning model, lecturer's attitude, facility, students' interaction, and learning achievement. The comment had better more focus on students' category. The comment also could be categorized into 4 levels: level 1 (only describe), level 2 (describe and give reason), level 3 (describe and giving

reason and solution), level 4 (level 3 + theory reference). The comment was focus on students learn that starts by telling learning fact not opinion Then, the fact was analyzed why they involve or do not involve in learning, how to involve students in learning. Learning theory which was relevant could be reference to strengthen the finding. Observer has to get inspiration/precious experience to be applied in the class

One cycle of LSLC includes developing lesson design, implementation of learning, and reflection. The next cycle was done in same class with different material. Lecturer model also implemented input from reflection in class parallel (if it exists). The next cycles of LSLC have to show revision of learning quality. Every LSLC activity needed to be recorded by camera video as document and data to be analyzed so that can be work of research lesson. Practical of LSLC has to give impact toward daily learning.

Result seminar and Monevin of LessonStudy. This activity was done through result seminar of lessonstudy activity with these mechanisms: preparation of seminar. The things should be done in preparation of seminar of this lesson study are: 1) arranging schedule of implementation activity of seminar and monevin. 2) Inviting lecturer of Mathematics study program, lecturer of Bahasa Indonesia study program and lecturer of English education study program and the management and miter school as the participants of result seminar and Monevin of lesson study. 3) Delivering invitation to the colleague of lesson study from Dikti.4) Telling information to the lecturer modeland monevin team as the presenter. 5) Preparing medium, tool which is used for seminar. 6) Seminar participants and monevin team representative present the result seminar paper of lesson study. 7) documentation and publication the result seminar and monevin of lesson study.

2. Here are the study programs and the subjects which have been the target in lesson study activity.

Lecturer model	Subject	Collaborative Model
Matematika Study Program		
1. Fhela Vhantoria, S.Pd., M.Pd	Persamaan Diferensial Kompleks	Jigsaw
2. Venty Meilasari, S.Pd., M.Pd	Pengantar Logika	TAI
3. Karsoni Berta Dinata, S.Pd., M.Pd	Analisis Vektor	GI
4. Ratih Handayani, S.Pd., M.Pd	Aljabar linier	STAD
5. Darwanto, S.Pd., M.Pd	Himpunan	CLS
Prodi Bahasa Inggris		
1. Elis susanti, S.Pd., M.Pd	Advanced speaking	Learning Together
2. Asep Hardiyanto, S.Pd., M.Pd	Intermediate grammar	TAI
3. Bobi Arisandi, S.Pd., M.Pd	Semantics	Jigsaw
4. Rulik Setiani, S.Pd., M.Pd	Vocabulary	CLS
5. Rini susilowati, S.Pd., M.Pd	Listening comprehesion	CI
Prodi Bahasa Indonesia		
1. Rahmat Prayogi, M.Pd	Morfologi Bahasa Indonesia	CI
2. Dewi Ratnaningsih, S.Pd., M.Pd	Analisis kesalahan berbahasa	Jigsaw
3. Nur Mei Ningsih, S.Pd., M.Pd	Keterampilan Membaca	STAD
4. Windo Dicky Irawan, S.Pd., M.Pd	Linguistik umum	TGT
5. Dr. Sri Widayati, M.Hum	Kajian prosa fiksi	CLS

3. Lesson study activity in each study program was done minimally 3 learning cycles

C. Results Which Have Been Reached

The results of lesson study in STKIP Muhammadiyah especially in each study program are:

1. getting increase pedagogic competency, social, professional and each lecturer model's personality of lesson study,
2. creating professional learning community to identify and look for solution from the problem which appears during learning process,
3. getting increase of learning readiness with lesson design,
4. doing associating of lesson study in the school to get learning increase,
5. fulfillment of students' learning right,
6. lecturer model finds innovative learning in learning,
7. creating digital media which can observe and accommodate increase of students' achievement,
8. getting increase lecturer's work in research sector and dedication to society,
9. getting increase in students' cognitive ability, affective, and psychomotor,
10. Bindingup professional community which is more cohesive and wide in developing learning quality with lesson study, and creating revision of learning quality which is continuity.

D. Conclusion

Implementing of Lesson Study for Learning Comunity(LSLC) of STKIP Muhammadiyah Kotabumi is applied in three study programs as Mathematics study program, Bahasa Indonesia study program and English study program. Lecturer model is lecturer who will apply learning based on lesson study in each study program that contain of 5 lecturers who are appropriate with their basic knowledge. Learning model used is collaborative learning model while the media used to make easy evaluation process and learning is Moddle. Each lecturer model uses collaborative learning model that is different in one field.

Lesson Study for Learning Comunity(LSLC) activities of STKIP Muhammadiyah Kotabumi are: 1) Technical guidance of LSLC. 2) Socialization ofi Lesson Study. 3) Development workshop ofchapter design, lesson design, and exposureopen lesson. 4) Implementing open lesson as long 3 cycles . 5) Result seminar and Monevin of *LessonStudy.*

The results which have been reached in implementing LSLC are: 1) getting increase pedagogic competency, social, professional and each lecturer model's personality of lesson study, 2) creating professional learning community to identify and look for solution from the problem which appears during learning process,3) getting increase of learning readiness with lesson design, 4) doing associating of lesson study in the school to get learning increase, 5) fulfillment of students' learning right,6) lecturer model finds innovative learning in learning, 7) creating digital media which can observe and accommodate increase of students' achievement, 8) getting increase lecturer's work in research sector and dedication to society,9) getting increase in students' cognitive ability, affective, and psychomotor, 10) binding up professional community which is more cohesive and wide in developing learning quality with lesson study, and creating revision of learning quality which is continuity.

References

Ningrum, Fhela Vhantoria. 2016. *Analisis Kemampuan Berpikir Kritis Mahasiswa ditinjau dari Gaya Kognitif*. Jurnal Eskponen:STKIPMKTB

Nugroho, Purna Bayu. 2015. *Konstruksi Proses Berpikir Grup Berdasarkan Teori Action, Process, Object, Scheme (APOS) pada Mahasiswa Semester IV STKIPM Kotabumi Tahun Akademik 2014/2015*. Jurnal eksponen: STKIPMKTB

Widjajanti, Djamilah Bondan. 2008. *Strategi Pembelajaran Kolaboratif Berbasis Masalah.* [Online] tersedia: eprint.uny.ac.id: Lumbung Pustaka

Development Instruction Quality of Statistics with Think Pair Share through Lesson Study for Learning Community on FKIP UNIPA

Benidiktus Tanujaya, Jeinne Mumu, Purwati, and Freddy N. Lohi
Mathematics Education, University of Papua Manokwari, Indonesia
b.tanujaya@unipa.ac.id

Abstract

This Lesson Study activity aims to improve the quality of statistics instruction by focusing on students' ability to present data in graphics. This study occupied Think-Pair-Share, a cooperative model in designing the instruction. Students were paired in groups of two before they were randomly grouped in bigger groups; groups of three then groups of six. Bigger groups were formed after the smaller groups finish discussing and doing the assignments given by the teacher. The discussion was regarding graphics components, graphics procedures, and graphics selection in terms types and forms. The instruction process was done in two cycles in two pararell classes. From the first reflection, the teacher was suggested to pay attention the best time to use the graphics during the class as well as to evaluate students' responses of the class. This study showed that students were more active during the class. It can be seen from the more relaxed learning athmosphere where students were more assertive and involved in classroom discussion. It can also be seen from their improved concepts of graphic mastery; students were able to choose the proper graphics according to the data.They were also able to makeright conclusion about the presented graphics.

***Key words**: Think-Pair-Share; lesson study; statistics*

A. Introduction

The University of Papua, the only state university in West Papua Province, was established on November 2, 2000. It consists of 13 faculties, one of which is the Faculty of Teacher Training and Education (FKIP UNIPA). As one of faculties in University of Papua, FKIP has the responsible for education implementation, and should always improve the quality of instruction. Some efforts to improve the quality of instruction in FKIP UNIPA are continuously conducted by developing and implementing innovative and creative instruction methods and strategies based on the Student Center Learning (SCL) approach.

There are various methods and instruction strategies used to apply the SCL approach in FKIP UNIPA, among others are problem-based learning, project-based learning, inquiry-based learning, and research-based learning. However, in its practice, many lecturers have difficulties to apply the various methods and strategies of instruction, so they tend to implement instruction by using lecture method. Lecture method is a teacher-centered learning (TCL) method which tends not to improve students' thinking ability.In TCL, students put all of their focus on the teacher. When the teacher talks, the students listen exclusively. During activities, students work individually, and collaboration is discouraged.

Alipio (2014), stated that TCL is a traditional approach in instruction that explains learning in terms of behaviorism theories. Behaviorists consider learning as sequential and hierarchical – a process that takes place when bits of separated knowledge are accumulated. The theory believe that transfer of learning can only occur in a situation where there is a high degree of similarity. On the contrary, SCL is an instruction approach based on a constructivist learning theory. The learning theory is based on the assumption that knowledge and understanding are constructed within a social context and learning occurs when deep understanding and support is observed.

In addition, FKIP UNIPA students have heterogeneous characteristics but generally have low reading interest, and tend to be lazy to do the task given by the lecturers. They prefer cheating on the tasks that have been done by their friends, rather than doing the task independently. The students who belong to this group, have a low learning interest. This situation is caused by many factors, including the lack of internal motivation of students.Various problems also occur in basic statistics lectures. Basic statistics is a compulsory subject for all students in six study program of FKIP UNIPA.

In order to overcome these problems, a new instructionsystem for lecturers and students of FKIP UNIPA is crucial to be implemented. SCL is one of the alternatives that can be applied in FKIP UNIPA. The lecturers of FKIP UNIPA need to be well prepared in order to be able to perform various innovative and creative learning, so as to increase student's motivation to learn. One of the activities instruction that can be used is lesson study for learning community.

Lesson study, according Isoda and Katagiri (2012), is a system of planning and delivering teaching and learning that is designed to challenge teachers to innovate their teaching approaches, and to recognize the possibilities of intellectual and responsible growth of learners while fostering selfconfidence in all concerned.Whereas according to Harvolsen and Lund (2013), the aim of lesson study is to improve instruction and advance student learning. Lesson study focuses on collaborative planning, teaching, observing,anddebriefingoflivelessons. Thus it can be stated that lesson study is a collaborative process, which helps teachers to develop lessons and innovate new practices in order to solve instruction problems and improve the quality of instruction.

Successful implementation of lesson studies has been reported in various countries at several levels of education such as the Japanese elementary school (Yoshida, 1999), in the United States (Fernandez, 2002), some universities in Indonesia (Saito, Hawe, Hadiprawiroc, and Empedhe, 2008), in Hong Kong (Lo and Marton, 2012), and Sweden (Carlgren, 2012), and several other countries including Singapore (Tan, Fang, andAng,2013).

Can lesson study be applied in the study at the FKIP UNIPA, especially in instruction of basic statistics? How to implement lesson studies on the learning so that the quality of basic statisticsinstruction can be improved?The statistics, especially the basic statistics course is one of the compulsory subjects for students in FKIP UNIPA. Therefore, this Lesson Study activity is aimed at improving the quality of basic statistics instruction by focusing on students' ability to present data in graphics.

B. Method

The instruction of basic statistics in FKIP UNIPA is implemented in several parallel classes. In the implementation of this lesson study, the basic statistics class is divided into two classes. The first class is a class consisting of Mathematics Education students, while other classes consist of Physics Education, Chemist Education and Biology Education students. There are 145 students involved in this lesson study.The first class consists of 35 students, while the second class consists of 110 students.

This lesson is designed by using lesson study for learning community. The implementation of lesson study includes preparation (plan), implementation of learning (do), and reflection (see). In preparation, the model teacher with a lecturer team consisting of 4 lecturers, planning in order to arrange chapter design and lesson design. The faculty team also serves as an observer that performs observations during the learning process. There are 5 lecturers from other study programs who serve as observers. Observers also serve to convey criticism and suggestions at the time of reflection activities.

Preparation of lesson studies is done by making chapter design and lesson design. Chapter design and lesson design based on the results of lecturer team discussions, are presented in appendix 1 and 2. In chapter design there are several things that need to be done by model lecturer in learning. Learning is implemented using the think pair share approach, a type of cooperative learning model.According to Pressel (1992) students in the cooperative learning environment have opportunities to help each other to improve their achievement and retention, increase self-esteem and intrinsic motivation and develop more positive attitudes toward learning skills and social skills. Cooperative learning helps students to learn academic knowledge under the guidance of a teacher and at the same time they can develop communication skills and values through cooperative interaction.

Once the implementation of cooperative learning is done, students were paired in groups of two before they were randomly grouped in bigger groups; groups of three then groups of six. Bigger groups were formed after the smaller groups finish discussing and doing the assignments given by the teacher. The discussion was regarding graphics components, graphics procedures, and graphics selection in terms of types and forms. The teaching process was conducted in two cycles in two pararell classes.

Data collection is conducted by using observation guidance and evaluation of learning outcomes. Observation guides are used by observers, while evaluating student learning outcomes at several evaluation phases using assessment as learning (AaL) methods. AaL according to Tanujaya (2017), is a method of learning evaluation conducted by lecturers and / or students themselves to know what is known and what they do not know.In this learning activity, students conduct an evaluation by conveying the knowledge and skills acquired to their friends in groups of two. His/ her friend corrected by adding or reducing what was said before, so there was a discussion to increase both their knowledge and skills. Discussions continued on groups of three and six students.

After the open class, reflection is done to address the various deficiencies in the learning process. The results of this reflection are used to improve the next learning process (in parallel classes). Reflection was first performed by model teachers, then continued by lecturers by delivering their observations. The results of the first reflection are used by the model teacher to rearrange the learning plan together with the other lecturers.

C. Findings and Discussion

This Lesson Study activity aims at improving the quality of basic statistics instruction by focusing on students' ability to present data in graphics. This lesson study is carried out in three stages, namely plan, do, and see. According to Isoda and Katagiri (2012), the lesson study operates when teachers develop a sequence of lessons together: to plan, by preparing the lesson in advance, including a prediction of the possible learning, to do, by presenting the class to children observed by other teachers, and to reflect on the learning with the observers through discussion. Further, according to Lewis (2002) the ideas contained in the lesson study are actually short and simple, i.e. if a teacher wants to improve learning, one of the most obvious means is to collaborate with other teachers to design, observe and reflect on the learning.

As presented further description, namely the increasing of instruction, the important result obtained from the lesson study is formed learning community. Many things are gained with the learning community, namely the exchange of opinions among lecturers to overcome the problem of learning. This is in accordance with the opinion of Lewis, Perry, and Hurd (2009) which states that lesson study makes various types of knowledge more visible, such as colleagues' ideas about pedagogy and students' mathematical thinking, thereby enabling teachers to encounter new or different ideas, and to refine their knowledge, as cognitive theories propose. Second, the lesson study enables teachers to strengthen professional community, and to build the norms and tools needed for instructional improvement, as situated theories of learning propose.

Plan

Lecturer model activity begins by doing learning planning. There are two things to do in learning planning, namely: determining learning problems, and preparation of lesson plan and chapter plan. Unlike the preparation of learning that has been implemented,this learning planning is done together in the group of lecturers of the study program. Although model lecturer is more dominant in the preparation of lesson plans, suggestions from other lecturers are important in this planning stage of learning.

After studying the lecture issues while teaching the students enrolled in the basic statistics class, the discussion was conducted to establish learning problems.Based on the learning problems, the model lecturer arranges lesson design and chapter design. Model lecturers then arrange the learning media used in the implementation of learning. Learning media used is a slide of power point presentation.

Do

At this stage, there are two important activities: teaching and observation. The teaching of basic statistics is carried out by model lecturer using cooperative model of

think pair share type, while observation is done by nine lecturers. Model lecturers carry out learning by presenting a powerpoint slides for discussion by students. The presentation slides are bar charts, line charts, pie charts, histograms, steam and leaf diagrams, and boxplot diagrams. Various diagrams are presented in pairs so that students can observe the similarities and differences of the two graphs shown.

The lecturer then asked the students to find the elements of each diagram, the procedure of creating a diagram, and the level of data on each graph. Students are personally asked to convey what is known by observing the slide presentation presented by the lecturer. The lecturer then asked some students to express their opinions. The lecture then continued with the formation of students in groups. The discussion was conducted by students in groups of two, followed by three and finally in group of six.

See

The see activity is done through discussion between model lecturer and observer. This study showed that students were more active during the class. It can be seen from the more relaxed learning athmosphere where students were more assertive and involved in classroom discussion. It can also be seen from their improving concepts of graphic mastery; students were able to choose the proper graphics according to the data.They were also able to give right conclusion about the presented graphics.

Students are able to communicate in conveying opinions, criticisms and suggestions. Communication is done in groups as well as in the class as a whole. This situation is very rarely seen in previous learning. The ability of students to understand the material is also very good. Most students are able to think to solve the problems conveyed by model lecturers. This improvement cannot be separated from the presentation of lecture material in the form of slide presentation.

From the first reflection, the teacher were suggested to pay attention the best time to use the graphics during the class as well as to evaluate students' responses of the class.These suggestions were then improved on the next lesson. While from the second reflection, the observer generally highlights the difficulty of teaching the class with a large number of students.

D. Conclusions and Suggestions

Based on the results of the implementation of lesson study and discussion conducted, several things can be concluded as follows:

1. The procedures for implementing lesson study are: (1) determining lesson problem, (2) planning the lesson, (3) teaching and observing the lesson, (4) evaluating the lesson by reflecting, and (5) revising the lesson.
2. Lesson study can improve the quality of basic statistical learning in the FKIP UNIPA, by improving the quality of instruction conducted by lecturers and students.Students were more active during the class. Learning athmosphere was more relaxed where students were more assertive and involved in classroom discussion.

As a suggestions, lecturers of FKIP UNIPA need to improve the quality of learning through the application of lesson study more. Improving the understanding and

skill of Lecturer of FKIP UNIPA about lesson study needs to be done through various scientific activities such as, workshops, seminars and scientific articles writing.

References

Alipio, J. D.C. (2014), Learner-centered approach in the teaching of mathematics aconsideration of teachers' perceptions, *Dissertation*. University of Zululand.

Carlgren, I. (2012), The learning study as an approach for 'clinical' subject matter didactic research, *International Journal of Lesson and Learning Studies*, Vol. 1 No. 2, pp. 126-139

Fernandez, C. (2002), Learning from Japanese approaches to professional development, *Journal of Teacher Education*, Vol. 53 No. 5, pp. 393-405.

Halvorsen, A. L., and Lund, A. K. (2013), Lesson Study and History Education, *The Social Studies*, 104:3, pp. 123-129.

Isoda, M., and Katagiri, S. (2012), Mathematical thinking, how to develop it in classroom, In Stacey, Tall, Isoda, and Inprashita (Ed),*Monographs on lesson study for teaching mathematics and sciences* – Vol. 1. World Scientific, Singapore.

Lewis, C. C., (2002), Lesson Study, A Handbook for Teacher-Led Improvement of Instruction, Philadelphia: Research for Better Schools.

Lewis, C. C., Perry, R. R., and Hurd, J. (2009). Improving mathematics instruction through lesson study: a theoretical model and North American case, *J Math Teacher Educ*. 12:285–304.

Lo, M. and Marton, F. (2012), Towards a science of the art of teaching: using variation theory as a guiding principle of pedagogical design, *International Journal of Lesson and Learning Studies*, Vol. 1 No. 1, pp. 7-22.

Pressel, B.E. (1992),Aperspective on the evolution of cooperative thinking, In Davidson and Worksham(Ed), *Enhancing thinking through cooperative learning*. College Teachers Press, NY.

Saito, E., Hawe, P., Hadiprawiroc, S. and Empedhe, S. (2008), Initiating education reform through lesson study at a university in Indonesia, *Educational Action Research*, Vol. 16 No. 3, pp. 391-406.

Tan-Chia,L., Fang, Y, andAng, P. C. (2013),Innovating the Singapore English Language curriculum through lesson study, *International Journal for Lesson and Learning Studies*, Vol. 2 Issue 3 pp. 256 – 280.

Tanujaya, B. (2017), Application of assessment as learning in mathematics instruction, *Proceedings of the 5th South East Asia Development International Conference 2017*, pp. 140-143.Atlantis Press.

Yoshida, M. (1999), Lesson study (Jugyokenkyu) in elementary school mathematics in Japan: a case study, *paper presented* at On the Threshold of the 21st Century:

Challenges and Opportunities, The Annual Meeting of the American Educational Research Association, American Educational Research Association, Montreal, April 19-23.

Appendix

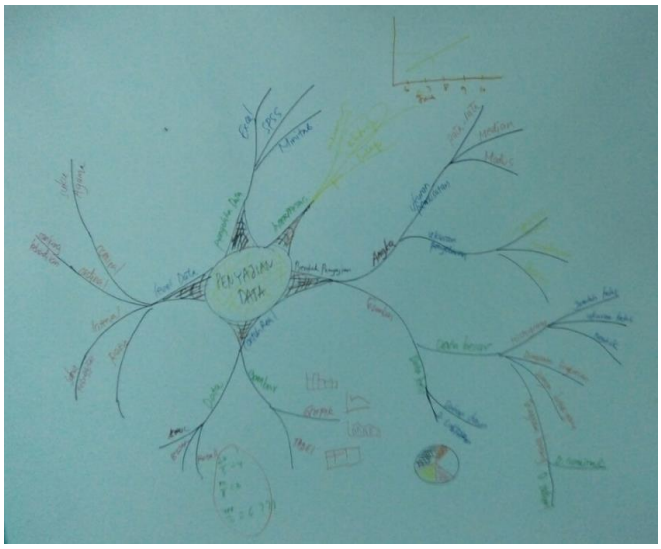


Figure 1. Lesson Design

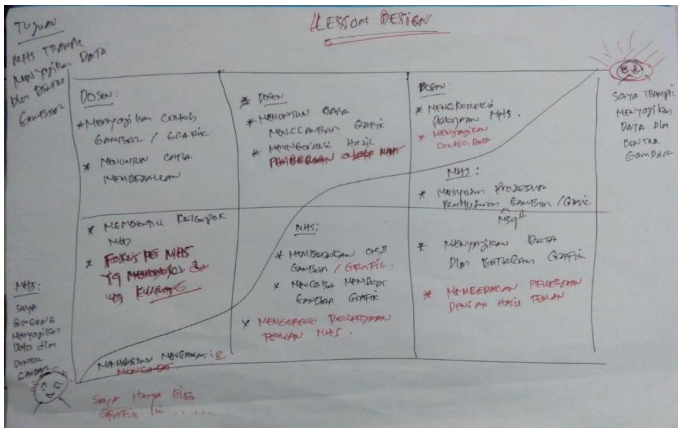


Figure 2. Chapter Design

Learning Quality Development of Microbiology with Cooperative Model of TSTS through Lesson Study Activity in Biology Education Study Program of University of Papua

Iwan, Jan H. Nunaki, and Aksamina M. Yohanita
Department of Biology Education, FKIP University of Papua
b.iwan@unipa.ac.id

Abstract

The purpose of this Lesson Study activity is to fix the teaching and learning of Microbiology course. The activity was performed in two cycles which each of the open class consisted of three stages of activities; planning/plan, observed learning (do), discussion and reflection (see). Each planning resulted in chapter design, lesson design, and scoring documents with theme and subtheme mentioned. Learning process was designed and performed through the implementation of the cooperative model Two Stay Two Stray (TSTS). The data were collected by observation. According to the result of observation, reflection and data anlysis, it could be seen that (1) There was increase of students' activity, creativity and independence; (2) there was an increase in students' understanding on the considered difficult concept. There are several suggestion to improve the learning process of Biology; (1) Lesson study activity is to be frequently and continually performed to develop other subjects' material because it has been proven to raise students' activeness, learning process and results; (2) the continual activity of lesson study is considered able to increase profesionalism of teachers, pedagogic aspects and understanding of lesson material or profesional aspects.

***Key words**: Lesson study, microbiology learning, cooperative TSTS.*

A. Introduction

Learning is a process by which a person undertakes to gain a whole new behavioral change, as a result of his own experience in interaction with his environment (Slameto 1995: 2). Considering there is not a perfect learning process, it is always necessary to improve the quality of learning. Further dikti (2008) stressed that the process of learning in the college should prioritize on student centered learning patterns. Some of these descriptions illustrate the importance of active student involvement and interaction among them during the learning process. By that students should be encouraged to have motivation in themselves, then strive to achieve the desired competence.

Competence of microbiology courses, emphasizing on the mastery of concept and application of microbiology concept in everyday life. In the effort to achieve these competencies, it is necessary to design a student-centered learning through cooperative learning type TSTS. Cooperative learning model type Two Stay Two Stray is a group learning system with the aim that students can work together, responsible, mutually help solve problems and encourage each other to excel. This method also trains students to socialize well (Yusiriza, 2010).

According to Suprijono (2009), learning by TSTS method begins with the division of groups. Once the group is formed the teacher assigns tasks in the form of

problems they should discuss the answers. After the group discussion was over, two people from each group left the group to visit the other group. Group members who are not assigned as guests have the obligation of receiving guests from a group. Their job is to present the work of the group to the guest. Two people serving as guests are required to visit all groups. If they have finished their work, they return to their group. After returning to the group of origin, both learners on duty as well as those on duty to receive guests match and discuss the work they have done.

In an effort to apply cooperative learning model TSTS type more effective that leads to the increase of student learning activities, it should be coupled with lesson study (LS). This is very reasonable because the series of activities of LS emphasizes on student learning activities. In addition, the points raised in the reflection phase are authentic data from observations, which serve as a basis for improving the quality of subsequent learning. Although according to Ueno (2013), LS does not give priority to solving problems and difficulties but to share problems, interact, and think to solve problems together. From the description above, shows the importance of developing the quality of learning through lesson study activities as an effort to improve student learning activities and is believed to improve basic knowledge in learning, improve professionalism of educators, and build community of learning communities.

B. Method

The Lesson Study is held from August to September 2017, in the odd semester of academic year 2017-2018. Open Lesson is conducted in Biology Education Study Program, Faculty of Teacher Training and Education, University of Papua. The subjects of the study were semester V students of biology education program programmed Microbiology courses consisting of 29 people consisting of 6 men and 23 women. The discussion groups were formed in five (5) groups with each group of 4-5 students. In each open lesson consists of stage plan, do and see. the activities in the stage *plan done* collaborativelyby the *lesson study team*.

Activities at the stage of the plan carried out collaborative activities by the team of lesson study. These activities include identification of microbiology learning problems, review of common learning experiences, preparation of syllabi, design lesson study-based lesson plans that include making lesson design and chapter design, formulating methods, models or learning techniques that will be used, creating teaching materials, making learning media, making student discussion sheets, making observation sheets, and preparing the necessary tools in the learning process and documentation equipment. Tahapan do includes two main activities, namely the implementation and observation of the learning process. Implementation of learning done in accordance with that has been formulated in the stages of the plan. Observation of the learning process is done to find the facts that arise during the learning process. During observation, observers are not allowed to speak to each other. Tahapan see in the form of activities review, evaluation or reflection on the learning process that has been going on. See in this research carried out collaboratively by involving all students of sample class, not only between observer and model lecturer only. Implementation (see) in the form of reflection conducted during the learning process takes place.

Reflection activity led by the moderator concurrently observer / observer. Another observer is 3 lecturers. The discussion is directed at: (l) sharing and analyzing data, (2) achievement of learning objectives and student development, and (3) improvements that need to be made to the design of the learning process. All inputs from the see activities serve as materials to make revisions and improve the stages plan or do in the second cycle. Technique of data collecting done by observation technique to student activity and lecturer model, questionnaire, interview, and audio video technique. The data obtained were analyzed descriptively qualitative.

C. Findings and Discussion

Implementation of Lesson Study

Implementation of Open Class in cycle I is done with introduction theme and History of Microbiology. Learning tools that include Reading materials, RPS, Student Work Sheets (LKM), student cognitive tests, and activity plan sheets have been prepared prior to the activity plan. Plan followed by 4 Lecturers of Biology Education FKIP UNIPA, among others; Jan H. Nunaki, Iwan, AksaminaM.Yohanita, and Silvia H.KusumaSirait. Plan is done in the lecture room of Biology Education Program of FKIP UNIPA.

Do cycle I held on Thursday 31 August 2017 at 08.00 - 10.20 WIT in Room 6 Lt 2 Postgraduate of University of Papua On Introduction Material and history of Microbiology. Lecturer model is Iwan, Observer among others; BenidiktusTanujaya, Jeinne Mumu, Apriani Sulu Parubak, AchmadRanteSuparman, Fredi N. Lohi, Silvia Hanna K. Sirait. The present observer consists of 7 lecturers. In general, learning activities run well at first, students are interested in the apperception described by the model lecturer and follow what is instructed by the model lecturer. At the time of the learning process took place several students are asked by the model lecturer to read the learning objectives so that students look enthusiastic in following the learning because it is involved in the delivery of learning objectives. But when entering the beginning of the material there are some students who seem busy with their own activities, this is because at the beginning of the lecturer delivered the material with the lecture method, the student looks staring at the fore but his eyes look hollow, just some people who look active, after a few minutes later when the model lecturer lure students to ask then the students have started to look enthusiastic next model lecturer divide. Lecturers divide students into 5 groups and each group consists of 4-5 people. The model lecturer then distributes the MFI to be discussed by each group. Each group gets different material to be constructed. Group discussions take place normally, then two people from the host group will visit another group as guests to get an explanation from the host group, then the guest excuse themselves and so on until the back of each group of origin and match the results of information obtained with the group. then each group presents the results of group discussion and other groups can respond. In closing activities the model lecturer directs the students to conclude the lesson.

See Activity (Reflection) is done after Do activity completed by model lecturer. Some suggestions and inputs during the reflection are some students who look

less active like student no.9 in the name of DamianusWonmut and Paulina who are original papua students who need special therapy so that students can be active. Some group divisions are also not heterogeneous so there is one group that is almost all less active as mahsiswa No. 3, No. 6 No. 8 and No.11 need to be spread. The group discussion time is still lacking so that the students have not finished yet discussed by the students have moved to other groups. In general, the observer states that the model of learning adopted by the model lecturers is very good because it can provide an opportunity for students to independently be responsible and find the concept of learning through information obtained after a visit to another group. The advantages of open class I are: (1) The Student Worksheet is very interesting and explores the students' ability, (2) most of the learning time has been utilized by the students, (3) the lecturer does not dominate the learning process, and (4) the very apperception interesting and able to arouse student interest (5) the use of TSTS learning model can enable students. Some observer ideas after observation of learning are: (1) arrangement of class discussion by lecturer so that there is no dominance by certain group, (2) U-shaped seating arrangement for lecturer and observer able to observe student activities, (3) use of instructional media more maximized (4) division of heterogeneous student groups so that the ability can be spread so as to help his less fortunate friends.

Plan in the second cycle is done in the lecture room of Biology Education Study Program of University of Papua followed by Iwan as model lecturer, Jan H. Nunaki, AksaminaM.Yohanita, and Silvia Hanna KusumaSirat. At this stage learning tools, Student Worksheets, evaluation tools and lesson study observation sheets have been prepared. Trying to approach the students on behalf of Damianus and Paulina, students from Papua to be able to follow his friends to actively discuss. One way to ask him to mention the purpose of learning / lectures. Next time for student discussions is arranged in such a way that it can run well and effectively. The division of groups has been pursued heterogeneously with attention to the background of the ability of the students so that all students are strived to be active in learning activities.

Do Cycle II was held on Tuesday, September 05, 2017 at 10:20 am-12:50 pm in room 6th floor of the University of Papua Postgraduate Building on Bacterial Material. Lecturer model is Iwan, Observer among others; AchmadRanteSuparman, Fredi, Silvia Hanna K. Sirait, Purwati and Sri WahyuWidyningsih. The attendees were 6 persons. Students interested and listen to the apperception submitted by the model Lecturer because it is associated with real life experienced by the day-to-day by students. At the time of delivery of student learning objectives are involved to read the purpose so that the material is directed. The Model Lecturer delivered the material briefly so that the students looked enthusiastic and attentive. Lecturers then divide the students into 5 groups and each group consists of 4-5 people. The model lecturer then distributes the MFI to be discussed by each group. Each group gets different material to be constructed. Group discussions take place normally, then two people from the host group will visit another group as guests to get an explanation from the host group, then the guest excuse themselves and so on until the back of each group of origin and match the results of information obtained with the group. Then each group presents the results of group discussion and other groups can respond. In the closing activities the

lecturer model directs the students to conclude the learning according to the intended purpose.

See Activity (Reflection) in cycle 2 is done after Do activity completed by model lecturer. Some suggestions and inputs during the reflection include students who in cycle I look less active as student no.9 in the name of DamianusWonmut and Paulina who is a native Papuan student, after therapy by encouraging to engage in the discussion activity then the student finally become active and have dare to ask and express opinions. The division of the group has been heterogeneously made so that the uniformity of each group, such as students 3, No.6, and No.11 have been spread evenly, but of course some people are still less active. Group discussion time has been added so that group work becomes effective. In general, the observer states that the model of learning adopted by lecturer model is very good because it can provide an opportunity for students to independently responsible and find the concept of learning through information obtained after a visit to another group so that student activity is increased.

The advantages of open class cycle 2 are: (1) the students already understand the taught material, (2) the student can do the MFI and present it well, (3) the lecturer model performs successfully the discussion as facilitator very well. Some observer ideas / ideas after observing the lesson: (1) the seating arrangement is neater, (2) the attention of the lecturers is more comprehensive, especially for the students who are in poor papua origin (3) the class discussion is maximized. Implementation of reflection is recorded some valuable lesson learned, among others, as follows. (l) In the group there must be a passive and active student. This is normal. Not that passive students do not learn, students stay focused on learning activities but only reading the material. If students are not active it is always so in various learning activities should often be motivated. (2). Almost all students are preoccupied with the learning process through the application of Two Stay Two Stray type learning model.

Discussion

Improvement efforts made by lecturer model from cycle I to cycle II in lesson study activities is a way of model lecturers to improve the weaknesses in learning activities using cooperative learning model type Two Stay Two Stray. The effort is done by requesting input from a colleague who acts as an observer in the do activities conducted by the model lecturer. In the first cycle, the group division is not heterogeneous, so some students are not able to discuss with their group's friends. The sitting position in the group is also still not quite right. The learning model is applied in the new sense by the students so that the students are still less familiar with the model. Some students appear less active in learning activities.

Weaknesses found Lecturer model and colleagues (observer) as stated above, increase the motivation Lecturer model to improve it. Improvements made by the model Lecturer in cycle II is to divide the group in a heterogeneous group that is proportional to facilitate Lecturer model in guiding it consists of 4 people in one group. Seating settings that initially appear to be scattered are individually converted into circular seats in the middle allowing observers to observe the activities of the students. The model lecturer asks 2 people of each group to visit another group and 2 people live as guests

and it is the duty to explain to every guest who comes. Every student is less active, then the Model lecturer came to him to provide guidance for them to be active in learning activities. Thus, the above improvements reduce the confusion and difficulty of students in carrying out the whole learning activities. Reduced confusion and difficulties experienced by students to facilitate them in completing the MFI in task.

The above statement in accordance with the statement Susilo (2011) ie lesson study is one of the activities to improve the quality of learning through collaborative activities with colleagues. Syamsuri and Ibrohim (2008) also added that in applying lesson study the teacher seeks to transform the learning process into a qualified and effective learning process by observing and collecting data, seeing how the impacts are assisted by the observer, and further revising the lesson plan for the next learning activity. Observations made by the observers show that by using TSTS learning model in the microbiology course progressively "developed" because the students participated in the activity directly and the model lecturer only served as the facilitator only. The students' activity seems to be getting stronger, it is shown by students who are very enthusiastic in discussing. The above statement in accordance with the opinion Santyasa (2009) that the improvement in improvements in the practice of learning melaksankan course will lead to improving the quality of learning outcomes and student learning products.

Student activity is increased enough not to be separated from the effort of model lecturers together with his colleagues (observer) in improving the learning process. Stage-by-step model lecturers are unrelenting to improve lesson plans, improve teaching methods, and improve ways of observing student activities. The whole activity is done by the model lecturer to improve the quality of the learning it does. The above statement is supported by the question of Ibrohim (2009) that the lesson study activity will actually give effect to the students' learning outcomes because in this activity always done improvements in the learning process so that the difficulties experienced by the students will be overcome by the running of lesson study activities by the teacher . Garfield in Ibrohim and Syamsuri (2008) also added that the lesson study is a systematic process used by teachers to test the effectiveness of their learning in order to improve their learning outcomes which indirectly also helps in increasing the learning outcomes of their students.

The successful implementation of lesson study in this study can not be separated from the support of colleagues (observer) during the progress of learning in the classroom. They do a detailed observation on the activities of students and not just the activities undertaken by the model lecturer. No matter how small the activities of students can be recorded by colleagues (observer), so the results of observations by the observer can be used as an improvement of the quality of learning of students of Biology Education Studies Program FKIP UNIPA.

D. Conclussion

The conclusions that can be obtained from the implementation of lesson study (LS) are:

1. The implementation of cooperative learning of TSTS type through lesson study (LS) activities can increase cooperation and discussion between the lesson study team

members in the planning and implementation of learning, as well as the reflection on the learning activities.

2. The implementation of TSTS cooperative learning model through lesson study (LS) activities can improve the quality of learning that is seen from the involvement of all students actively during the learning activities.

References

Azis, A. A., Adnan, Muis, A. ,Taiyeb, A. M. , Faisal. (2013). Penerapan Pembelajaran Kolaboratif Untuk Meningkatkan Aktivitas Belajar Siswa Kelas XI IPA 3 Melalui Lesson Study BerbasisSekolah di SMA Negeri. *JurnalBionature*. Volume 14 (1), Hal. 38-43.

Dikti. (2008). Buku Panduan Pengembangan Kurikulum Berbasis Kompetensi Pendidikan Tinggi (Sebuah alternative penyusunan kurikulum). Dikti. Jakarta.

Ibrohim. (2009). *Pengaruh Model Implementasi Lesson Study dalam Kegiatan MGMP terhadap Peningkatan Kompetensi Guru dan Hasil Belajar Biologi Siswa*. Disertasi tidak diterbitkan. Malang: PPs UM.

Prayitno, T. A., dan Nuril H. (2015).*Penerapan lesson study pada kegiatan praktikum mikrobiologi program studi pendidikan biologi Ikip budi utomo malang*. Jurnal BIOEDUKASI Volume 9, Nomor 1.ISSN: 1693-265X

Santyasa, I. W. (2009). *Implementasi Lesson Study dalam Pembelajaran.* Disajikandalam "Seminar Implementasi Lesson Study dalam Pembelajaran bagi Guru-Guru TK, Sekolah Dasar, dan Sekolah Menengah Pertama di Kecamatan Nusa Penida, Tanggal 24 Januari 2009. Universitas Pendidikan Ganesha.

Slameto, (1995). BelajardanFaktor – faktor yang Mempengaruhinya, Jakarta: RinekaCipta.

Suprijono, A. (2009). Cooperatif Learning Teori dan Aplikasi PAIKEM,Yogyakarta: PT. PustakaPelajar.

Susilo, H. (2011). *Pengembangan Potensi Siswa melalui Pembelajaran Sains yang Inovatif: Apa, Mengapa, dan Bagaimana?*.Makalah disajikan dalam Seminar Nasional bertema Inovasi Pembelajaran Sains dalam Pengembangan Sumber Daya Manusia, Universitas Ronggolawe. Tuban, 22 Mei.

. Ueno, M. (2013). *Pembelajaran Kolaboratif dan Pendidikan Demokrasi. Makalah Disajikan pada Short-Term Training on Lesson Study (STOLS) for Institute of Teacher Training and Education Personnel (ITTEP)*, Tokyo, 14 Oktober-8 November.

Yusritawati, (2009). *Pengaruh Penerapan Model Pembelajaran Kooperatif Teknik Two Stay Two Stray terhadap Kemampuan Representasi Matematika Siswa SMP*. (Skripsi Jurusan Pendidikan Matematika FKIP UNPAS: tidak diterbitkan) diunduh dari http://furahasekai.wordpress.com /2011/09/07/pembelajarankooperatif-tipe-two-stay-two-stray/ tanggal 31 Agustus 2017.

Cooperative Learning Based on Ethnic Collaboration on General Biology, Subject Cellonfor the First Semester of FKIP UNIPA Manokwari

Jan H.Nunaki, Aksamina M. Yohanita, and Silvia H. K. Sirait
Departement of Biology Education, FKIP UNIPA Manokwari
yannunaki@gmail.com

Abstract

Papua Island has 235 ethnic groups or 42.7% of the total ethnic groups documented in Indonesia. In addition, Papua has 240 languages spoken all over the Island. In UNIPA, the ratio between Papuan students and non-Papuan students is 40% and 60%. The diversity in ethnicity and language in Papua is a treasure that need to be taken care well, especially the local wisdoms that can be adopted to improve the quality of teaching. During the regular class, it could be seen that the Papuan students seemed to group themselves apart from the non-Papuan students. This made the class see appeared to be uncomtable as the Papuan students tended to be less motivated. Therefore, the Lesson Study was designed to impove the learning quality especially for those Papuan students in General Biology course. Learning activities are designed and implemented using a cooperative model. The students were blended in groups; every group had Papuan and non-Papuan students members. The teacher taught the history of cell invention and types of cells. Pictures were included in the class to help the students visualized the material being taught. Studentactivity in learning is known by counting the number of students from Papua who do the activity of asking and answering questions.Results of dataanalysis showed that there are improvement in Papuan students' activeness; some of them can actively asked question and helped explaining the subjects to their classmates.

***Key words**: Papuan, Cooperative, Lesson study*

A. Introduction

Education is a process of changing the behavior of learners into adult human beings who are able to live independently and as members of society in the social environment. Through education the learners can develop capabilities optimally and can be realized function itself in accordance with personal needs and society. For that, the most efficient step in improving the nature and morality of a learner is through improving education.

Learning is a interaction process of learners with lecturers and learning resources in a learning environment. The learning process needs to be planned, implemented, assessed and supervised to be implemented effectively and efficiently (Rusman, 2014: 3). In the learning process at college must be interactive, inspirational, fun, challenging and motivate learners to participate actively, and provide enough space for initiative, creativity and independence according to talent, interest and physical development and psychological learners.

The geographical condition of Papua is very influential to the character of the people of Papua, where the customary territory of Papua is divided into 7 custom areas: Mamta, saireri, Doberai, Bomberai, Ah-anim, Me-pago and La-pago, where the ethnic 235 or 42.7 % of the total ethnicity in Indonesia and has a language of 240 languages (Ap and Prioyulianto, 1995).

Since the University of Papua was established on 2 November 2000 as the 2nd State University in Papua land with the purpose of the existence of this campus is to educate the life of the nation, especially the field of education prioritized to the original Papua, so in the percentage of student acceptance quota is based on percentage for people Papua 60% and non Papua 40%. This policy until now is still enacted to provide greater opportunities for people of Papua to study in college. However, in reality the level of drop out of each evaluation of student success percentage of the most failure is the people of Papua.

Failure to succeed in lectures due to cultural factors and education systems that occur in Papua today. According to Mentansan (2014) this failure is caused by the cultural values of people of Papua who are oriented to the future with impetuous and impetuous future impetus and planning. Instead there is a culture oriented that rely on others is not a good thing. The failure of the education system that occurred in Papua by building a poor foundation of basic and secondary education where the research results of UNICEF in 2015 showed that teachers absent or teachers who did not attend school at school hours amounted to 37.1%.

Cooperative learning model is a model of learning that can be used in Papua. This is because Papuan students will feel greatly appreciated when given the opportunity to express their opinions on what is known according to the question. This learning can grow the self-confidence of every person Papua. With this learning system, Papua people who cannot talk the concept alone, must be supported by the pictures of the material taught as a supporting medium because Papua students cannot think that the abstract must be concrete.

The purpose of this learning is the collaborative learning of ethnic Papua which is divided into groups with non-Papua students so that heterogeneous ethnic. This is because the student community of Papua always make its own groups and do not like to adapt to other ethnic in academic activity and social campus. Only a few people who have socialized with other non-Papua students. Thus this learning tends to shift from individual and competitive to collaborative learning.

B. Method

The lesson study activity in the open class was held on August 28, 2017 in the Hall of FMIPA University of Papua in General Biology subject of cell material (History of cell and cell type). Participants of the lecture are students of Mathematics Education and Physics Education Department with 78 students. While the number of observer 10 people and 1 resource person.

Learning method used in this learning is collaborative learning, where there are 7 students from high school outside of Papua serve as group center and

heterogeneous student of Papua and Non Papua are distributed to the group. With cooperative learning model.

Indicator of success of collaborative learning is the level of activity by students in Papua in asking and answering questions discussed using the snow ball model.

C. Findings and Discussion

Learning activities undertaken in the majors of mathematics education and physics education. Lesson learning is the first lecture for new students because it is the beginning of the 2017/2018 academic year semester. The condition of the new students to adapt the learning system in the college is very influential to the model lecturer in applying the knowledge. For that model lecturers do some pattern approach so that the learning process can be successful.

Students

In accordance with the objectives of this study, the results of lesson study in the open class showed that student of Papua have been distributed in seven (7) groups. The number of this group with regard to the origin majors of students, majoring in mathematics education and physics education, also based on the tribe of students, students of Papua and Non Papua. The process of group division takes a lot of time ± 15 minutes. This is because changing the group of togetherness that is outside the room and the nature of the tribe is something difficult, because this is a process of adaptation that will be done impromptu in the classroom and will affect the results of group work is not the maximum that will dominate the idea of individuals.

The result of cooperative learning based on ethnic collaboration appears in the increasing quality of learning, especially for students with indicators who ask by answering. During the learning process there are questions that come from model lecturers and from the students themselves who are returned to the group discussed and answered. There are 8 questions discussed and 13 answers that learners. From the results of questions and answers it can be seen that the number of Papua students who make questions by 37.5% and who answered the question of 38.5%. The quality of questions and answers is not the measure used to accommodate the number of questions and answers, but the size is the activity of giving questions and answers.

Model Lecturer

Model lecturers are facilitators and provocateurs in managing the learning process. For an active learning process should look at the social, cultural and personality background of the student. Especially for the learning done in the land of Papua pattern of regional and humorous approach must be done by an educator then there will be progress of success.

Open class results show that many opportunities are given by lecturer's model to learners but not used well to respond to these opportunities. This is because learners are not familiar with the cooperative pattern that is done even though the material that has been provided with the support of the drawings. Model lecturers recognize that the background of Papua's special learners from a variety of lowland to highlands, from mountains to valleys, from islands to coastal areas with high absenteeism (teacher

absenteeism) is 37.1% research UNICEF 2015 then that raw material Papua that must be accepted.

As a college educator, model lecturers must be ready to accept prospective students with poor quality, because the task of educators is to make who cannot be able, from who do not know to be tau. For that end any lecture activities should always give preliminary tasks and material information to be taught at the next meeting.

Reflection

After the open class activities done reflection as part of the evaluation of learning activities that have been done both to students and lecturers model to improve the following learning process:

- The division of the group still does not function effectively better peer teaching.
- Students do not seem to focus on following lectures.
- Heterogeneous group division is quite effective.
- Questions like what I am with you like animals can evoke their motivations in answering.
- Lecturers appreciate students' opinions.
- The model lecturer appoints abruptly to the student to answer the question so that the sleepy student can focus.
- Chapter design and plan design should be prepared by lecturer model before teaching.

D. Conclusions and Suggestions

Based on lesson study activities for open class there are some things that can be concluded:

- Open class activities should be prepared completeness starting from the number of participants, Chapter design and plan design and the student plan so efficient time in learning.
- Group sharing should be peer teaching.
- The teaching process should be interspersed with humor.
- Many model lecturers provide opportunities for learners to ask questions and answer especially the children of Papua.

There are several suggestions from this learning activity:

- Lesson study activities should be tailored to academic activities at each university.
- There should be an assessment sheet of the learner against the model lecturer.

References

Rusman (2014). Model-model pembelajaran pengembembangan profesi guru. Jakarta: PT. Radja Grafindo Persada.

Ap Lamech dan Prioyulianto H. (1995). *Kearifan Tradisional Masyarakat Pedesaan Daerah Irian Jaya di Kabupaten Jayapura dan Biak Numfor*.Depdikbud, Irian Jaya.

Mentansan G, (2014). Etnografi Papua. Yogyakarta : Kepel Press

.

Developing Vector Space Construction Capability through Analogical, Abstraction and Generalization Process in Lesson Study Activity Based on Papuan Wisdom, Satu Tungku Tiga Batu

Jeinne Mumu, Purwati, Nurhasanah, andBenidiktus Tanujaya
Mathematics Education, University of PapuaManokwari, Indonesia
j.mumu@unipa.ac.id

Abstract

The purposes of this study was that students were able to do abstraction, analogy and generalization of mathematics in order to construct, develop and apply mathematic concepts from the simplest to the complex ones. While in the previous class the teacher started the class by giving the definiton of Vector Space, this class was designed through Lesson Study activity in which students were encouraged to construct the definition of Vector Space. This study occupied Group Investigation (GI) model. This model facilitated students from diversed background in Papua to collaborate, as principled in local wisdom ' Satu Tungku Tiga Batu'. The subjects of this study were 24 students. However, the focus of this study was 5 students with low academic achievement as well as low confidence. The data were collected using observation sheet that focused on students' discussion and their ability to construct concepts. This LS activities were done in two cycles. The second cycle was designed according to the suggestion given in the cycle 1. Regradless, this study focused on the cycle 1.According to the observation during the class and the analysis during the reflection session, it could be concluded that the learning process run well that 3 of the 5 students had become more active. From Smiley face instruments used, 62.5% students were very happy during the activity, and 77% students looked forward to having the class with GI learning model. The students also hoped the teacher could explain in more slowly and use multimedia such as projector when presenting investigation result.

Key words: *Abstraction, Analogy, and Generalization; Group Investigation; Satu Tungku Tiga Batu*

A. Introduction

The Linear Algebra is a Mathematics group given in the third semester of Mathematics Education Program of FKIP UNIPA. It is a continuation course of the Linear Elementary Algebra course and a compulsory subject. The essence to be formed in this course is for students to have mathematical abstraction ability, mathematical analogy and adequate mathematical generalization so that they are able to construct, develop and apply a complex mathematical concept from a simpler concept of Mathematics. This course is an initial course that provides learning experience in order to improve abstraction ability, analogy and generalization of students. This ability is absolutely owned by students so that they are able to study the next Mathematics course.According to Winkel (2012),

Such abilities will be established through conceptual learning. Learning concepts in this context is to use past knowledge to build / construct new knowledge.

Vector Space is the beginning material in this course. The axiom of the vector space can be analogous to the properties present in the vectors in R ^ 2 and R ^ 3, (Anton and Rores, 2013). Thus, the vector concepts in R ^ 2 and R ^ 3 that have been studied in Linear Elementary Algebra courses are seen as concrete concepts that will help students construct the new abstract concept of Vector Space.

As a lecturer in charge of this course since 2012, Vector Space learning follows the stages of presenting definitions that include the axioms of the Vector Space, giving examples and not examples, writing theorems, discussing theorem proofs and ending with practice questions. While student activities include listening, recording material and doing the exercise questions independently. From the experience of teaching this material, then there are some problems that arise in learning Vector Space. These problems include: (1). the percentage of graduation for this course from year to year never exceeds 60%, (2) rigid classroom atmosphere because students are very passive (3) a very diverse class of cognitive ability factors. Gap between high cognitive students is very distant with low cognitive students, (4) there are groups of students who are difficult to interact with friends because of cultural influences and this group is usually a native Papuan student (5) weak students in abstracting, analyzing and generalizing the concept of Vector Space from the identification of vector properties in R^2 and R^3. Besides the problem of abstract material characteristics make lecturers very difficult to find the right learning model. As a result, teacher centered learning cannot be avoided.

Based on these problems researchers want to develop the ability of vector space construction through the process of abstraction, analogies and generalizations. Students' activities in constructing Vector Space are expected to enable students to learn, make learning fun for all students with different diversity and change the learning pattern from teacher centered learning to student centered learning.

Lesson Study based on the value of Papuan wisdom One Three Stone Furnace provides solutions to problems related to learning Vector Space. According to Lewis (2002) the ideas contained in the lesson study are actually short and simple, i.e. if a teacher wants to improve learning, one of the most obvious means is to collaborate with other teachers to design, observe and reflect on the learning. Lesson study in LPTK is a model of professional development of lecturers through collaborative and continuous learning in analyzing learning problems both from material aspect and method and then looking for solutions and designing innovative student-centered learning (Subadi, 2010).

Furthermore, the value of the wisdom of Papua SatuTungkuTigaBatu is based on the philosophy of the Fak-fak people who view the three religions, Islam, Christian and Catholic as family religions that support each other, work together, give each other assistance in achieving the goal (Adam, 2011). This philosophy is in line with the Fuji mountain philosophy, which helps each other to reach the summit of the mountain

together. This value is also compatible with the cooperative learning model, where students are grouped to help each other in learning, encourage and support each other to achieve academic success (Savin, 2010).

In learning mathematics, cooperative learning model is very effective. Tarmizi and Bayata (2012) found that collaborative problem-based learning in a group environment has a significant influence on student performance. This finding reinforces the results of the study Kocak et al (2009) observed that students who studied mathematics instead of memorizing the relevant information and proofs. Adapting this method of learning at the university level but also in a subject that students always findchallenging and a subtopic that students always struggle (Sofroniou and Poutos, 2016).

B. Method

The research was conducted on Mathematics Education Study Program of FKIP UNIPA in the odd semester of academic year 2017/2018. The study was conducted on Linear Algebra course with Vector Space material. This course is a compulsory subject in the third semester. The study was designed collaboratively and collaboratively in a Lesson Study for Learning Community workshop by the research team. The team of researchers consisting of 4 people is a group work team Mathematics courses. Lecturer model that will carry out open class is lecturer of Linear Algebra subjects. In addition to the research team, the design and implementation of the research also collaborated with the faculty team of FKIP UNIPA involved as observer.

The number of cycles that have been implemented in this study as much as 2 cycles. Each cycle consists of 3 (three) stages of Lesson Study according to Saito, et.al. (2005), covering three steps, namely: 1) Planning (Plan); 2) Implementation (Do); 3) Reflection (See).

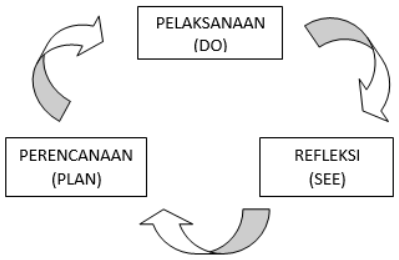


Figure 1. Lesson Study Cycle

The first and second cycles include the stages: Planning (Plan), Implementation (Do) and Reflection (See).The results of the analysis on the first cycle Reflection (See) activity become the basis for planning activities and implementation in the second cycle.

1) Planning (Plan)

Activities at the planning stage include academic excavation, learning planning and preparation of tool

2) Implementation (Do)

Activities at the implementation stage include the implementation of learning and observation by colleagues

3) Reflection (See)

Activities at this stage in the form of discussion between observers and lecturers model related activities of learners during the process of learning.

The first cycle is conducted on Regular S1 students of Mathematics Education Program which program Linear Algebra course, with 24 students. The second cycle is done on the undergraduate students repeat the courses of Algebra Linear Mathematics Education Study Program, with the number of students 16 people.

Data collection was done by observation, documentation, questionnaire and assessment of Student Working Sheet (LKM). Observation and documentation techniques to find out the learning activities of each student in learning. According to Syamsuri andIbrohim (2011), such activities may include: 1) student interaction with other students in, either in groups or groups, the effectiveness of group work, is there any mutual help activities; 2) student interaction with lecturer; 3) student interaction with instructional media. Questionnaire in the form of smiley face to know the feelings of students while following the lesson. The questionnaire is also to find out what the student wants in the next lesson. Assessment of MFIs to determine students' ability to construct Vector Space.

C. Findings and Discussion

Stages of planning (plan)

The planning stage is done collaboratively by the lesson study team which is the research team. This team consists of lecturer of Mathematics Education Department. Targets to be achieved at this stage is the making chapter design, lesson design and learning scenarios. At the first meeting, the team identified the subject matter of the Vector Space. The identification result concerns 2 (two) aspects:

1) Aspects of concept characteristics; the concept of Vector Space is very abstract and is at a difficult level (Anton and Rores, 2013). This concept is the starting point for learning the next Mathematical concepts,

2) Aspects of student characteristics; the students' ability is very diverse, there are 6 students with GPA> 3.5 and there are 5 (five) students with GPA <2.00, students with low cognitive are more like to be alone. From the discussion also obtained information if during this Vector Space learning, lecturers always use lecture and assignment methods. The second meeting discussed the purpose of Vector Space learning and the essential concepts in the Vector Room. This discussion produces a chapter of the Space Vector design.

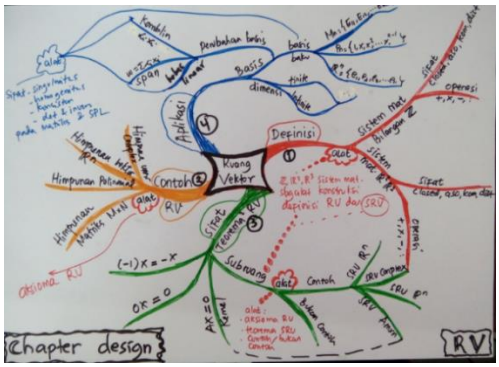


Figure 2. Chapter Design of Vector Space

From the chapter design, it appears that the first meeting for the topic of the Vector Space is to discuss the definition of the Vector Space. The Definition of the Vector Space containing the axioms of the Vector Space can be constructed from the properties of vectors in R ^ 2 and R ^ 3 and its generalizations in R ^ n. Z integer systems that have been known since elementary school bench can also be used to help students construct Vector Space. The team then agreed and drafted the first meeting design lesson. Lesson design is designed by considering the characteristics of student diversity. Cooperative learning model with Group Investigation GI is used in first meeting learning. The first lesson design is titled "Memory Box".

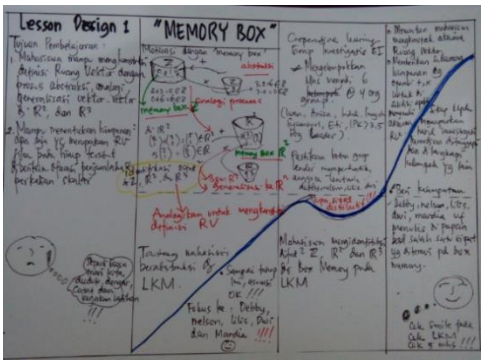


Figure 3. Lesson Design "Memory Box"

Next, the team prepares the student worksheet, the observation sheet and the smiley face questionnaire. At the end of the planning stage, the lesson study team invited non-researcher observer who is a lecturer staff at FKIP UNIPA. The meeting was held so that the team can socialize the lesson design that will be the reference in the open class implementation of the Do stage, including providing information of some students who become the focus of observation.

Implementation stage (do)

Open class at the stage of Do, held in Mat Room 5 Mathematics Building FKIP UNIPA on Monday, August 28, 2017. Observer who attended amounted to 9 people including Prof. HerawatiSusilo. There were 24 students, consisting of 8 male students and 16 female students. Learning activities include 3 (three) stages, namely preliminary

activities, core activities and closing activities. In the lecturer's preliminary activities provide illustrations related to learning objectives and the importance of studying Vector Space as well as an overview of Vector Space applications. Given the picture also through a simple example of what is meant abstraction, analogies and generalizations in Mathematics. Lecturers then lead students to sit in groups according to groups / groups that have been prepared. Groups / Groups formed amounted to 6 groups. Each group has 4 members and is led by a leader who is a student with a GPA of> 3.5.

Furthermore, the lecturers start with question and answer to explore students' memories related to integer systems Z, R ^ 2 and R ^ 3. The next stage, the lecturer distributes the student worksheet to be done by students in the group. The lecturer reminded the philosophy of One Stone Triple Stone as a group philosophy. This stage has entered the core stage to construct the Vector Space. At this stage, the lecturer guides the group in completing the student worksheet. After the appointed time, the lecturer invites each group to write down the results of their investigations on the board. The results were responded by another group, looking for similarities and differences of investigation results. Lecturers also provide opportunities for students who have a GPA> 2.00 to dare to advance write down the results of his group's investigation. In closing activities, the lecturer guides the students to construct the definition of the Vector Room by reconstructing the results of the appropriate investigation. Furthermore, ending the meeting, Lecturer distributed the instrument smiley face, collect the student worksheet and smiley face and give the task independently.

Reflection Stage(see)

Stages of reflection (see) in this study directly done after the open class ended. The form of reflection activity is a discussion that is guided by a moderator. Beginning by giving the opportunity to the model lecturer to express his feelings during the open class. For the model lecturer, the open class is now the first experience for him to teach not only with lecture methods but to give students opportunities to study in groups. Feeling nervous at the beginning of learning activities because observed by many lecturers as observers. Furthermore each observer put forward their observations. There are 7 (seven) items of observation refer to the observation sheet held by the observer. Next will be discussed the essence of the observation.

(1) Have all students really learned about the topic today? How do they learn?

Some students look to have really learned. This can be seen from their liveliness in groups They have made any notes and listened without always looking forward. Indeed, at first some of the students looked confused but long ago they shared a smile with the group members as a sign they understood the results of their group discussion.

(2) Which students are inactive?

In each group there are always students who are silent, not involved in discussions. Yuni, Debby and Dwi were the three students who were observed to be very passive in the group, when their observers approached as if frightened.

(3) Why is the student unable to learn well?

Students who cannot learn well because of their lack of understanding of the prerequisite material. As a result, these students are less brave and even feel inferior to communicate with friends of the group.

(4) How does the faculty effort encourage students Who are not active? What is student response?

Lecturers' efforts encourage inactive students by approaching groups and guiding them individually. The results appear to a student who becomes the focus of observation, Nelson. He who initially did not want to, finally came forward to present the results of his investigation.

(5) Is the learning objective achieved? Is the group working effectively?

Learning objectives are achieved. Students are able to work on student worksheets and able to construct Vector Space. The results showed that, group work more effectively to activate and achieve learning objectives.

(6) What can be imitated from the model lecturer?

Some things that can be imitated from model lecturers are model lecturers able to lead the students understanding of something simple, able to facilitate group discussion, good whiteboard management, regularity in material delivery and excellent mastery of material, able to understand students and interact with students.

(7) What valuable lessons can be learned from this observation?

The ability of lecturers in managing the class and forming student groups is a positive thing from the model lecturers. The formation of student groups has been prepared by model lecturers by accommodating the diversity of students. Model lecturers are also able to provide students with weak cognitive opportunities to dare to express their opinions.

Based on the results of Smiley Face instrument, there are 62.5% of students who feel very happy with learning activities in groups. Furthermore, it is known that there are 77% of students who hope the next learning is done by cooperative learning. Nevertheless, there were 3 students who considered group learning unsuitable because they could not assess individual ability so they preferred if the lecture method used by the model lecturer.

D. Conclusion

Implementation Lesson study based on Papuan wisdom SatuTungkuTigaBatu, produce the following conclusions:

1. Increase learning activities of students. Students are more active in learning.
2. Learning is more fun.
3. Improving students' ability in constructing Vector Space through abstraction process, analogies, and generalizations.

References

Adam, I., (2011). *Satutungkutigabatu*: *Hubungantiga agama di telukpattipiFakfak.* Etnohistory.org

Anton, H., and Rorres, C., (2013). *Elementary linear algebra, Application version*. John Wiley and Sons, New York.

Kocak, Z. F., Bosan R, and Isik, O. (2009). The important of group work in mathematics. *ProcediaSos. Behav. Sci.* pp. 2363-2365.

Lewis, C. C., (2002), Lesson Study, A Handbook for Teacher-Led Improvement of Instruction, Philadelphia: Research for Better Schools.

Saito, E., Imansyah, H., and Ibrohim. (2005). Penerapanstudipembelajaran di Indonesia: Studikasusdari IMSTEP. *Jurnalpendidikan "MimbarPendidikan"* No. 3 Thn XXIV, pp. 24-32.

Slavin, R. E., (2010). Cooperative learning. Nusa Media, Bandung.

Sofroniou, A., and Poutos, K. (2016). Investigating the effectiveness of group work in mathematics, *Educ. Sci.* 6(30).

Syamsuri, I. and Ibrohim. (2011). *Lesson study* (*study pembelajaran*). UM Press, Malang.

Tarmizi, R. A. and Bayata, S., (2012). Collaborative problem based learning in mathematics, A cognitive load perspective. *ProcediaSos. Behav. Sci.* pp. 344-350.

Winkel, W. S., (2012). *PsikologiPengajaran*, Media Abadi, Surakarta.

Teaching Student Critical Thinking Skills and Conceptual Problem Based Learning Model

I Wayan Karmana dan Taufik Samsuri
Program StudiPendidikanBiologi, FPMIPA IKIP Mataram
iwankarmanaweda@gmail.com

Abstract

One of the essential skills that learners must have in 21st century is critical thinking skills. High-level thinking skills, among them, critical thinking should be the focus of learning development in Indonesia, because it is believed to be potential to make someone have life skills, creations and innovationsto solve various complex life problems in the 21st century. The objective of learning in Indonesia also emphasizes students to analyze factual, conceptual, and procedural knowledge, where the analytical process is central to critical thinking skills. Teaching critical thinking ability requires a set of specific learning models that facilitate critical thinking skills. Conceptual Problem Based Learning Model, which is attributed by activities of prior knowledge, advance organizer, organize, investigate, analyze, and evaluate. However, prior knowledge determines the possibilities of new learning, and what individuals already know affects much of what they will learn, and the advance organizer is a teaching tool that experts recommend to link learningnew materials with initial knowledge, plays an important role in learning process to facilitate students' critical thinking skills.

Keywords: *Conceptual Problem Based Learning Model, Critical Thinking Skill.*

A. Introduction

Critical thinking ability is one component of high-level thinking skills, where high-order thinking skills can and should be taught (Woolfolk, 2009). Educators believe that developing high-level thinking skills including critical thinking in learners is of paramount importance (Albrecht and Sack, 2000), but very few of them have an idea of how to teach it (Prayogi, 2013; Paul et al. ., 1989; Duron et al., 2006). Destalia et al (2014) also stated that the common problem facing biology teachers in schools is the lack of ability to develop models or learning methods that can improve thinking processes, including critical thinking.

Thompson (2011) argues that in learning critical thinking skills requires a holistic approach and should involve a set of objective and goal-oriented instructional models that enable learners to manipulate their cognitive skills, Hallinger and Bridges (2007) to maximize students' memory of the material they teach, it is important for the teacher to create the right conditions such as activating the student's initial knowledge, information about the benefits of knowledge learned in the context of life, and the activities of collaborating information. In this context the PBM model is modified into a set of Conceptual Problem Based Learning (CPBL) models with the steps of Prior knowledge, Advance organizer, Organize, Investigate, Analyze, and Evaluate. The CPBL model specifically developed aims to train students' critical thinking skills of high school.

B. Body Text

Critical Thinking

Fisher (2003) explains that the active process can be contrasted with an example in which a person accepts ideas and information from others, and does not think deeply that does not involve an active process in mind that might be thought of as passive thinking. In addition, critical thinking requires persistent or continuous processes as well as meticulous. Fisher himself describes critical thinking as a process of skillful and active interpretation and evaluation of observation and communication, information and argumentation (Fisher and Scriven in Fisher, 2003).

According to Facione (2011) critical thinking is basically a detailed description of some characteristics that include the process of interpretation, analysis, evaluation, inference, explanation and self-regulation. One of the most notable contributors in the tradition of critical thinking is Robert Ennis. Ennis (1996) gives the same definition as Hassard (2005) about the concept of critical thinking, which is critical thinking as a reasonable and reflective thinking that focuses on deciding what to believe or do.

Paul explains critical thinking in another definition, the way of thinking about what matter, substance or problem, in which a thinker enhances the quality of his thinking by handling skillfully the structures inherent in thought and applying intellectual standards to him (Paul, Fisher and Nosich in Fisher, 2003). Paul also describes critical thinking as an art in analyzing and evaluating with a view to improving the ability itself (Paul and Elder, 2006). Critical thinking is often called independent thinking, thinking of considering, or thinking of evaluating (Reid, 2006).

Basically all things that are fixed on a thinking then referred to as a process, in this case relation to critical thinking, Ibrahim in Dwijananti and Yuliyanti (2010) explains critical thinking is a mental process that organizes well in making decisions solving problem solving by analyzing and interpret data in scientific inquiry activities.

Almost everyone who wrestles in the field of critical thinking has produced a list of the thinking skills they perceive as the foundation for critical thinking. Lipman in Jeevanantham (2005) argues that critical thinking is a responsible, responsible skill that facilitates good decisions because (a) depends on criteria, (b) self-correction, (c) is sensitive to context. Added by Rudinow and Barry (2008) that critical thinking is like a set of conceptual tools by connecting intellectual abilities and strategies that are useful for making informed decisions about what to do or believe.

Glaser's critical thinking skills in Fisher (2003) are the ability to: (a) identify problems; (b) find ways to deal with those problems; (c) collect and compile necessary information; (d) recognize unspecified assumptions and values; (e) understand and use appropriate, clear, and distinct language; (f) analyzing data; (g) assessing facts and evaluating statements; (h) recognizing the logical relationship

between problems; (i) draw the necessary conclusions and similarities; (j) examine the similarities and conclusions one takes; (k) rearrange one's belief patterns based on a wider experience, and (l) make appropriate judgments about certain things and qualities in everyday life.

Fisher (2003) himself describes several important skills in critical thinking: (a) identifying elements in thought, especially for reasons and conclusions; (b) identify and evaluate assumptions; (c) clarifying and interpreting statements and ideas; (d) assessing exeptability, in particular credibility, claims; (e) evaluating arguments of various kinds; (f) analyze, evaluate, and produce explanations; (g) analyze, evaluate and make decisions; (h) drawing inferences, and; (i) produce arguments. Another aspect of the concept of critical thinking is decision making, as Sternberg (1986) says, critical thinking consists of the mental processes, strategies, and representations that people use to solve problems, make decisions, and learn new concepts.

Some experts argue that other elements of critical thinking focus not only on aspects of ability and or skill, but also other elements that are at the core of the concept of critical thinking (Kiltz, 2009). Watson and Glaser in Kiltz (2009) argue that critical thinking is a combination of skills, knowledge and attitude. Watson and Glaser further explain that critical thinking consists of an understanding of making conclusions and generalizations, as well as the skills to be able to carefully consider the logic and accuracy of the evidence. Facione, et al.; Facione and Sanchez in Kiltz (2009) show how attitudes play an important role in critical thinking. This attitude is important because it affects a person's ability to analyze questions or underlie assumptions in situations or circumstances. Furthermore, McPeck in Kiltz (2009) believes that critical thinking involves aspects of character (disposition) and skills. Therefore, teaching a person to become a critical thinker requires reasoning both in the cognitive and affective domains.

To be a successful critical thinker, students must be proficient in certain cognitive skills, for example; skilled in interpretation, analysis, evaluation, concluding, explaining, self-regulation, and developing the character (disposition) to critical thinking, for example; curiosity, open mindedness, self-conviction, systematicity, analyticity, truth-seeking, judiciousness (Facione, 2006). Standardized tests for measuring the character (disposition) of a critical thinking person, the California Critical Thinking Disposition Inventory (CCTDI) use indicators adopted from Facione, ie truth-seeking, open-mindedness, analyticity, systematicity, self-confidence, inquisitiveness, and maturity (Ricketts and Rudd, 2004).

Instructional Strategy To Integrating Critical Thinking Skills

Conceptual understanding is the goal of all learning because the thinking ability requires every individual to understand the concept in advance to be able to train and improve his thinking skills. Concepts are important parts of thinking construction. In line with that opinion, Starnberg (2014) states that conceptual understanding is a key concept in learning, the core objective of learning is to

encourage students to understand the core concepts of the material learned rather than recall the concepts in teaching materials. In addition, the concept helps students to be sensitive to natural phenomena encountered (Chi and Brem, 2009). Concepts can also help the process of remembering and making processes in learning more efficient (Ibrahim, 2012).

Abstract concepts that are difficult to comprehend are sometimes structured in the minds of students in different ways based on what their goals are. Many previous studies have shown that students develop their beliefs and ideas in the exact concepts and phenomena encountered into preliminary knowledge and bring that knowledge into the classroom (Amir and Tamir in Baryak, 2013). Arends (2012) states that in the face of a confusing problem, individuals will seek to connect new knowledge with prior experience and construct new meanings. Even more clearly said much at least the initial knowledge that students have determines effectiveness in designing problem-solving strategies (Eggen and Kauchak, 2012). To teach students an understanding of concepts, in the first syntax, students are given or facilitated in defining and classifying terms in important concepts in the delivered teaching material. The description shows that prior knowledge is an important component and must be considered in the learning process. Ausubel in Woolfolk (2009), reinforces that the most important factor affecting meaningful learning is the level of initial cognitive structure students have had during the learning and can be extracted using prior knowledge.

In addition to prior knowledge, in the learning process also needed advance organizer, which emphasizes the understanding and mastery of the concepts of the material or topics learned by learners (Ausubel in Woolfolk, 2009). This advance organizer is a teaching tool recommended by Ausubel to link new learning materials with preliminary knowledge (Nur, 2011). The examples to illustrate key features or attributions and additional examples of important concepts contained in the material to be learned are also integrated into the advanced organizers syntax in the developed learning model. Hypothetical framework (step) of CPBL model is shown in Table 1.

Table 1. Syntax of CPBL Model

Phase	Lecturer's Activities
Phase 1 ***Prior knowledge***	a. Lecturers explain learning objectives, required logistics, and motivate students to engage in problem-solving activities and explore students' initial knowledge b. Define important concepts related to learning materials. c. Classify the terms contained in the definition of the concept of learning materials.
Phase2 ***AdvanceOrganizer***	a. Provide a pilot to illustrate characteristics or key attributes in the concept of teaching materials. b. Give more pilots and ask students to categorize the concepts, explain the categorization, or ask students to

	genarilate the sample concepts that the student proposes. c. The lecturers do the concept consolidation through step advance organizer related problem that is comparative organizer, activate the existing schemes or reminds about what have been known that may not realize as matter relevant to problem. d. Expository organizer is to provide new knowledge on the topic that will be needed to understand the information that will come. (problemto be solved).
Phase3 ***Organize***	a. The teacher reviews the concept-related concepts with questions to the students. b. Ask students to formulate a plan to solve the problem to be solved.
Phase4 ***Investigate***	a. Teachers help students in groups to solve problems that will be investigated according to the planning that tellah compiled. b. Gathering the appropriate information c. Carry out experiments
Phase5 ***Analyze***	a. Analyze the results of investigations that have been done. b. Seek explanations and solutions according to the plan that has been set
Phase6 ***Evaluate***	a. Evaluate the learning process b. Ask students to map the concept of learned material.

Partnership for 21st century skill (2011) includes critical thinking skills as one of the essential skills to be taught to students. The development of CPBL model aims to trace the critical thinking skills of high school students. Critical thinking skills are the students' awareness of what is thought, believed, operated, and conveys rationally (Ennis, 2011) demonstrated through observing, asking, and finding solutions to problems faced (Facione, 2011).

Paul and Elder (2008) further describe that critical thinking becomes important for learning because every individual thinks and it is a natural human sifal, but often biased and distorted in a person's thinking process and critical thinking is needed to overcome it.

C. Conclusion

Critical thinking has long been an educational goal, critical thinking can encourage students to make good planning, improve student performance, and potentially prepare successful students in real life. Critical thinking is an art in analyzing and evaluating for the purpose of improving one's thinking quality. The Conceptual Problem Based Learning model attributed to the Prior Knowledge,

Advance Organizer, Organize, Investigate, Analyze, and Evaluate steps can serve as a bridge to teach critical thinking skills to high school students in order to actively contribute to the achievement of national education objectives.

Refrences

Albrecht, W. S., dan Sack, R. L. 2000. *Accounting education: Charting the course through a perilous future*. Accounting Education Series No. 16. Sarasota, FL: American Accounting Association.

Duron, H., Limbach B., danWough W. 2006. *Critical Thinking Framework to Any Dicipline*. International Journal of Teaching and Learning in Higher education. Volume 17(2): 160-166.

Eggen, P. &Kauchak, D. 2012. *Strategidan Model Pembelajaran.* Indeks. Jakarta.

Ennis. R.H. 2011. The Nature of Critical Thinking:An Outline of Critical Thinking Dispositions and Abilities.*Sixth International Conference on Thinking*.MIT, Cambridge, MA, May 2011. Hal. 1-8.

Facione, P. 2011. *Critical Thinking. What It Is and Why Its Counts*. Measured Reason and The California Academic Press. London.

Fisher, A. 2003. *Critical Thinking An Introduction*. Cambridge University Press.

Hallinger, P dan Bridges, E.M. 2007. *A Problem-based Approach for Management Education*. Springer. Dordrecht.

Hassard, Jack. 2005. *The Art Teaching Science*. New York: Oxford University Press.

Ibrahim, M. 2012. *Konsep, Miskonsepsidan Cara Pembelajarannya.* Unesa University Press. Surabaya.

Jeevanantham, L.S. 2005. "Why Teach Critical Thinking*". Africa Education Review*. 2 (1): 118-129.

Kiltz, Linda. 2009. "Developing Critical Thinking Skills in Homeland Security and Emergency Management Courses." *Journal of Homeland Security and Emergency Management.*Vol 1. Issue 1.

Nur, M. 2011. *Strategi-strategiBelajar.*Pusat Sains dan Matematika Sekolah UNESA. Surabaya.

Partnership for 21st Century Skills. (2011). Framework for 21st Century Learning, www.p21.org.

Paul, R. dan Elder, L. 2008. *Critical Thinking (Concepts and Tools)*. The Foundation for Critical Thinking.

Paul, R., Bingker, A.J.A., Martin, D., Vetrano, C., Kreklau, H. 1989. *Critical Thingking Handbook.* Central for Critical Thingking and Moral Critique. Rohnert Park.

Prayogi, S. 2013. *Implementasi Model Inquiry untuk Mengembangkan Kemampuan Berpikir Kritis Mahasiswa Pendidikan Fisika.*Laporan Hasil Penelitian. LPPM IKIP Mataram.

Reid, Jerry C. 2006. *Mengajar Anak Berpikir Kreatif, Mandiri, Mental danAnalitis*. Jakarta: Prestasi Pustakaraya.

Ricketts, John dan Rudd, Rick. 2004. "The Relationship between Critical Thinking Dispositions and Critical Thinking Skills of Selected Youth Leaders in the National FFA Organization".*Journal of Southern Agricultural Education Research*. 54 (1): -.

Sternberg, Robert. 1986. *Critical thinking: its nature, measurement, and improvement.* http://eric.ed.gov/PDFS/ED272882.pdf.

Woolfolk, A. 2009. *Educational Psychology Bagian Kedua Edisi Kesepuluh*. PustakaPelajar. Yogyakarta.

Session Study Model's (Study of Lesson Study in Guidance and Counseling)

Ratih Christiana
FKIP UNIVERSITAS PGRI MADIUN
Madiun, Indonesia,
ratihchristiana@yahoo.co.id

Abstract

This study aims to reveal how the implementation plan of Session Study in counseling practice class at PGRI University of Madiun in semester VI student. This session study has not been applied before in the counseling practice class, by adopting the existing process in Lesson Study. For the reason that, guidance and counseling in schools are in fact no classroom teaching, like other subjects. The practice of counseling in schools is carried out by counseling sessions, even several times face-to-face to make the counselee self-made. There are 6 steps or stages of activities in which there are 4 session findings in session study, 1. Pre Counseling, 2. Counseling Process, 3. Post Counseling and 4. Counseling Contract.

Key Words: Session Study Model's, Lesson Study, Guidance and Counseling

A. Introduction

Improving the quality and quality of good education is expected to give birth to graduates who have high competitiveness, to deal with the challenges and competition in the world of work. Therefore, improvements in the field of education should continue to be implemented in order to achieve the quality and quality of education in accordance with expectations and ideals together.

Improvement efforts in the field of education is the responsibility of all parties, one of which is the educator. As explained by Oemar Hamalik (1991: 44) who said that educators are responsible for carrying out educational activities in schools in the sense of providing guidance and instruction to learners. Educators must be able to innovate in their duties as educators relating to the teaching task of learners. Innovations by educators in their duties as educators are expected to improve student learning achievement. Given that educators also have an effect on the learning achievement of learners. As stated by Hamzah B. Uno (2008) that an educator is very influential on learning outcomes that can be demonstrated by learners. Therefore, changes related to the teaching task of educators should be enhanced.

Counselors in conducting a counseling activity sometimes have obstacles, either obstacles prior to the implementation or when the implementation. Similarly, in carrying out professional duties, counselors also get barriers that various kinds of fine barriers are mediocre even to serious obstacles. A counselor also has limitations to make the counselee process so that sometimes the counseling process is not effective.

Therefore, for the counseling session to run smoothly, both at the time of practice and the realization of the need for implementation of learning strategies that can provide a direct learning experience through the use and development of skills processes and scientific attitudes with the aim to understand the concept and able to solve problems in the implementation of counseling .

B. Discussion

Educational effort is a normative effort, the keajegan view of human nature is absolutely necessary in education, because education is the basis of the normative direction of educational effort, (according to Mungin, 2005: 7). Education can utilize counseling as a partner in carrying out its duties as a series of relief efforts. Counseling provides elements outside the individual self that can be used to develop themselves (Mungin, 2005: 9). According to Mungin Edi Wibowo (2005: 9), Counseling activities will always be related in education, because the existence of counseling in education is a logical consequence of the educational endeavor it self.

According to D'Zurilla in Farell (2011: 41), counseling counseling process is required to provide services expected counselees in making decisions that are able to establish, the basis of alleviating problems that exist in the counselee is to increase self-efficacy counselor himself in the face of counseling sessions. To improve the effectiveness of new educators: problem-solving skills training (D'Zurilla, 1986) in Farell (2011: 42) includes: realizing problems, defining and formulating, putting forward alternative solutions, deciding approaches, testing solutions.

The results of the analysis of the views and expectations of the practice of counseling in the field and the consideration of the demands, developments, and future challenges of a more competitive environment, the counseling services provided by counselors in the hope of able to memandirikan counselee with Session study is based on the problems experienced by students of the sixth semester is in a university environment. Limited to the preliminary study results in two universities in Madiun City to all students of semester VI counseling and guidance study program of 167 respondents, there are 53% of students feel not ready when facing clients or counselee who cry in front of counselor, 47% student counselor candidate unable to think spontaneously when dealing directly with the counselee, and confused what to say.

Coupled with several research results that strengthen the importance of session study in the handling of cases experienced by students in the sixth semester when experiencing a crisis of confidence during the counseling process:

1. Shame to fellow practitioners and teachers who are considered senior so that the in mind is only a mistake when providing counseling services. Markus Plate (2015) entitled "Shame And The Undoing Of Leadership An Analysis Of Shame In Organizations", discusses the shame of the social level, the individual level, then in interaction with others, when the essence of "who we are" is questionable , we are too troubled with the thoughts of others.

2. Fear of harming or hurting the counselee, and a deep fear (fear of dependence or being challenged to do something) to both the client and the counselor. The initial counselor's statement above is reflected in the journal Martin C. Seay, Andrew T. Carswell, Melissa Wilmarth, and Lloyd G. Zimmerman (2014) entitled "Exploring HECM counselors' fraud awareness and training", approximately 86% of counselors indicate that counseling face to face is HECM (Home Equity Conversion Mortgage) clients are very useful, expected to face the counselee with face to face.
3. Lack of experience leads to less knowledge and skills. As mentioned above, the main characteristic of social phobia is marked and feared by lack of knowledge, with one or more social or performance situations in which the person has some stranger or feels under supervision, August (2001: 137)
4. Creating distance between counselor-client, loss of security and acceptance, too much talking counselor or too much silence,
5. Too emotional, Miryam Clough (2010) with the title of the journal "Shame And Organisations", in terms of other interesting (Uncomfortable) emotions can be carried away when the problem counselee leads to anger and hatred.
6. Feeling unappreciated or underestimated. Patricia (2003: 82),
7. Confused when faced with counselor when opening and closing Session counseling, what to do, Patricia (2003: 91)
8. Feeling himself nice people for helping others and he hopes to be appreciated. Martin C. Seay, Andrew T. Carswell, Melissa Wilmarth, and Lloyd G. Zimmerman (2014).

Session Study

Session study is a model development adapted by the Lesson Study method developed by Makoto Yoshida, which is a process to develop the professionalism of teachers or prospective educators in Japan by investigating or testing their teaching practices to be more effective, Hamdani (2010 : 94).

The following steps will be presented in Session Study:

1. A number of potential counselors work together in a group. This cooperation includes
   a. Pre counseling
   b. The counseling process, which consists of the practice of counseling skills.
   c. Post counseling
   d. Contract the implementation of the behavior
2. One of the counselors in the group takes the planning stage, which is to prepare a Counseling Guidance and Counseling Plan (RPBK) which is equipped with the theoretical underpinning principles.
3. Counselors who make RPBK conduct counseling sessions, this means the stage of counseling practice has been done
4. Other teachers in the group observed the learning process while matching the RPBK that had been made, this means the observation stage was done.
5. All counselors in the group, including teachers who have conducted counseling sessions, jointly discuss their observations of the ongoing counseling process.

This is the stage of reflection, in this stage also discussed improvement measures for subsequent learning.

6. The results on (5) are subsequently implemented in the next class or counseling process and so on back to (No. 2). The advantages of the model adopted from this lesson study are: (1) can be applied in every field until each generation, (2) can be implemented between or across universities.

C. Conclusion

Session study can be used to form a comprehensive teacher profile. Thus, it is expected to be considered by teachers and even prospective teachers to improve the quality of counseling practices, which can not only shape the character of student participants, but also the character of teachers in learning comunity.

Higher education and other relevant institutions can synergize for ongoing dissemination and assistance so that the findings in the lesson study can continue to be explored and contribute to education. In addition, further study is needed with design, development of methods, strategies, and instructional techniques using the Session Study on larger test groups and on other subjects.

References

August, R. (2001). *Anxiety Disorders An Introduction to Clinical Management and Research.* Netherlands: Willey-University of Maastricht

Farell, M. (2011). The Effective Teacher's Guide to Behavioral and Emotion Disorder. New York: Routledge 270 Madison Avenue

Hamalik, Oemar. (1995). *Kurikulum dan Pengajaran*, Bandung: Bumi Aksara

Hamalik, Oemar. (1991). *Pendidikan Guru Konsep dan Strategi*, Bandung: Mandar Maju, 1991

Hamdani. (2010). *Strategi Belajar Mengajar*. Bandung: CV. Pustaka

Hendayana, Sumar. (2010). *Perkembangan Lesson Study di Indonesia: Prospek dan Tantangannya. Dalam Teori, Paradigma, Prinsip, dan Pendekatan Pembelajaran MIPA dalam Konteks Indonesia.* Bandung: Fakultas Pendidikan MIPA Universitas Pendidikan Indonesia.

Markus Plate. (2015). Shame And The Undoing Of Leadership _ AnAnalysis Of Shame InOrganizations. *Emerald Insight Journal.* Vol. 11 pp. 29-50

Martin, Andrew, Melissa, Lloyd G& Zimmerman. (2014). Exploring HECMcounselors'fraud awareness and training. *Emerald Insight Journal.* Vol. 21 Iss 4 pp. 484 - 494

Miryam Clough. (2010). Shame And Organisations. *Emerald Insight Journal*. Vol. 6 Iss 1 pp. 25-33

Mungin Eddy Wibowo. (2005). *Konseling Kelompok Perkembangan*. Semarang : UNNES PRESS

Patricia T. (2003). *Dealing with Dilemma A Manual for Genetic.* San Francisco: Counselors. University of California

Uno, Hamzah B. (2008). *Profesi Kependidikan*. akarta: Bumi Aksara

Students Involvement In Learning Process

Sri Suryanti
University of Muhammadiyah Gresik
srisuryanti@umg.ac.id

Abstract

Student involvement in learning activities is very important. The involvement of students is one of the successful factors in learning process. The purpose of this study is to describe the students's involvement in the learning process that uses a project-based worksheet. The developed worksheet is devoted to the Graph coloring material in the graph theory course. This topic is very appropriate with graph coloring and applied in the real contexts. The subject in this study is 30 students of the 6th semester. Data collection is obtained through observation sheets and questionnaires of students's response that were distributed after learning process. Observation sheet used directly observe the activities of students in the learning process, while questionnaires used to obtain the feedback on learning and worksheets used. The results showed that the level of students' involvement in the learning process is high at the level 5, while the response of students towards learning and worksheets are positive..

Keywords: *students' involvement, project-based worksheet*

A. Introduction

Students' involvement in learning is very important. Students' involvement is one of the decisive factors in students' success (Webber, 2013). When the students involved in the learning process, he or she will like learning (Pascarella & terenzini, 2005; and Robert, 2010).

One of the efforts to increase the students's involvement in learning is through the use of project-based worksheets. With project-based worksheet will provide an opportunity for students to explore their abilities by resolving issues on the worksheet. In addition, this research is done on graph theory course, which the content of graph theory has wide application. Graph theory can be attributed to a variety of science and everyday life such as problems in Network Communications, Transportation, Computer Science, Operations Research, Chemistry, Sociology, Cartography and other sciences. The graph was first used to solve the problem of the Konigsberg bridge in 1736. In that year, a Swiss mathematician named L. Euler successfully solved the problem of the Konigsberg bridge. He modeled this problem in the form of graphs with the mainland (vertex connected by a bridge) is modeled as a node or vertex and the bridge is expressed as a line or edge.

One peculiarity of graph theory is the simplicity of the subject being studied because it can be served as a point (vertex) and side (edge). The theory of graph coloring is one object of interest and well-known in the field of the graph. Graph coloring is divided into 3 parts, first is coloring of vertices, second is edge coloring, and the last is coloring region. A region of a graph coloring to do (like the color on the territories on the map) by making dual of the map. Graph coloring has a fairly

extensive application, including the scheduling of exams, the placement of chemicals efficiently.

Therefore, learning on graph theory course is aimed at students. Not only mastering the concept but also it can be applied in the real life. One of the methods that can assist students in connecting what they learned in their daily life and to have a conceptual understanding is a project-based learning.

Project-based learning is learning that begins with project submissions to students. Furthermore, students are given one week of opportunity to complete the project in groups. The completion of the project was presented by students in groups in front of the class. The project is a math problem that takes a long time to solve it (Bush & Greer, 1999).

Students' involvement

Astin (1984) defines the involvement of students as a number of both physical and psychological energy devoted by students to gain academic experience. Students can involved even ingage to college life through serving of good learning, learning that gives students opportunity to explore the capabilities (Kuh, et al, 2005 and Hu and Kuh, 2001). So that, the involvement of students' needs to continue to be pursued, that is by continuously improving the quality of learning, increasing the role of lecturers in the learning process and giving more attention to the students.

This students' involvement in the learning process will have an impact on increasing retention of students (Mortension, 2005), which ultimately have an impact on learning outcomes and quality of the students themselves.

There are several important elements in students' involvement, according to Fletcher (2003), namely:

a. Learning is the involvement of students can develop learning with complex skills for students. The learning environment that empowers students as active learners, teachers, and leaders.
b. The partnership is engaging students with adults as equal partners throughout education.
c. Quality that students' involvement is contributing to all students good sign that discrimination of race, ethnicity, culture, gender, religion, economic status and others.
d. Infusion involvement is able to increase the change of attitude deep, coherent and systematic.
e. Quality is an involvement seeks to continue addressing important educational issues.
f. Evidence is an involvement has evidence of effectiveness can be measured and meet the general standards

While the level of student involvement according to Fletcher (2003) are:

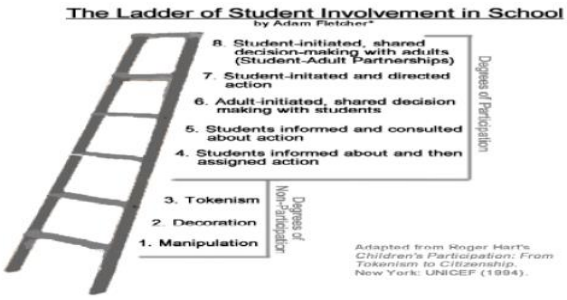


Figure 1. Level of students' involvement in learning

While Trowler (2010) distinguishes the involvement of students into three positive engagement, nothing involvement, and negative involvementt. Fredricks, Blumenfeld, and Paris (2004) identified three sizes to state that students are engaged in learning:

a. Students' behavior. The behavior here means students have positive behaviors such as obey the rules, be present on time and do not disrupt the course of learning
b. Students' Emotions. Students who are emotionally involved will show positive reactions such as showing interest and enjoying the learning process.
c. Cognitive students. Students who are cognitively involved will spend all their abilities in learning and love challenges.

Based on some of these explanation, in this study there are four aspects that will be investigated to see the involvement of students by combining the above opinion of some experts, namely:

a. The involvement of students in receiving their subject matter, ranging from attitudes and behavior of students in early learning, attitudesand behavior of students during the learning, and the attitudes and behavior of students at the end of learning. This aspect consists of six indicators.
b. The involvement of students in group discussions. This aspect consists of six indicators
c. The involvement of students in the presentation. This aspect consists of three indicators
d. The involvement of students in working on the evaluation. This aspect consists of two indicators. So from the four aspects are spelled out in 17 indicators.

B. Method

This research is a quantitative descriptive research, which is done by the 30 students of Mathematics Education program in the 6th semester which take Graph Theory Course. The instruments used were students observation sheets and students' response questionnaire given at the end of the lesson. This instrument has been validated by a team of experts through focus group discussions (FGD). Observation of learning done 3 times, and in each study the researcher used the steps of lesson study, thoseare plan, do and see.

C. Findings and Discussion

Findings

Collecting data in this research was done three times, and in each lesson the researcher used lesson study steps, with the aim of improvements in every lesson learned. The following is a summary of activities carried out over three cycles:

Tabel 1 Summary of learning activities

Stages of activities	Cycle 1	Cycle 2	Cycle 3
Plan	• The topic of learning is the concept of coloring graph which consists of vertex coloring and edge coloring • Students are dividedinto small groups consist five students to find the concept of chromatic number through worksheets	• Topics application of vertex coloring on daily life • Give awards to active students by taking down their names on the white board. • Problems are given in the worksheets really an issue that close to the students, is the scheduling courses • Each group is given one week to complete the worksheet	• Topics application of edge coloring on daily life • Problems are given a students will find many colors minimum required for coloring the map Gresik. • The treatment added to third cycle is that the beginning of learning is to reshow the name of the awarded students, as well as the students' comments • Each students is given three colored cards each of which is written the name of the students. This card is used during the learning and students return this card whenever they respond or

Stages of activities	Cycle 1	Cycle 2	Cycle 3
			answer questions.
Do	• Researchers make a name for each group • During 120 minutes of discussion and presentation without pause in every activity • 30 minutes are given a quiz for evaluation	• The presentation technique is changed, that is not designated by the researcher but researchers provide an opportunity to volunteer groups for presentations	• Students who collected the most cards will be awarded • Groups willing to volunteer are also awarded
See	Positive feedback needs to be given to groups who are able to respond other groups when presentations, including students who answer the quiz with fast and correct time	Evaluation technique is quite effective	Giving cards for each students is very effective to encourage in each individual students to be involved in the learning process

The results of observations using the observation sheet that was done three times presented in the Table 2:

Table 2. Observation results of students involvement in learning

Aspect	Cycle 1	Cycle 2	Cycle 3
First Aspect	64%, for the 5th indicator and 6th indicator only a small percentage of students who answer questions and make small remarks as the	80%. 5th Indicator shows a positive result	80%. The ability of students to make their own summary is not yet fully visible, only about ten students who make little remarks

Aspect	Cycle 1	Cycle 2	Cycle 3
	result of his/her thinking		as a result of his own thoughts.
Second Aspect	80%. This aspect is more observing the activities of students in the group, the observations in this first cycle for the six indicators showed a positive result. Students in his group discussed the concept of chromatic numbers. For the sixth indicator, not all students write back the results of the discussion in their personal notes.	80%. Students tend to photograph the results of the discussion, not taking notes.	100%. The six indicators show positive results.
Third Aspect	For this third aspect, students' involvement in the presentation is still low, the score for this aspect is 33%. There was a small percentage of students responding to the other group presentation.	67%. Students as volunteers can present well. Another group seemed enthusiastic about the presentation of their friend.	100%. All three indicators show positive results.
Fourth Aspect	In the 4th aspect score is 50%. Students appear enthusiastic in doing the evaluation question but have not shown independence yet. Tests are displayed on the slides so that students are given the opportunity to write questions first.	80%. The evaluation technique is read aloud and the student responds promptly within the prescribed time limit.	80%. There are still students who ask their friends.

While the questionnaire related student's response about LKM and learning responses also given three times, presented in the following bellow:

Table 3. Summary of questionnaire results of student responses

Grain answers	Cycle 1	Cycle 2	Cycle 3
Positif answer	89 %	94%	94%
Negatif answer	11 %	6%	6%

Discussion

Involvement in learning

From overall learning activities, it shows a positive involvement. This appears at the beginning of learning, students coming on time even 15 minutes earlier than the lecturer. So it can be said that students have involved in the learning process. Students try to finish the worksheet given seriously, the students are active and cooperate with the team of the group.

In the second observation, the technique of writing down the names of students who ask on the blackboard gives a positive effect. Compared to the first observation, students who asked, answered or responded to the explanation of lecturers have increased. Evaluation techniques in the form of quizzes with time limits, giving effect to students to do it seriously and feel challenged.

On the third observation, students seem very enthusiastic in learning. The technique of giving the card to each student, which the student must return the card as proof of his achievement. This makes students very challenged, so that almost 90% of students are active and compete to collect as many cards as possible.

Here are some documentation of student activities during the learning process:

Figure 2. Students do LKM outside the classroom, in the mathematics laboratory

Figure 3 Students discuss with friends in their group

While the involvement when viewed from four aspects that have been determined by researchers, the average for the 1st aspect is 75%, which is the first aspect consists of 6 indicators which means five of the six indicators show positive results. Student behavior at the beginning of learning is positive, shown by students coming on time, students read the material to be studied, students answer lecturer questions, and there are some students who make notes as a result of his thinking.

While for the second aspect, that is about student involvement in group discussion activity is 86,7% almost six indicator show positive result. Student behavior during discussion is positive, students enthusiastically follow discussion activity, able to cooperate with friends in group, students give opportunity to friend to express opinion, and student consult things that they do not understand to lecturer. In addition, at the end of discussion activities some students write back the results of the discussion.

Then for the third aspect, the involvement of students in the presentation was 67%, still in a positive level. Students' ability to respond to groups with less presentation. Furthermore, for the fourth aspect of student involvement in the evaluation activity is 70%, meaning that student involvement in this activity is positive. Enthusiastic student attitudes when given a quiz, and even feel challenged.

Based on these three observations, the level of students' involvement in the learning process based on the level of students' involvement by Fletcher (2003) is at the 5th level, ie students inform and consult about the activities they do. This 5th level can be said to be a high level, because the level of students' involvement by Fletcher (2003) consists of 8 levels, of which levels 1th to 3th are low, levels 4th to 6th are high, and the 7th to 8th level is very high.

Students' response to worksheets and learning process

Overall the students' response to Worksheets and learning activities is positive. The first indicator until the sixth indicator is related to the students's response to the learning activity, of the six indicators received a positive response. While the seventh indicator until the eighteenth indicator, is an indicator to know the students's response to the Worksheet used. Of the twelve indicators, ten indicators received a positive response, and two indicators received a negative response. So it can be concluded that the students' response to the worksheet is positive.

Students' involvement creates a quality learning environment

With the involvement of students's in the learning process, there is a learning process in which the lecturer involves all studentss to be critical thinking, empowering all the ability to complete the task given by the lecturer, the learning environment created able to make studentss as active learner. A learning environment that respects equity principles, there is no discrimination. A learning environment where students can express their opinions, consult their difficulties (Olson, 2202). Learning environment becomes a bridge that eliminates the gap between students, students become partners of other (Real, 2003).

When students feel involved and are engaged to the learning process they will learn to the end, they are happy to do every learning activity. Thus, learning services play an important role in student involvement.

D. Conclusions and Recommendations

Conclusion

Based on the result of the observations, it can be concluded that the involvement of students during the learning process using project-based worksheets is positive, and the level of students' involvement is high that is at level 5. While the student's response to learning activities and to the worksheet used is positive.

Recommendation for Future Research

- It needs further research on students' involvement, both academically and socially, meaning to the whole campus life as a place to learn, because such involvement will greatly affect their success.
- Need to do research to see the learning outcomes of students, because this study is still limited to observe the activities of students' involvement in learning.

References

Astin, A. (1984). Student involvement:A developmental theory for higher education. *Journal of College Student Personnel* , 297-308.

Bush, W., & Greer, A. (1999). *Mathematics Assessment.* Reston: NCTM.

David, D., & Andrew, S. (March, 28-April 1, 2009). Too Engaged? A Study of Student Involvement and Academic Success. *ACPA Annual Convention.* Washington, DC.

Fletcher, A. (2003). *Meaningful Student Involvement 'A guide to inclusive school change'.* Kenmore, Washington: Humanlinks Foundation.

Hu, S., & Kuh, G. (2001). Being (Dis) Engaged in Educatinally Purposeful Activities: The Influences of Student and Institutional Characteristics. *Paper presented at the American Educatinal Research Association Annual Conference* , Seattle, WA, 10-14 April.

John, D. F., & Lauren, U. G. (2006). Effects of Involvement in Clubs and Organizations on the Psychosocial Development of First-Year and Senior College Students. *NASPA Journal Vol 43 No 1* , 166-183.

Kuh, G., Kinzie, J., Shcuh, J., Whitt, E., & Associates. (2005). *Student success in College: Creating conditions that matter.* San Fransisco: Jossey-Bass.

Mortenson, T. (2005). *Measurement of persisttence. In A Seidman (Ed), College student retention.* Westport: Praeger Publishers.

Olson, L. (2002). Do Students Care about Learning? *Educational Leadership* .

Real, H. (2003). *Student Voices Count: A Student-Led Evaluation of High Schools in Oakland.* Kids First: Oakland,CA.

Roberts, J., & Nell M, M. (2010). Student involvement/Engagement in Higher Education Based on Student Origin. *Research in Higher Education Journal* , 1-11.

Trowler, V. (2010). *Student engagement literature review.* Department of Educational Research Lancaster University : The Higher Education Academy.

Webber, K. L., Krylow, R. B., & Zhang, Q. (2013). Does involvement Really matter? Indicators of college student Success and satisfaction. *Journal of College Student Development* , 591-611.

Teaching Analytical Decision Making Ability And Mathematical Problem Solving with Conflict Cognitive Strategy Learning Model

I Ketut Sukarma[1], Muhammad Asy'ari[2], danIwanDody Dharmawibawa[3]
[1]Program StudiPendidikanMatematika, FPMIPA IKIP Mataram
[2]Program StudiPendidikanOlahragadanKesehatan, FPOK IKIP Mataram
[3]Program StudiPendidikanBiologi, FPMIPA IKIP Mataram

Abstract

Analytical decision making is very important to be trained because it becomes the final goal in learning. Analytical decision making is also a core objective at the university level that expects learners to be able to make decisions based on the results of information, fact or data analysis, and phenomena, so it is important that a specific learning model be developed through the ability of the student's analytical decision making. Analytical decision making is a learners' decision-making activity should involve a process of choosing logical choices based on the systematic stages of the available choices, taking into account the positive and negative impacts of all available alternatives, predicting the outcomes of all available options and explaining why choosing them used in the situation at hand. Students as prospective teachers have strategic functions, after becoming teachers they should be able to develop the ability of analytical decision making students in schools, given the ability of analytical decision making has become one of the main learning objectives in the curriculum in Indonesia. Mathematical problem solving model by integrating cognitive conflict strategy can generate student awareness of self-potential to be able to analyze a phenomenon well and make the right decision based on information analysis, data or phenomenon presented.

Keywords: *Analytical Decision Making Ability, Mathematical Problem Solving with Conflict Cognitive Strategy Learning Model*

A. Introduction

Analytical decision making is a learning decision-making activity involving the process of choosing logical choices based on the systematic stages of the available choices (Adair, 2010; Wang and Ruhe, 2007; Lunenburg, 2010), considering the positive and negative impacts of all alternative options there (Safir and LeBoeuf, 2004; Facione, 2011), suspect the outcome of all the options available and explains why choosing such options is used in the situation at hand (Facione, 2011). The National Research Council (2010) incorporates a system of thinking into the abilities that students should learn, in which analysis and decision making become a core component of the student's thinking system. Asy'ari, Prayogi and Samsuri (2016) stated that decision making is the ultimate goal of the thinking process, if the learner wants to teach high-order thinking should students be taught to make decisions through logical thinking processes by questioning and analyzing the assumptions given (Sternberg , 2010). Science as a process should also emphasize students to be keen in choosing strategies or ways to solve problems by promoting logical analysis (Ibrahim and Wahyusukartiningsih, 2014). The

importance of teaching learners analytical decision making abilities is also explicitly stated in Kemdikbud (2013) which emphasizes learners or learners at the college level should be able to take decisions based on the analysis of information and data.

Stanick and Kilpatrick in Schoenfeld (2012) argue that problem solving in mathematics can be viewed as a tool for achieving curriculum goals and for melting analysis and decision making skills in mathematics learning. Decision making in learning has 3 (three) main keys are: 1) resources,ie knowledge as a tool used to solve problems; 2) orientations,ie beliefs and attitudes toward the chosen choice; 3) goals are choices that take by orientation and knowledge possessed (Schoenfeld, 2014). Prayogi and Ash'ari (2013) states that by learning learners through learning oriented on authentic and academic issues, learners can improve their analytical skills, evaluate, and draw conclusions from the processes they have undertaken. Furthermore, Sukarma (2013) states that learners can learn their learning process through meaningful learning that prioritizes student oriented and contradictory phenomena through problem based learning. Marcow and Lerman (2006) presented several models of mathematical problem solving that have the potential to develop analytical and decision making skills to learners such as Polya (1957), Scoenfeld (1985), Garofalo and Lester (1989).

Onyekuru (2015) states that education as an anchor that can exploit the potential of self as a social creature, master the skills, talents, and competencies needed to increase self-awareness with the integration of real life problems. Ability analysis and decision making is one of the important capabilities emphasized in learning for the purpose of raising the potential self-learners. National Research Council (2010) incorporates system thinking into 21st century skills which includes analytical skills and decision making. The process of implementing learning at the college level has used different types of models, approaches, methods, and learning strategies with specific objectives, ranging from content objectives to processes, but lacking the facilitation of students to practice their analytical decision making skills. Mitrevski and Zajkov (2011) show that the tendency of teaching staff of teachers or lecturers in developing countries is identified using many teaching models, methods and techniques ranging from lectures, questions, answers, demonstrations, experiments, project work, problem solving, to outside lesson methods, but the learning objectives with these models and methods are not explicitly addressed to enable analytical decision making skills.

B. Body Text

Students Analytical Decision Making Ability And Connections With Mathematical Problem Solving With Cognitive Conflict Strategy Learning Model

Analysis and decision making become an important goal in education in Indonesia which emphasizes the learners to be able to make decisions based on the analysis of information and data (Permendiknas, 2013), the purpose of education is

the basis for developing a model of learning that specifically trains the ability of analytical decision making on students as candidates teachers in order to teach students the ability. The National Research Council (2010) incorporates a system of thinking into the abilities that students should learn, in which analysis and decision making become a core component of the student's thinking system. Analytical decision making in this study is the ability of learners in making decisions (decision making) through a logical process of systematic (analytical) based on the stages or alternatives provided solutions. Analytical decision making can be learned through mathematical problem solving model.

Problem solvingis generally defined as trying to get results or solve a problem when the problem is not known method or way to solve the problem. Mathematical problem solving consists of four components needed to analyze the success or failure of a person in solving the problem (Schoenfeld, 2013): 1) individual knowledge; 2) the problem solving strategy used, called the heuristic strategy; 3) individual self monitoring and regulation; 4) indivudu belief systems and students' mathematical experience. Some models of mathematical solution developed by researchers such as four steps by Polya (1957): 1) understand the problem; 2) to plan; 3) implement the plan; 4) look back; three steps by Schoelfeld (1985): 1) analysis; 2) exploration; and 3) verification, and four steps by Garofalo and Lester (1989): 1) orientation; 2) organization; 3) execution; and 4) verification (in Marcou and Lerman, 2006) became the basis for the development of the learning model to be developed. The development of this model is considered important because the model developed by the previous expert did not specifically teach students to make analytical decisions, Bailin in Ash'ari, Prayogi, and Samsuri (2016) stated that decision making is one place to think, if the learner wants to teach high-level thinking skills should be learned to make decisions through logical thinking processes by questioning and analyzing the assumptions given (Preiss and Sternberg, 2010). Science as a process should also emphasize students to be keen in choosing strategies or ways to solve problems by promoting logical analysis (Ibrahim and Wahyusukartiningsih, 2014).

Instructional Of Mathematical Problem Solving With Conflict Cognitive Strategy To Facilitate Students' Analytical Decision Making

Mathematical problem solving model developed into a model that explicitly aims to facilitate analytical decision making ability of prospective teachers. The hypothetical framework of mathematical problem solving with cognitive conflict strategy learning model described in Table 1.

Table 1. Hypothetical Framework of Mathematical Problem Solving Model with Cognitive Conflict Strategy Learning Model.

Learning Phase	The Role of Teachers and the Integration of Cognitive Conflict Strategies
Phase 1: *Provide and Indentify*	• Identify students' knowledge through the gradual phasing of cognitive conflict phenomena to invite

	beliefs, interests, interests, motivations, and ensure early knowledge of students arise in relation to the lessons learned (**analysis**). • Identify learning objectives.
Phase2: *Organize*	• Accessing information relevant to the problem based on the results of the evaluation of knowledge owned. • Presenting cognitive conflicts, ensuring that cognitive conflicts provide a framework for learning materials to be learned and that cognitive conflicts are related to the knowledge they previously possessed. Cognitive conflicts are carried out to follow up on the results of prior knowledge of learners.
Phase3: *Planning and Decide*	• Formulate some alternative solutions based on problems and knowledge and choose the most likely alternative to use (**make decisions**) • Learners are asked to consider the possible consequences of alternative problem-solving options (**decisions based on existing information analysis results**).
Phase4: *Implement and Evaluate*	• Implement the selected troubleshooting plan. • Evaluate activities undertaken. • Evaluate planned actions, tailored to the results obtained, then provide recommendations for analytical decision solutions (**analytical decision making**)

Development of mathematical problem solving model with cognitive conflict strategy aims to facilitate analytical decision making ability of prospective teachers. Analytical decision making ability has two key words: analysis and decision making, in which analytical ability is inseparable from logical thinking process using existing knowledge (Adair, 2010) and decision making is the process of choosing solution solution by considering various alternatives (Adair, 2010; Wang and Ruhe, 2007; Lunenburg, 2010) through the process of analyzing the consequences of selection of applied solutions (Facione, 2011).

Mathematical problem solving is a learning model that is often used in mathematics learning activities, but can also be applied in other science learning (Schoenfeld, 2014); however, the fundamental difficulty in applying a problem-oriented learning model is the lack of early knowledge of learners of the material to be learned Prayogi, 2013; Verawati, 2013). This suggests the potential of developing a model of mathematical problem solving by integrating cognitive conflict strategies because basically, learners come with the initial knowledge they already have and can be generated through the presentation of cognitive conflict phenomena (Duit and Treagust, 2012), cognitive conflict strategies can encourage

learners for their learning activities or cognitive reflection (Thomas, 2012) so as to analyze the knowledge they already possess (Vosniadou, 2012). The indicators of analytical decision making ability in this research is to define the purpose and problem, analyze the relevant information to reach the goal, formulate the problem solving step, make the initial decision problem solving, analyze the problem solving result.

C. Conclusion

Decision making in learning has 3 (three) main keys are: 1) resources ie knowledge as a tool used to solve problems; 2) orientations ie beliefs and attitudes toward the chosen choice; 3) goals are choices that take by orientation and knowledge possessed (Schoenfeld, 2014). Based on the three key decision making, the mathematical problem solving model with cognitive conflict strategy first identifies the students' knowledge through giving cognitive conflict phenomenon and identifying objectives (phase 1. provide and indentify), accessing information relevant to the problem based on the evaluation result of the knowledge owned (phase 2: organize) formulate some alternative solutions and choose the most likely alternative to use; in this activity the students are also asked to consider the possible consequences (phase 3: planning and decide), implement and evaluate the results of the activities undertaken (phase 4: implementation and evaluate).

Refrences

Adair, J. 2010. *Decision Making and Problem Solving Strategies*. Second Edition. Kogan Page. London.

Asy'ari, M., Prayogi, S., danSamsuri, T. 2016. KajianLiteraturtentangBerpikirKritis, BerpikirKreatif, danMetakognisidalamPembelajaran. *Prosiding Seminar Nasional PKPSM*. 12 Maret 2016. Mataram, Indonesia. Hal 292-298.

Duit, R., and Treagust, D. 2012. How Can Conceptual Change Contribute to Theory and Pratice in Science Education?. *Second international handbook of science educations.* 1(2): 107-118.

Facione, P. 2011. *Critical Thinking. What It Is and Why Its Counts*. Measured Reason and The California Academic Press. London.

Ibrahim, M. dan Wahyusukrtiningsih. 2014. *Model Pembelajaran Inovatif Melalui Pemaknaan, (Belajar Perilaku Positif dari Alam).* Unesa University Press. Surabaya.

Lunenburg, F. 2010. *The Decision making Process.*National Forum of Educational Administration and Supervision Journal. 27(4): 1-12.

Marcou, A., and Lerman, S. 2006. Towards the Development of A Self-Regulated Mathematical Problem Solving Model. *Proceeding 30th Conference of the International Group for the Psychology of Mathematics Education.* -.-. 2006. InNovotná, J., Moraová, H., Krátká, M. &Stehlíková, N. (Eds.). Hal 137-144.

Mitrevski, B and Zajkov, O. 2011. Mathematics and Science Teachers' Concept of Critical Thinking. *Bulg. J. Phys*. 38: 318–324.

National Research Council of Educational Academies. 2010. *Exploring the Intersection of Science Education and 21st Century Skills.* The National Academies Press.Washington, D.C.

Nieveen, N. 2007. Formative Evaluation in Educational Design Research. *Proceedings of the seminar conducted at the East China Normal University*. 23-26 November 2007. Shanghai, PR China. Hal 88-101.

Onyekuru, B.U. 2015. Field Dependence-Field Independence Cognitive Style, Gender, Career Choice, and Academic Achievement of Secondary School Students in Emohua Local Government Area of River State.*Journal of Education and Practice*. 6(10): 76-85.

Permendiknas no. 73 tahun2013 tentang Penerapan Kerangka Kualifikasi Nasional Indonesia (KKNI) pada bidang Pendidikan Tinggi.

Prayogi, S. 2013. *Implementasi Model Inquiry untuk Mengembangkan Kemampuan Berpikir Kritis Mahasiswa Pendidikan Fisika.* Laporan Hasil Penelitian. LPPM IKIP Mataram.

Prayogi, S., danAsy'ari, M. 2013. *Implementasi Model PBL (Problem Based Learning) untuk Meningkatkan Hasil Belajar dan Kemampuan Berpikir Kritis Siswa*. Jurnal Prisma Sains Vol. 1, No. 1. pp (79-87).

Preiss, D.D., and Sternberg, R.J. 2010. *Innovations in educational psychology: perspectives on learning, teaching, andhuman development*. Springer: New York.

Schoenfeld, A. 2013. Reflection on Problem Solving Theory and Practice. *The Mathematics Enthusiast.*10(2): 9-34.

Schoenfeld, A. 2014. What Makes for Powerful Classrooms, and How Can We Support Teachers in Creating Them? A Story of Research and Practice, Productively Interviewed. *Educational Researcher*. 43(8): 404-412.

Shafir, E., and LeBoeuf, R. 2004. Blackwell Handbook of Judgment and Decision Making: *Context and Conflict in Multiattribute Choice.* Blackwell Publishing Ltd.Oxford.

Thomas, G.P. 2012. Metacognition in science education: past, present and future considerations. Second international handbook of science educations. 1(2): 131-144.

Verawati, NN Sri P. 2013. Implementasi Model Inquiry untuk Mengembangkan Keterampilan Berpikir Kritis Mahasiswa Pendidikan Fisika pada Pokok Bahasan Hukum Hooke. *Jurnal Pendidikan Biologi BIOTA*. 6(1): 77-86.

Vosniadou, S. 2012.Reframing the Calssical Approach to Conceptual Change: Preconceptions, Misconceptions, and Synthetic Models. *Second international handbook of science educations*. 1(2): 119-130.

Wang, Y., and Ruhe, G. 2007. The Cognitive Process of Decision Making. *International Journal of Cognitive Informatics and Natural Intellegence*. 1(2): 72-85.

Yuan, S. 2013. Incorporating Pólya's Problem Solving Method in Remedial Math. *Journal of Humanistic Mathematics.* 3(1): 96-107.

The Development Of Research-Based Curriculum Through Research-Based Learning And Lesson Study For Learning Community

Hobri[1], Dafik[1], Susanto[1], Sunardi[1], & Suratno[2]
[1]Lecturer of Postgraduate of Mathematics Education
[2]Lecturer of Postgraduate of Science Education
Email : hobri.fkip@unej,ac.id

Abstract

The development of research-based curriculum is intended to increase the productivity both in terms of quantity and quality of research that can be published in international journals, integrated with the teaching and learning process. The development is carried out using Plomp stage, i.e. design and construction phase. The research-based curriculum through RBL and LSLC, begins with the formation of a research group. In the first semester, all students joint course work, while in semester 2, has been focused on research group (RG) activity with RBL and LSLC, as well as the third semester doing teaching practices and writing scientific papers and publishing it in international journals according to its RG, and in the end writing thesis.

Keywords : *research based curriculum, reseach based learning, lesson study for learning community*

A. Introduction

Permenristekdikti No. 44 2015 on National Standards of Higher Education reinforces the importance of research activities in universities. In this Permenristekdikti, the national standard of higher education consists of 24 standards, namely 8 national education standards, 8 national standards of research and 8 national standards of community service. The details of the 8 research standards are as follows the standard of research results; standard of research content; standard of research process; standard of research assessment; standard for researchers; standard of research facilities and infrastructures; standard of research management; and funding standards and research financing. The emergence of this research standard is clearly separated further reinforce that the establishment of Research University has gained a special container in Permenristekdikti No. 44 2015.

In its development, Jember University has developed an innovative research program that encourages the formation of several research groups such as CDAST, CGANT, and C-RiSSH, which is a group of inter and multidisciplinary studies in line with the vision and mission of Jember University. The studies undertaken by the study group are specifically expected to produce superior research outcomes that can be integrated with the college curriculum.

Based on the Letter of Agreement by the Implementation of Curriculum Development Grants based on Research-Based Learning of Islamic Development Bank (IDB) Project 2017; No: 256/UN25.7/PIU-IDB/2017, May 17, 2017, thus study program of magister of mathematics education was appointed to develop

research-based curriculum. The development of research-based curriculum is intended to increase productivity both in terms of quantity and quality of research that can be published in international journals, integrated with the learning of lecturers and students.

B. Method

The type of this research is developmental research (R&D). Development research is oriented towards product development where the development process is described as thoroughly as possible and the product is finally evaluated. In this research, we develop curriculum based research (CBR). The development process is related to the activities at each stage of development. The final product is evaluated based on the aspect of product quality specified (Hobri, 2009).

Curriculum development is consist of 5 (five) stages of development of educational design model (Plomp, 1997). In the implementation, modification is done by combining the stages of material development (product) by Nieveen (in Akker, 2009) by considering 3 aspects of quality, namely aspect of validity, practicality aspect, and aspect of effectiveness. Activities undertaken at the initial investigative stage are to collect information on curriculum and mathematics learning problems of previous mathematics education and to formulate the rationale for the importance of developing research-based curriculum through RBL and LSLC.

The next step is the stage of construction. This stage is a continuation of activities at the design stage. At this stage, prototype 1 (initial) is generated as the realization of the design results.

C. Findings and Discussion

The process of curriculum development

The first step is determined the vision, mission, and objectives of Study Program of Magister of Mathematics Education which is based on the vision of Jember University, and Faculty of Teacher Training and Education of Jember University. Then, next step is SWOT analysis, tracer study and graduate profile. The profile of graduate of mathematics education program of FKIP University of Jember is: (1) Mathematics Educator in Secondary School or Lecturer of Mathematics Education at Higher Education, (2) Researcher and Designer of Mathematics Education and Learning, (3) Modeling Designer of Learning Mathematics, and (4) Instructor and Consultant for Education and Mathematics Learning. Then determine the Learning Achievement Description Based on KKNI (General and Detailed) and Elements of Learning Achievement according to Five Pillars of Education Unesco-Sisdiknas, Material Studies and Coloring of Study Materials.

Research Group (RG) is set as follow, (1) RG Combinatorics & Development of its Learning Model (RGKPMP). RG KPMP is essentially a study group in terms of discrete mathematics, and graph. And also the development of strategies, approaches, and learning models used in learning (Dean Decree No. 1151

/ UN25.1.5 / KP / 2017, 13 Februaary 2017). (2) RG Geometry and Development of its Learning Model (RGGPMP). RG GPMP is essentially a study group in terms of geometry and learning, as well as the development of strategies, approaches, and learning models used (Dean Decree No. 1159 / UN25.1.5 / KP / 2017, 14 February 2017). (3) RG Development of Assessment and Evaluation of Mathematics Learning (RGPAEPM). RG PAEPM is basically a review group in terms assessment and evaluation of school and university. Also reviewed how the development of PISA and TIMMS problems. The PAEPM study group also includes aspects of validity, reliability, differentiation, degree of exchange, and effectiveness. And also how it relates to creativity, critical, and HOT (higher order thinking) (Dean Decree No. 1158 / UN25.1.5 / KP / 2017, 14 February 2017). And (4) RG Lesson Study in Mathematics Learning (RGLSML). RG LSML is basically a study group in terms of how to develop and implement collaborative learning, learning community, caring community, and jumping task in mathematics learning. Also analysis how to implement LSLC with plan-do-see concept and its development in Indonesia, starting from elementary, middle and even university (Dean Decree No. 1157 / UN25.1.5 / KP / 2017, 14 February 2017).

The structure of research based Curriculum

The structure of the research-based curriculum in the Study Program of Magister of Mathematics Education is presented below.

Table 1. Research-based curriculum structure

<table>
<tr><th>SEMESTER</th><th>SKS</th><th colspan="8">Subject Course</th></tr>
<tr><td>IV</td><td>10</td><td colspan="2">Thesis RGKPMP</td><td colspan="2">Thesis RGGPMP</td><td colspan="2">Thesis RGPAEPM</td><td colspan="2">Thesis RGLSML</td></tr>
<tr><td>III</td><td>4</td><td>Teaching Practice</td><td>Scientific Paper & Publication</td><td>Teaching Practice</td><td>Scientific Paper & Publication</td><td>Teaching Practice</td><td>Scientific Paaper & Publication</td><td>Teaching Practice</td><td>Scientific Paper & Publication</td></tr>
<tr><td>II</td><td>14</td><td colspan="2">RG Combinatorics & Development of its Learning Model (RGKPMP)</td><td colspan="2">RG Geometry, and Development of its Learning Model (RGGPMP)</td><td colspan="2">RG Development of Assessment and Evaluation of Mathematics Learning (RGPAEPM)</td><td colspan="2">RG Lesson Study in Mathematics Learning (RGLSML)</td></tr>
<tr><td>I</td><td>15</td><td colspan="8">COURSE WORK</td></tr>
</table>

Table 2. The distribution of subject course (SC)

SEMESTER	SKS	SC1	SC2	SC3	SC4	SC5	SC6	SC 7
4	10	Thesis						
		10						
3	4	Teaching Practice	Scientific Project and and Publication	Field Trip				
		2	2	0				
2	14	Problems in Math Learning	The Development of Math Learning Model and Materials Tool	The Asessment of Math Learning	RG Subject Course	The Analysis of Article	Thesis Proposal	
		A1 B1 C1 D1	A2 B2 C2 D2	A3 B3 C3 D3	A4 B4 C4 D4	A5 B5 C5 D5	A6 B6 C6 D6	
		2	2	2	4	2	2	
1	15	Science philosophy	The Foundation of Education	Research Methodology of Math Edu	The Analysis of Curriculum and School Math	The Strategy of math Learning	Educational Psychology	Applied Statistics
		2	2	3	2	2	2	2
Total	43							

Note :

A : RGKPMP B : RGGPMP C : RGPAEPM D : RGLSML

Table 6. Learning Section in Each RG at second semester

	SC 1	**SC 2**	**SC 3**	**SC 4**	**SC 5**	**SC 6**

RG/ MK	Problems in Math Learning	The Development of Math Learning Model and Materials Tool	The Asessment of Math Learning	RG Subject Course	The Analysis of Article	Thesis Proposal
			In			
A	Learning Problems in Combinatorics and graph	The Development of Combinatorics and graph Model	The Asessment of Combinatorics and graph Learning	Combinatorics and graph	The analysis of Combinatorics and graph article	Thesis Proposal Combinatorics and graph
B	Learning Problems in Geometry	The Development of Geometry Model	The Asessment of geometry Learning	Geometry	The analysis of Geometry article	Thesis Proposal Geometry
C	Learning Problems in Assessment and Evaluation of Algebra	Assessment and Evaluation of Algebra	Learning Assessment of Algebra	Assessment & Evaluation of Algebra & learning process	Research Journal assessment and evaluation of Algebra	Thesis Proposal Assessment and Evaluation of Algebra
D	Learning Problems in LSLC of Analysis	Model Development and Learning Tools LSLC in Analysis section	Learning Assessment and Analysis with LSLC	LSLC of Analysis	Research Journal LS and LSLC of Analysis	ThesisProposal LS & LSLC of Analysis

The description of learning outcome (general and detailed) is based on Permendikbud No. 44 2015, and based on the socialization of IndoMS (Indonesian Mathematical Society) 2017.

Research Based Learning (RBL) and Lesson Study for Learning Community

The term Research Based Learning (RBL) is one of the learning models that used to enable learning both on the activities of students and teachers in the learning process. According to Dafik (2015: 6), RBL is a learning method that uses contextual learning, authentic learning, problem-solving, cooperative learning, hands-on & minds on learning, and inquiry discovery approach. The target of RBL implementation is to encourage the creation of high-level thinking skills in the lecturers and students themselves. Students are not only filled with information and science, but must be taken to a high level that is creating or communicating. Achievement up to this level in learning theory is known for achieving high-level thinking skills.

Khamdit (2014: 11) explained that: RBL is a learning approach emphasizes on learning by practicing, learning from real situations, creating outcome from thinking process, functioning systematically, forming knowledge individually, using the research process to solve problems, eliciting answers from the query and analyzing the data on their own. This approach will inspire students to develop their potential in all areas. RBL is also one of the student-centered learning methods (SCL) that integrates research in the learning process. RBL is multifaceted with reference to various learning methods. RBL provides opportunities / opportunities for students to seek information, develop hypotheses, collect data, analyze data, and make conclusions on the data that has been prepared; in this activity apply learning by doing "learning by doing" (UGM, 2010, Singh, 2014).

In general, the stages that must be implemented are:

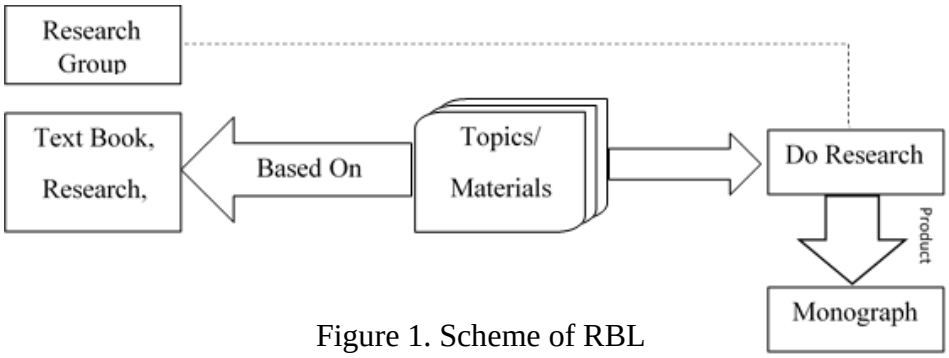


Figure 1. Scheme of RBL

***Lesson Study for Learning Community* (LSLC)**

LS is based on Vygotsky-Bruner's theory (meaning of knowledge), active, collaborative, and reflection. High quality learning, namely: (1) authentic learning, (2) collaborative learning (listening), ZPD - collaborative - jumping (not a task in the book). Successful LS tips, i.e. reactions to each other listening, seating plan, and mutual learning or mutual talk. Three pre conditions of learning in the LC is authentic learning, listening reaction, and jumping task. In practice, the LSLC does not question educational inputs, but rather the illumination models, so there is no need to assess the learning outcomes of each learning activity. (Hobri, 2014).

The meaning of collaborative learning, can be viewed as a spiral cycle that begins with the object, the ability of the mind itself, collaborate, gain meaning, then given the objects, the ability of the mind itself, collaborate, gain meaning, and so on. Learning Community Vision: in learning, students should not be left alone or "none of the students are neglected". Lecturers must know, care, and educate (caring) to students with problems by facilitating students to learn in a collaborative form.

Learning in principle is to create an atmosphere that allows students to learn from one another, not to let any student be neglected. Through learning community is expected all parties involved as perpetrators of learning improvement. In learning, the most important is not group work but what they do and how they respond in groups, students feel comfortable and devote their attention to the lessons, and also students can learn to interact through the media / objects. The ability of social interaction develops first, then the academic ability of each child develops. (Hobri, 2017).

Collaborative Learning

Collaborative learning is a lesson used in Japan. Collaborative learning is seen as an approach that allows students to learn from each other, give each other, mutual feel, and accept each other so that students feel not alienated in the group. The basis of collaborative learning is: (1) the lecturer must provide everything related to the material or material, and the supporting learning media so that the students master the material, (2) the creativity of the lecturer is required to create creative students. (Hobri, 2014).

Collaborative learning can be developed through case designs related to learning materials, then into student's worksheet and materials to be discussed in groups, where students learn from each other, to each other, who do not ask questions who already understand, and who understand, can explain to the theme other. The type used in collaborative learning, the spiral type. The spiral type, always stepping forward by involving students who have not understood, and the material developed by involving the material before but expanded and continue to be expanded with scaffolding.

Some of the things that characterize a collaborative learning are namely the involvement of all students (without exception) in learning. Engage in the sense that, in total, all students experience learning activities, as well as in the acquisition of information or material. For that lecturers have to be creative in making materials that can make jumping, and can control the involvement of all students in learning activities. Another thing that is very urgent is spiral learning, which is the mastery of the material by students is not done jumping, but expanded forward (small or large) by using creativity and scaffolding.

Here is an example of RBL design and LSLC implementation on the topic of constructivist learning and Lesson Study in the course of Learning Strategy. The study materials are learning constructivism, (M. Kordaki, 2015, M. Makgato, 2012)

and Lesson study / LS (M. Vrikki, P. Warwick, J. D. Vermunt, N. Mercer, and N. Van Halem, 2017) in the implementation of learning using LSLC.

D. Conclusions and Suggestion

It was developed a research-based curriculum with RBL and LSLC, which begins with the formation of a research group. In the first semester, all students joint course work, while in semester 2, has been focused on each RG through RBL and LSLC, as well as the third semester doing teaching practice and writing scientific papers and publishing it in international journals according to its RG, and the end, writing thesis.

The Suggestions that given in the development of research-based curriculum, are: (1) need to optimize with coordination with stakeholders, (2) LS and LSLC nuances more highlighted, device development need to pay attention to RBL and LSLC concepts.

References

Akker, d. v. J., Branch, M.R., Gustafson, K., Nieveen, N., and Plompt, T. 1999. *Design Approaches and Tools in Education and Training*. Dordrecht/Boston/London: Kluwer Academic Publishers.

Arifin, P. 2010. *Research Based Learnig*. Bandung: Institut Teknologi Bandung.

Dafik. 2015. Handbook for the Implementation of RBL (Research-Based Learning) in the Courses. Jember : Universitas Jember.

Hobri & Susanto. 2017. "Collaborative Learning dan Caring Community dalam Pembelajaran Matematika Menggunakan Lembar Kerja Siswa (LKS) Berdasarkan Scientific Approach". *Prosiding Seminar Nasional Matematika dan Pembelajarannya 3 Mei 2017*, ISBN *:* 978-602-74058-2-0, hal. 1-14. Jember : Program Studi Pendidikan Matematika FKIP Universitas Jember.

Hobri, 2009. *Metodologi Penelitian Pengembangan*. Jember: CSS.

Hobri. 2014. *"Lesson Study for Learning Community*: Review Hasil *Short Term on Lesson Study* V di Jepang", *Prosiding Seminar Nasional Pendidikan Matematika 28 Mei 2016*, ISBN : 978-602-74238-7-9, hal. 12-21. Pamekasan Madura : Prodi Pendidikan Matematika FKIP Universitas Madura.

Kementerian Ristekdikti, 2015, *Peraturan Menteri Riset, Teknologi, dan Pendidikan Tinggi Republik Indonesia Nomor 44 Tahun 2015 tentang Standar Nasional Pendidikan Tinggi*, Jakarta : Kemenristikdikti.

Kementerian Ristekdikti, 2016, *Surat Edaran Direktur Jenderal Pembelajaran dan Kemahasiswaan Kementerian Riset, Teknologi, dan Pendidikan Tinggi Republik Indonesia Nomor 255/B/SE/VIII/2016 tentang Panduan Penyusunan Kurikulum Pendidikan Tinggi*, Jakarta : Kemenristikdikti.

Khamdit, Sinthawa. 2014. *Research–Based Learning (RBL) in Higher Education*. SUTHIPARITHAT Vol.28 No.85 January - March 2014.

M. Kordaki, 2015. "A Constructivist , Modeling Methodology For The Design Of Educational Card Games," *Procedia - Soc. Behav. Sci.*, vol. 191, pp. 26–30.

M. Makgato, 2012. "Identifying constructivist methodologies and pedagogic content knowledge in the teaching and learning of technology," *Procedia - Soc. Behav. Sci.*, vol. 47, pp. 1398–1402.

M. Vrikki, P. Warwick, J. D. Vermunt, N. Mercer, and N. Van Halem, 2017 "Teacher learning in the context of Lesson Study : A video-based analysis of teacher discussions," *Teach. Teach. Educ.*, vol. 61, pp. 211–224.

Plomp, T. 1997. *Educational and Training System Design*. Enschede, Netherlands: Twente University.

Poonpan, S. (2001). *Indicators of Research – Based Learning Instructional Process: A Case Study of Best Practice in a Primary School.* Bangkok.

Singh, Vandana. 2014. *Research Based Learning: An Igniting Mind. International Journal For Research In Education* (IJRE) (Impact Factor 1.5), Icv: 6.30, Vol.3, Issue:6, Oct.-Nov. : 2014 (Ijre) Issn: (P) 2347-5412 ISSN: (O) 2320-091x.

Slameto dkk. 2016. Pengembangan Model Pembelajaran Berbasis Riset Untuk Meningkatkan Keterampilan Berpikir Aras Tinggi. *Prosiding Konser Karya Ilmiah Nasional* Vol. 2, Agustus 2016 | ISSN: 2460-5506, hal. 213-228

Tim UGM. 2010. *Handbook Research Based Learning*. Yogyakarta: Universitas Gadjah Mada.

Yawen Li. 2015. Enhancing undergraduate education through research based learning: a longitudinal case study. *122nd ASEE Annual Conference & Exposition*, june 14-17 2015, Seattle, WA.

Using Poetry To Enhance Students' Enthusiasm And Activity For Basic Reading Class

Rohmy Husniah[1]& Slamet Asari[2]
[1,2]University of Muhammadiyah Gresik
[1]rohmyhusniah@umg.ac.id

Abstract

Some strategies had beed applied in teaching Basic Reading for the first semester students of English Education Programme in Universitas Muhammadiyah Gresik but some students looked bored, some were sleepy and some ignored the lesson. Finally the lecturer together with the Lesson Study (LS) team of Basic Reading tried to give a new form of text for them to gain their interest in reading. The aim of this paper is to describe how basic reading is taught using a poem as the media to enhance students' enthusiasm and activity in learning basic reading. The method of this paper is descriptive as it potrays the teaching learning process in basic reading class. The LS team used poetry for the Traditional Food reading topic. The steps of using poetry in basic reading are writing the poem, preparing the authentic media, and applying it in the classroom. The result is so impressive; the students are interested and curious to understand the text. Moreover, they also show their creativity in developing the poem used their own imagination and language. Not any student is passive during the lesson. The finding suggests that using literary works in teaching reading is a fun and enjoyful way which is not much used by Indonesian teachers in reading class.

Keywords:*basic reading, media, poem, Gresik traditional food.*

A. Introduction

Basic Reading is the first Reading subject that students take in English Education Programme before they take another reading courses. Because this is basic, the aim of Basic Reading is to train the students with reading skills, fluency, and comprehension (literal, interpretive and critical comprehension). It also trains the students to tell the content of the text confidently because most of students do not have good self confidence to convey their opinion moreover if it is in English. The course will also equipt the students with the information about culture not only from Indonesia but also from other countries. The National Reading Panel (2000) has defined reading comprehension as a highly complex cognitive process involving the intentional interaction between the reader and text to extract or construct meaning.

Unfortunately, the students seem not so enthusiastic and active during this lesson. This may because the lecturer uses the same strategy and kind of reading texts repeatedly for some meetings. She asks students background knowledge about the text, asks them to read the text loudly than gives them worksheets to be done. As a result, they get bored and not interested in joining the lesson. Some students are active but some are not. There are also some students who get difficulties in

following English lesson that it make them more difficult to understand the text well. They usually look confused and do not know what to do with the worksheets. As a result, they are often passive in the class.

Pengajaran traditional (What the experts say). Konsekuensi dari pengaaran secara tradisional. Basic Reading is one of the subects that is designed, prepared and evaluated in team through lesson study. The Lesson study team for basic reading are Rohmy Husniah, Slamet Asari, Candra Hadi Asmara and Ribeh Nadjib Muhammad. After some meetings observations the team finally at the fourth plan the team decided that something has been done to elevate students anthusiasm and activeness in the lesson. The text, media, and strategy must be improved. Usually lecturer uses narrative or descriptive texts for the lesson, the media are power point, the text itself, and worksheets for students. The strategy is common one, warming, reading aloud, and doing the exercises.

The team try to give a new kind of text, which is not so difficult, short in length, interesting, and the content is common for students. English language learners need to be exposed to a variety of genres in the language classroom (Vardell, Hadaway & Young, 2006). Poetry is the best answer for these criteria. To make it sounds common then the lecturer should make her own poem. Then, for media; the media should be interesting and supports the text. Because the reading topic is about traditional food, the team decide that it should be Gresik traditional food; not only do the students recognize the food very well, but also hopefully they will be interested in learning the text about it. The media is the real Gresik traditional food; it is in line with the poem itself. One of the team member; that is Pak Slamet Asari who has been from tho months visit in Japan, gives suggestion to make the questions done orderly from the easiest to the difficult one through "shared questions" and "jumping questions". His suggestion is from the result of his observation during joining the open classes in Japan.

Poetry is used as the text for reading because students usually think that they are not able to understand a long passage. They also feel demotivated with the longer text. They think that the vocabularies are too difficult and therefore the content is not easy to comprehend. According to Vardell, Hadaway, & Young (2002), not only can poetry be a powerful vehicle for developing students' oral language ability, but when read aloud, it can also promote oral fluency and lay a strong foundation for reading in a new language. By using a poem it is hoped that from the first time they see the text they will feel eager to know more about the text. Moreover, when they know that the language is so simple, short, yet interesting to read. Theory about role and teaching use poem. Previous research

1.1 Purpose of the Study

The purpose of the study is to describe how basic reading is taught using a poem as the media to enhance students enthusiasm and activity in learning basic reading in a fun and interesting way.

B. Methodology

The method of this paper is descriptive qualitative because it describes the teaching learning process using a poem to enhance students anthusiasm and activeness in basic reading class.

The steps of teaching Basic Reading use a poem are:

1. Writing the poem about Gresik Traditional Food
2. Making the students worksheets which consist of "shared and jumping" questions
3. Deciding strategy to teach students
4. Forming students into 6 groups
5. Preparing the authentic media
6. Applying them in Basic Reading class.

C. Finding and Discussion

On the seventh meeting of teaching Basic Reading the LS team plan to use poetry as its kind of reading text entitled Gresik Traditional Food. Not only the text, the worksheets together with the authentic media have been prepared to elevate students understanding about the text. Here are the description of teaching Basic Reading using a poem from preparing the text, media, worksheets until applying it in the class:

1. Writing the poem about Gresik Traditional Food

   The topic for the seventh meeting is about "Traditional Food". To make the text is "common" for students and to make them understand their traditional food well then "Opak" as one of Gresik traditional food is choosen as the title of the poem. The lecturer begins to write the poem herself. Parkinson and Reid Thomas (2000, as cited in Sell, 2012 in Khatib& Nasrollahi) in Pourkalhor, also made a list of ten reasons for using literature in the language classroom:

   1. Cultural enrichment
   2. Linguistic model
   3. Mental training
   4. Extension of linguistic competence
   5. Authenticity
   6. Memorability
   7. Rhythmic resource
   8. Motivating material
   9. Open to interpretation
   10. Convenience

   The language of the poem should be concise yet interesting to read. It is to catch students attention the first time they read text. It is also written in rhymed pattern; that is the same or similar sounds at the end of each line, to make students easy to remember and to guess the next line. The poem is about how Opak as one of Gresik traditional food useful for one's life, the

taste of Opak and how to get it. As a place which serves Opak, the lecturer mention a place that is very common for students that is in Koperasi Universtas Muhammadiyah Gresik. It is hoped that the reader feel emotionally embedded with the text. The poem is as follows:

What to do when you're lonely,
Having no friend to chat and come by
Maybe something you can do to ease your worry
To have some snacks.

As they will charm your feeling,
The best company of your boring,
That you can buy with some shillings,
That's the snacks.

So just take your bike and ride it through,
Ding ding ding to and fro,
Came and go passing the meadow,
Merely to get those lovely snacks.

If you have come in Unmuh Gresik,
Just stop your bike to end your seek,
Go on its koperasi and pick,
The most delicious snack you can have: OPAK

Opak is a cute, crunchy, tasty food,
Cheap and brings good mood,
A temptation from Gresik to consume,
Not once in a bluemoon.

2. Making the students worksheets which consist of "shared and jumping" questions

After the poem is written then the LS Team arrange worksheets for students. To enhance students ability in doing the exercises to comprehend the text, the worksheets should be arranged orderly from the easiest to difficult one. The first exercise is aking about kind of Gresik traditional food. It is to recall and to check their knowledge about the traditional food around them as they live in Gresik. The students are asked to write some Gresik's traditional food that they know and describe anything about them.

The second exercise is about understanding the text; the questions are about language feature in the text, vocabularies and answering questions in connection with the poem. The first and second exercises belong to "shared questions" that is questions which can be done by most of students because they are easy to intermediate questions. It to gain students' self

confidence to do the exercises as they can do them without any difficulties and anyone can be actively participated to share their answer.

The last kind of exercise is "jumping question". It is called jumping questions because the question is "jump" or "beyond" the text. It needs students' creative thinking to do that. Therefore, the question is not found in the text. The students should think beyond the "box" and relate it with the content of the text in general.

3. Deciding strategy to teach students

   Lecturer usually asks students to do the tasks both individually or in group. If they do the exercises individually then they should do it alone; each student has their own answer, and when in group they should do it with their group which one answer in one group. In the seventh meeting, the team decide to use collaborative learning where they do the exercises in group only for discussing and solving the probelms yet they should have their own asnwer.

   Collaborative learning is meant to enhance students activity in discussing the problems. It also makes slow learners learn much things from fast learners as sometimes students more understand when their friend explain something to them instead of the lecturer.

4. Forming students into 6 groups

   Because collaborative learning is used as the strategy to teach basic reading at the seventh meeting, then the team divide students into 6 group. Each group consists of 4 students. Ideally, 2 girls and 2 boys but because there are only 3 boys in the class so it cannot be applied. The team arranges each group consists of heteregenous ability students; some are slow learners and some are intermediate to fast learners.

5. Preparing the authentic media

   The last preparation before applying teaching basic reading use poem is preparing the authentic media. Kilickaya (2004) defines authentic materials as "exposure to real language and use in its own community." Genhard (1996) classified authentic materials into three categories as follows:

   a. Authentic listening materials, such as radio news, cartoons, songs, etc.
   b. Authentic visual materials, such as street signs, magazines and newspapers pictures, post cards, etc.
   c. Authentic printed materials, such as sports reports, newspapers, restaurant menus, train tickets, etc.

The authentic media is some Gresik traditional food bought in a store which sells any kind of Gresik traditional food. Some food that is prepared are: Bandeng asap, Opak, Jenang Jubung, Jenang Ayas, and Pudak.

6. Applying them in Basic Reading class.

Pre-teaching

- Explain the lecture's activities

Before starting the class the lecturer explains what they are going to do on the lesson. She tells them that they will explore Gresik Traditional Food, understand the text, do exercises both individually and in groups and share ideas and present group works.

Whilst-teaching

- Explore students knowledge about Gresik's traditional foods

The first activity after explaining the organization of the lesson is exploring students knowledge about Gresik's traditional foods. The lecturer asks students to mention any Gresik traditional food that they know. Many students mention *Nasi Krawu* but many of them do not know much about the food besides nasi krawu. Only some of them who mention some other food just like *Lontong Romo, Opak, Jenang, Otak-otak Bandeng*, etc. Nasi Krawu is the most popular Gresik Traditional food that they know. Even three students from Thailand know only Nasi Krawu.

- Ask students to do the first exercise

After that the lecturer divides them into 6 groups and asks them to write down the names of Gresik traditional food and explain anything they know about it. They must discuss it in group but they have to write down the answer themself. The answer must be individual answer not one answer for one group. Because she asks them to write down their own answer after discussing it with their group, all students look active and none is sleepy or inactive. They share, discuss, and write their answer on a piece of paper.

After 10 minutes, the lecturer asks them to sit in U shape again, not semi circle with their group anymore. She then asks some students randomly to read their answer. And as it happens in the pre-teaching, most of them mention and describe Nasi Krawu well than other food. A student misunderstands about the leaf that cover pudak. She said that pudak is covered by banana tree, in fact it is covered by palm leaf. All students pay a good attention to their friends presentation.

- Show some kinds of Gresik's traditional foods

Twenty minutes have passed when the students finish their presentation. After that the lecturer puts some Gresik traditional food and shows it one by one to each student. She shows Jenang Jubung and Jenang Ayas and walks aroud the students as those two food are not familiar for them and the size are not so big.

Therefore the lecturer approaches them to make them see those two food clearly. All students are eager to see all of the food brought by the lecturer, especially the three students from Thailand. They not only see the food but also touch them. Some of them say "We want to eat some, Mom". As it has been predicted by the lecturer, she shares Opak in a mini package for each student and they may eat it.

- Ask students to read the text aloud

The lecturer turns her slide into a poem. She asks student to read the text. Some students recite the text and one of them recites it very well. Then together with the students, the lecturer explains the main idea of the poem. This activity does not happen for long as the lecturer wants them to understand the poem with their own effort. She just as the facilitator who helps students to depict the content of the poem in their mind's eye.

- give students second worksheet

The lecturer asks students to sit with their group again and she gives them the next worksheet. Not only giving the worksheet in printed one she also displays it in the slide. She explains that students should do the exercise and discuss it with their group in 20 minutes. However, each student must write and submit his/her own work. The exercise is about language focus; synonyms, antonyms, true or false, answering questions from text, etc. They discuss and answer the tasks with their group. All are deeply involved and active in their group discussion.

After 20 minutes they stop their work and the lecturer swap one's answer to other student and discuss and correct it together. Out of 20 questions given all students answer one question wrongly. It is the last question. It is about the synonym of "once in a blue moon" that is also stated in the last line of the poem. All students answer "night" instead of "rarely". It happens because the word "moon" has cheated their thinking; they think that it must be something in correlation with moon, that is night.

- Give students the last worksheet

The last worksheet is about "jumping question" that make students change some words of the poem with their own imaginative words. The lecturer has determined which part of the poem should be replaced with other words. In doing this last worksheet students look more enthusiastic and they discuss with their group what words to replace the original one so that the meaning of the poem will be slightly or totally different with the original one. This activity is done in 15 minutes.

- Ask them to show and read their work

Each group then come forward to recite the poem together. Original poem tells that Opak can be bought by riding bicycle and they can buy it in Koperasi Universitas Muhammadiyah Gresik, but students creatively change that Opak can be bought by riding Becak in drug store or and in one of students shop (they mention the student's name), etc.

Post-teaching

- Together with students Review and conclude the material

All of the worksheets and activity have been done enthusiastically and actively by students. After all groups read their poem the lecturer asks them what

Gresik traditional food they like much. Most of them answer Nasi Krawu. They are also asked other Indonesian Traditional food such as Soto from Lamongan, Ketoprak from Jakarta, Gudeg from Jogakarta, Kupang from Sidoarjo (not from Kupang), the same case also happens for Bikang Ambon which is not from Ambon, etc. They also learn some Gresik traditional food that few of them do not know well like Jenang Jubung and Jenang Ayas, and also Pudak which is covered by Palm leaf instead of Banana tree as they thought before.

D. Discussion

From the second until the sixth meetings (some meetings are done through Lesson Study; that is Plan, Do and See) students are not 100% enthusiast and active following the Basic Reading Class. Eventhough some are active but many of them seem not interested, lazy, and sleepy during the class. This becomes a problem that should be overcome by Basic Reading LS team. For elevating students enthusiasm and activeness in class, the text should be changed into a poem. The result is so surprising, 100% students are then enthusiast and active during the lesson.

The poem is simple but concise. From the first time they know that the text is not long than usual, they feel relax and not being threatened. This is important to build their self confidence; it is easy, and they will be able to "vanquish" it. This emotional preparation has helped them to be ready to learn very well. They will be ready to be active in the class and will not be afraid to do exercises and explore their best ability to understand the text including to show it in the class.

The languange of the poem is light yet meaningful, easy to remember cause it is rhymed. That is why students can learn the text in a fun way. They can guess or predict what word comes after the other. However, they should be aware although the language seems easy but it is full of meaning and some use idiom. It is proved when no student answer correctly on the synonym of "once in a blue moon".

Students are also involved with something they can find around them because the poem is about traditional food that is not strange for them. They can see, touch and taste it so that it is not abstract,they use their senses to feel the text. They know that food therefore they feel involved in the topic being discussed and they try their best to show what they have known and learned.

They have already formed the content of the poem in their head, the strategy of giving the worksheets gradually based on their level of difficulty is precise. By reciting the poem, seeing, touching and tasting the media students have their own adventure in forming the meaning of the text in their thinking. It supports them and gives them confidence to be active in class activities.

They also become creative because they are given chance to "change" the poem based on their creativity and imagination. When they are asked to change some words in the poem, they feel that they are important part in the teaching learning process that they become enthusistic and active in the class. They feel being trusted and respected.

E. Conclusion and Suggestion

Students enthusiasm and activeness are big roles in determining the success of teaching learning process. In order to make them enthusiast and active the lecturer should prepare the material, media and strategy very well. Using poem for teaching basic reading is a fun and interesting way as it is not so common in Indonesia. The language of the poem which is concise, uncommon vocabulary used, and the short length make it is an appropriate text to study. Moreover if the poem is something that students know very well in their everyday life. They will feel that they also "own" the poem.

To support the text choosen the media and worksheets must also be interesting. Employing the authentic media will explore students senses to experience the poem through the real objects. The worksheets must be given gradually based on the level of difficulty that students feel fun in learning reading. In short, using poem, the authentic media and also good worksheet will enhance students enthusiasm and activeness in teaching learning process.

F. REFERENCES

Genhard, J., G. (1996). Teaching English as a foreign language: A teacher self-development and methodology. Ann arbor: the university of Michigan press.

Hadaway, N. L., Vardell, S. M., & Young, T. A. (2002). Choosing and sharing poetry with ELL students. [Electronic version]. *Book Links*, 51-56.

Hadaway, N. L., Vardell, S. M., & Young, T. A. (2006). Matching books and readers: Selecting literature for English learners. *International Reading Association, 10*, 734-741.

Kilickaya, F. (2004). Authentic materials and culture content in EFL classrooms. The Internet ELT Journal, 10(7).

Norris, Jennifer M. (2010). Using poetry to teach reading comprehension strategies to english language learners. Hamline University.

Pourkalhor, Omid. (2013). Teaching reading comprehension through short stories in advance classes. *asian journal of social sciences & humanities*. Vol. 2. No. 2. May 2013.

Implementation of Lesson Study on Integral Calculus Course

M. Yusuf Fajar[1], Erwin Harahap[2], Icih Sukarsih[3], Onoy Rohaeni[4], and Didi Suhaedi[5]

[1, 2, 3, 4, 5]University of Islam Bandung

[1]myusuffajar@unisba.ac.id, [2]erwin2h@unisba.ac.id, [3]sukarsih@unisba.ac.id, [4]onoy@unisba.ac.id, [5]dsuhaedi@unisba.ac.id

Abstract

This paper presents the application of Lesson Study in the Integral Calculus course with the material of Definite Integral as an effort to improve the quality of learning to make the students comprehend towards the understanding of the integral calculus. Lesson Study activities are held on the short semester lectures at 2017 in the Integral Calculus courses.

Keywords*: lesson study, integral calculus*

A. Introduction

Indonesia needs professional human resources in educating students as the nation's future candidates. Through the world of higher education, steps taken to manage educators to become more reliable, active, and creative. Thus, we need an activity that aims to build a community of learning among lecturers so that collaboration occurs in developing the quality of learning, which ultimately created the conditions of lecturers and students who collaborate with each other in science transfer activities in universities. Lecturers are expected to be more creative and active to create professional, active, and creative students as well. Therefore, conducted Lesson Study for Learning Community activities expected to be a bridge to the exchange of information in learning methods.

Integral Calculus is a basic course that must be followed by all students in the Mathematics course of Islamic University of Bandung (UNISBA). The problem in the learning process of integral calculus session is that students do not fully understand about the concept of integrals, especially on the concept of definite integral. Consequently, we need serious efforts in applying learning methods that fit with the course.

B. Method

Lesson study was developed in Japan since the early 1900s. Lesson Study is a direct translation of Japanese *jugyokenkyu*, derived from the word *jugyo* meaning lesson or learning, and *kenkyu* which means study. Thus, lesson study is a study of learning. Through these activities, teachers in Japan review the learning through planning and observation together with the aim to motivate students actively learn and self-derived. Lesson study for learning community is a model of professional

education through a collaborative learning and continuous learning based on the principles of collegiality and mutual learning to build learning communities.

Lesson study is carried out in three stages: *Plan* (design), *Do* (implementation) and *See* (reflection) which is done continuously. The first stage of the plan means planning and designing, that is, a stage in which the lecturer and a team determined to collaborate to design the lesson design that matches the material to be discussed in a course.

The second stage is *Do* or implementation, where a model lecturer performs a planned learning model in an open class. While the other team members as observers who observe the activities that occur during the lecture, especially what is done by students.

The third stage is *See* or reflection, which is a discussion activity conducted after the open class. Model lecturers and observers jointly conduct discussions guided by a moderator. The observer provides input from observations during the course, providing an alternative solution for further learning improvement.

One of the subjects sampled in Lesson Study is Integral Calculus Course. This is based on the consideration that Integral Calculus is a basic course that must be followed by all students in the Mathematics Department UNISBA, and most students still lack understanding of the concept of integral course especially on the concept of definite integral.

C. Findings and Discussion

Lesson study activity consists of three stages: the first stage is *Planning*, the second stage is *Implementation*, and third stage is *Reflection*. At the first stage, the model lecturer and lecturers who are members of the lesson study community, develop the lesson design. At the preparation phase, the lesson design begins with determining the initial activities, core activities, and closing activities. In the initial activities, students are prepared the material to be studied and discussed, namely the concept of rectangular area, triangle area, and trapezoidal area. These three concepts are discussed as starting stage to calculate the area that is known as the *Riemann Sum*. Subsequently, to the core activities, students are asked to discuss about calculating the area under a given curve by determining the area of the rectangular area, starting from two partitions, four partitions, and eight partitions.

From the obtained results, students are asked to create a table lists of area with several different partitions. Furthermore, students are asked to discuss what happens when partitions are multiplied to infinity. From the discussion results, it is expected that students may understand the concept of integral through the *Riemann Sum* approach.

The second stage is the implementation stage which is carried out in open class, where one lecturer becomes model lecturer and some other lecturers become observers.

In the early stages of the lecture, the model lecturer asks the students about the concept of area of rectangle, the area of triangle, and trapezoidal. The students can easily answer the questions. Next, model lecturer direct students to form four groups that will address some problems.

Next, the model lecturer gives the problems to all groups and ask each of groups to calculate the area under the curve $y = x^2, 0 \le x \le 4$ by dividing the area to be calculated into *n* rectangles of equal width (*n* = 4, 8, 16) depicted in Figure 1. The area of each rectangle is calculated then is summed to get the total result.

The group with *n* = 4 calculates the area faster, but for group with *n* = 16 having difficulty and require quite long time to calculate. Furthermore, students are asked to discuss how if *n* is propagated to infinity. Students have difficulty understanding this propagation. To overcome this problem, the model lecturer provides help by using an application of *Riemann Sum* from Wolfram Mathworld for a larger *n*, for example with *n* = 32, *n* = 64, or *n* = 128, as depicted in Figure 2. Furthermore, the obtained areas are shown in table 1.

From figure 2 it can be seen that the bigger the value of *n*, the wide area obtained is almost wide area under the curve $y = x^2, 0 \le x \le 4$. Furthermore, in the same way will be calculated the area under the curve $y = f(x), a \le x \le b$, by dividing the interval [*a*,*b*] into 4 partitions, as depicted in Figure 3, with

$$a = x_0, x_1, x_2, x_3, x_4 = b,$$

$$\Delta x = \frac{b-a}{4} \quad .$$

Students are asked to discuss the calculation of area and obtain a wide area formulation as follows:

$$Area = f(x_1)\Delta x + f(x_2)\Delta x + f(x_3)\Delta x + f(x_4)\Delta x$$

In the same way, the formulation can be declared for any *n*.

$$Area = f(x_1)\Delta x + f(x_2)\Delta x + f(x_3)\Delta x + \ldots + f(x_{n-1})\Delta x + f(x_n)\Delta x$$

or it can be written in the form of sigma notation as follows:

$$Area = \sum_{i=1}^{n} f(x_i)\Delta x$$

Next, if *n* is propagated in to infinity, it will be obtained:

$$Area = \lim_{n\to\infty} \sum_{i=1}^{n} f(x_i)\Delta x = \int_a^b f(x)\,dx$$

The obtained formulation is a definite integral concept with the lower limit *a* and the upper limit *b*. Furthermore, by using the basic theorem of calculus, the area obtained under the curve is:

$$Area = \lim_{n\to\infty} \sum_{i=1}^{n} f(x_i)\Delta x$$
$$= \int_a^b f(x)\, dx$$
$$= F(x)\Big|_a^b = F(b) - F(a).$$

After students understand how to calculate the area under a curve at a closed interval using a definite integral concept, students are asked to discuss a problem as follows:
The Gardening Agency of Bandung City will make the existing garden pond with the form depicted in Figure 4. The Poolside will be planted with grass. Calculate how much area will be planted by the grass.

The third stage is reflection where implemented after the open class activities take place. One moderator leads the reflection activity to discuss some of the findings that submitted by the observer, as follows:

1. At the beginning of the group discussion, the observer found students who have difficulty in completing the given worksheet. The difficulties encountered are in determining the value of a given function especially in groups with large partitions (n = 16)
2. For large partitions (n = 8 and n = 16), students do not need to calculate the area because it will take a long time. Model lecturer must find an appropriate strategy so that the learning process runs effectively. Simply use the *Riemann Sum* application to discuss if the n partition is enlarged to infinity.
3. There are found groups that are less able to communicate with their friends within the group, as well as communication between groups are still lacking. Therefore, the model lecturer should facilitate communication between students in groups and communication between groups. If needed, the model lecturers are required to move students from one group to another to make the group discussion work better.

D. Conclusion and Suggestion

From the description above, it can be summed up as follows:

1. Implementation of Lesson Study in Mathematics Department of UNISBA in Integral Calculus course at academic year 2016/2017 has been done in accordance with the stages of Lesson Study, with some improvements for the next lecture.

2. Lecturers can plan lesson design collaboratively, to obtain a more innovative lesson design.
3. Lecturers get input from the observer about the learning that has been done for the improvement of learning in the future.
4. The change of teaching method from the lecture method becomes lesson study where the active lecturer teaches becomes a learning oriented approach to the active student learning.

Based on the conclusion above, it can be suggested for further research as follows:

1. Lesson Study is suggested to apply to all subjects in department of Mathematics UNISBA, as an effort to improve the quality of learning.
2. Each lecturer conducts research from the Lesson Study activities that the lecturer has performed.

E. References

Depdiknas, 2003., Undang-Undang No. 20 Tahun 2003 tentang Sisdiknas, Jakarta.

Iiris Attorps,… , Kjell Björk, Mirko Radic, *Varied Ways to Teach the Definite Integral Concept*, International Electronic Journal of Mathematics Education – IΣJMΣ, Vol.8, No.2-3, University of Gävle, Sweden.

Purcell, Edwin J., 2010, Kalkulus, Jilid 1, Erlangga, Jakarta.

F. Appendices

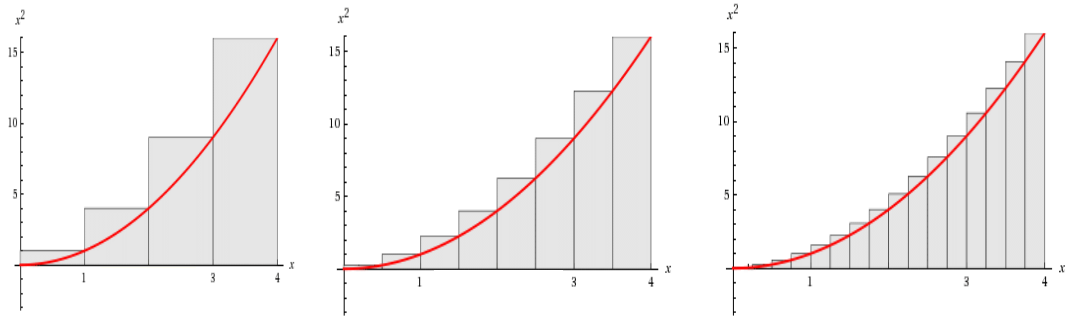
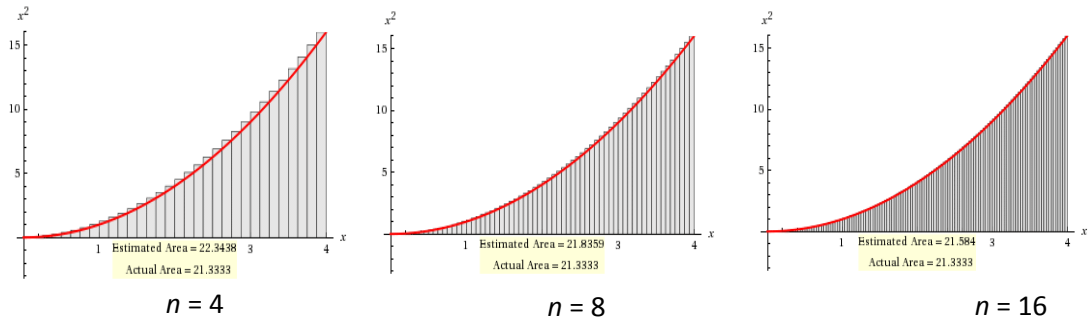


Figure 1. : The area of rectangle with n = 4, 8, and 16.



n = 4 n = 8 n = 16

Figure 2. : The area of rectangle with n = 32, 64, and 128.

Table 1. : The area for different *n*

No.	n	Area
1.	4	30
2.	8	25.5
3.	16	23.375
4.	32	22.344
5.	64	21.836
6.	126	21.584

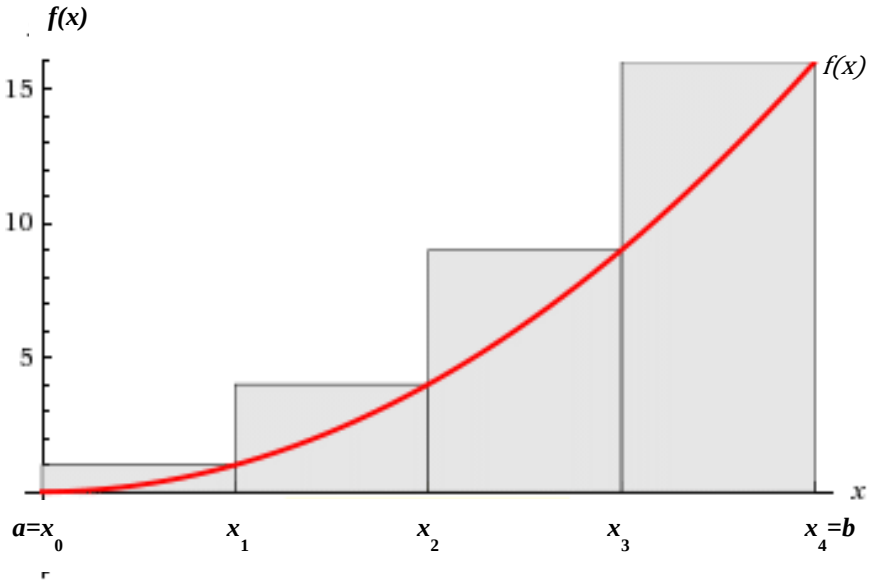


Figure 3. : Range [a, b] divide into 4 partition

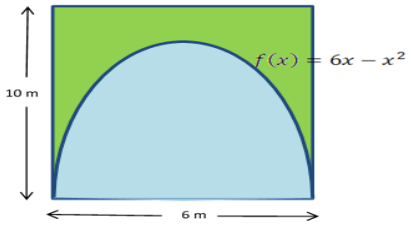


Figure 4. Gardenpond

Development of Lesson Study for Learning Community to Increase Empowerment of Teachers and Quality of Learning Innovation in the Faculty of Mathematic And Natural Sciences Of Pakuan University

Sri Setyaningsih[1)], Tri Saptari Haryani[2)] ,Prihastuti Harsani[3)]
1) Vice Dean of Academic Affairs, 2) Head of Biology Study Program; 3) Head of Computer Science Study Program
sri-setya@yahoo.com

Abstract

Lecturers as professional educators must have idealism and high morale, can work professionally, especially in designing the teaching program and carry out the learning process and can provide "expert service" according to the progress of science and technology.The purpose of this study is to improve the quality of learning innovation, to build learning communities among lecturers, among students, and to determine innovative learning models that are appropriate to the conditions and situations in each study program.The object of the research is the students who follow the lectures on even semesters in 2016-2017 from five study program, namely Biology, Chemistry, Mathematics, Computer Science, and Pharmacy.Research of Lesson study was conducted by combining three cycles in three stages of learning, namely plan, do, and see, with classroom management using Contextual Teaching and Learning aswell as Problem Based Learning.The results showed that, all the learning stages that include the cognitive, affective, psychometric has successfully invited students enthusiastically from the beginning to the end of learning, seen a significant increase in the value of completeness reached 91%.The implementation of lesson study during this research has also strengthened the collectivity between the lesson study team, establishing mutual learning, learning community among lecturers in each study program, and improving the professionalism of lecturers as educators in order to implement the Tridharma of Higher Education.

Keywords: empowerment of lecturers, quality of instructional innovation, FMIPA-UNPAK

A. Introduction

Law No. 14/2005 on Teachers and Lecturers and Government Regulation No.37 of 2009 on lecturers, states that lecturers are professional educators and scientists with the main task of transforming, developing and disseminating science, technology and the arts through education, research and devotion to the community.This regulation emphasizes the profession of lecturers is not only a professional educator, but simultaneously Lecturer is also a scientist and pioneer in advancing the nation.

Miriam Zukas (2006) emphasizes pedagogic meaning for a lecturer can be viewed from three angles, namely: (1) the teacher as charimatic subject, who understand how to teach good, (2) the teacher as component craftperson, a lecturer as an expert in the field in accordance with the competence, and (3) the teacher as reflective parctioner, the lecturer as the implementer of the learning practice.

The current constraint is that the empowerment of lecturers in Unpak has not been as expected, as shown by the survey and monitoring data from the Institute of Development and Increasing Instructional Activity (LP2AI) of Pakuan University that 25% have negative perception in some aspects reviewed.

Efforts to improve the quality of academic education are reviewed by a curriculum that is aligned with the Indonesian National Qualification Framework (KKNI), followed by improving the quality of learning in line with the Student Centered Learning (SCL) approach.

Therefore, in order to change the paradigm of teaching lecturers (teacher centered) to be a lecturer to teach students (student centered) required a reform of learning through community empowerment to learn from each other.Therefore, in order to change the paradigm of teaching lecturers (teacher centered) to be a lecturer to teach students (student centered) required a reform of learning through community empowerment to learn from each other.

Lecturer is very determining a learning process. Jack C Richard stated "Many things can be done to create the context for good taching, but the teachers themselves who are ultimaty determine a success of program". Freely means that lecturers play a role in the good or bad and the success or failure of a learning.

Lawrence Ingvarson quoted Richardson as saying two differences between good teachers and succesful teaching, that good teachers who align their teaching according to disciplinary standards, the completeness of schools using appropriate methods with moral consideration to improve competence in accordance with the material taught.

While good teacher means the students get what kind of skills that educators expect. The FMIPA of Pakuan University has organized a learning process that is in line with an inquiry-based, research-based, problem-based (SCL) approach to Student Centered Learning (SCL). Since 2012 FMIPA has received research grant and dedication to the society with the highest number of other faculties in the University of Pakuan. However, in the implementation, the results of research and dedication of lecturers are still many that can not be applied in the learning process, so it has not been able to improve the quality of learning optimally. From the result

of survey of FMIPA quality assurance team in aggregate lecturers at FMIPA still less in terms of: 1) student involvement in research, development / design engineering, 2) utilization of media and learning technology, 3) use of research result to improve the quality of lecturing.

Based on the above description, it is necessary a way or method of coaching the lecturers through a collaborative activity among lecturers, namely by conducting lesson study, as an alternative to overcome the problem of learning practices that have been considered less effective. Kemmis & Mc Taggart (1990) mentions six stages: (1) establishing a lesson study group, (2) focusing lesson study, (3) planning a lesson plan, (4) implementing classroom learning, (5) discussing and analyzing learning has been done, and (6) reflects on learning and planning the next steps.

The objective of the program is to improve the quality of learning through the Lesson Study for Learning Community (LSLC) in FMIPA UNPAK that is to improve the quality of learning innovation, to build learning communities among lecturers, between students and between students with lecturers, and to determine innovative learning models that are in accordance with the conditions And the situation at the Pakuan University FMIPA, to improve the scientific publications of the lecturers.

B. Method

The approach of this research is action research through improvement or improvement of quality, both micro and macro, because this research aims to improve learning by giving alternative action with lesson study model. The alternative action was made by the researcher, who then tested it to the students in the lesson.

The research was conducted for 4 months starting from May - July 2017 at Faculty of Mathematics and Natural Sciences, including Biology, Chemistry, Mathematics, Computer Science and Pharmacy with research object are students in Semester Even Semester of Academic Year 2016 - 2017. This research involves 2 (two) model lecturers and 10 (ten) observer lecturers consisting of lecturers of FMIPA Pakuan University. The observation and evaluation stage is carried out during the learning process, and is assisted by the collaboration team and the model lecturer. Lecturer activities in teaching and learning activities using a model of lesson study based on contextual learning (CTL) and Problem Based Learning (PBL)

Data collection is done by documentation, observation, field note, written test and interview. The data used include learning outcomes, affective attitudes, student activeness, and lecturer skills in the application of learning management and application of learning models. The instruments include the observation sheet consisting of the planning stage (Plan), implementation (Do), and reflection (See), each stage is done in three cycles, while the interview is done directly to the students as research object. Parameters observed were student learning activities, collaboration and communication between students during the learning process, and

learning model. Refletion is carried out on the basis of the use of CTL and PBL learning models in the classroom at the end of the cycle and is done through three cycles.

Data analysis was done by using descriptive statistics to know the number of categories of student learning activities, collaboration and communication among students during the learning process took place.

C. Findings and Discussion

The implementation of collaborative, communicative, and innovative learning models is the theme of this research. Previously, some preparations were made in the preparation of chapter design and lesson design for the preparation of open class, while the socialization was accompanied by representatives of Kemristekdikti and the holding of a workshop at FMIPA involving all lecturers representatives of the study program within FMIPA. From the results of research conducted in 3 (three) cycles. described in detail the findings and discussion of each stage of the lesson study in each cycle.

The one-cycle cycle begins on Thursday, June 8, 2017, at 2 pm-6pm. Implementation of Cycle I Action is designed in accordance with the concept and strategy that has been planned from the beginning. The problem identification for the lesson study activities involves the selection of the subject matter, the selection of methods, the media, the type of evaluation to be applied, and so on. From the results of the identification discussed with the lesson study group, opinions and suggestions came from lecturers. The important things to discuss are the observation sheets, especially the determination of the aspects that need to be considered in a learning process and the indicators are both seen from the behavior of lecturers and students. Furthermore the results of problem identification and learning tools are discussed to be refined, as well as determined who will act as a Model Lecturer.

Implementation of actions in cycle I include: a). Planning (Plan). The lesson study team that is the lecturer and collaborator discuss the lecture plan in the form of Learning Implementation Plan (RPP) and Syllabus and the learning material (hand out) which has been made by the lecturer. Implementation of learning (Do) This activity is done Lecturer hand out hand out and grouping students

The learning process that is done at one stage of the cycle is adjusted to the lesson plan in RPP. Students sit in accordance with the arranged seating plan. At the time of the learning activities took place, the observer team observed groups consisting of 4-5 students. Implementation of Contextual Teaching and Learing begins at the pre-exposure stage. The stage of initiation and acquisition is the next stage which is still included in the core activities aspect. This stage is the application of CTL with students given a duty sheet to be discussed in the group. By applying the principle of Lesson Study which emphasizes on collaborative learning, model lecturers make students learn more creative, and active and involved in class discussion forum, so that through the group discussion interaction between model lecturers with students and students with other students effectively.

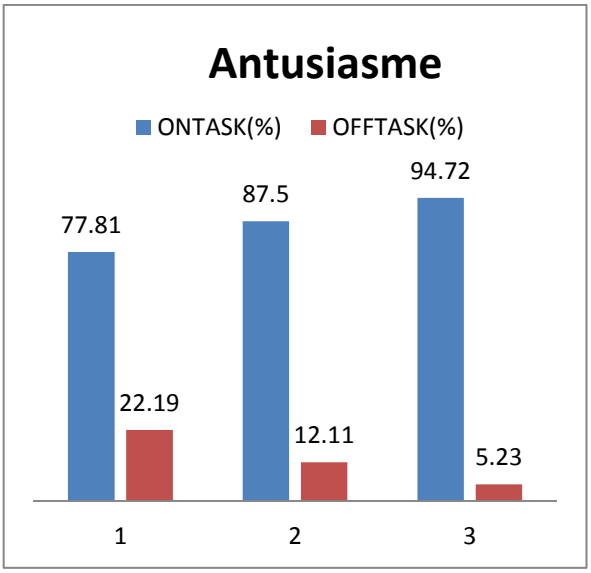
Stage plan in cycle 2 and cycle 3 is implemented based on recommendation result on cycle 1 reflection. The team formulates the teaching design by reflecting all the flaws in cycle 1. Based on the implementation see, then on cycle 2 and cycle 3 will be repaired. Stage Do in cycle 2 and cycle 3 is implemented with more emphasis on learning method. In general, the learning steps used the same as cycle 1, only based on the reflection on the 1st cycle of which more improved student conditioning, MFIs further enriched explanation, group placement has been set since before the start of learning, and given additional time for group discussion.

Learning outcomes were observed through five different capacities / capabilities achieved, including: 1) intellectual skills, verbal information, cognitive models, attitudes, and motor skills.

Observations made by observers at cycles 1, 2 and 3 during the process of learning activities took place enthusiastic students are exchanging knowledge in pairs or groups are called on task and otherwise off task is a conversation that is not associated with learning, such as chatting, joking, etc. presented in Table 1.

Table 1. Students' enthusiasm cycle 1, 2 and 3.

Cyclus	*ON-TASK(%)*	*OFF-TASK(%)*
1	77,81	22,19
2	87,50	12,11
3	94,72	5,23



Picture 1. Graph Enthusiasm Students Learning Cycle 1, 2, and 3

Based on the Table and the data Graph of learning antuasias during the learning process in cycle 1 to 2 and 3 increased ontask from 77.81% to 87.5% and at third cycle 94.72%. The data shows that there is an increase in student enthusiasm in the second cycle for ontask of 9.69% and in the second to third cycle of 7.22%. This means that from cycle one to cycle 3 it has a significant increase of 16.91% while Offtask decrease from cycle one to cycle two 10.08% then from cycle 2 to 3

equal to 6.88%. This means that from cycle one to cycle three decreased significantly by 16.96%.

The results of the cognitive domain in the form of test are carried out after the final learning cycle 1, cycle 2, cycle 3. Obtaining the result of student's cognitive test score can be seen in Table 2.

Table 2. One of the Cognitive Test Result Results of each Cycle in Study Program of FMIPA

Cyclus 1			Cyclus 2			Cyclus 3		
Score	Student	%	Score	Student	%	Score	Student	%
55	2	6%	65	2	6%	70	2	6%
65	1	3%	72	1	3%	72,5	1	3%
70	3	9%	75	1	3%	75	4	13%
72,5	1	3%	77	2	6%	77,5	1	3%
75	3	9%	80	3	9%	80	5	16%
78	2	6%	83	2	6%	82,5	2	6%
80	5	16%	85	2	6%	85	10	31%
82,5	5	16%	88	5	16%	87,5	2	6%
85	4	13%	90,5	4	13%	90	2	6%
87,5	1	3%	92	4	13%	93	1	3%
90	2	6%	94	3	9%	95	1	3%
95	3	9%	96	3	9%	100	1	3%
Amount	32	100 %	Amount	32	100%	Amount	32	100 %
The number of students completed		25	The number of students completed		26	The number of students completed		29
% Students completed		78%	% Students completed		81,25 %	% Students completed		91%

Based on the cognitive test test at the end of cycles 1,2 and 3 there are 7 students or about 21%, 6 students or 18% and in cycle 3 there are 3 students or about 10% of students do not achieve minimal mastery score (KKM75), while 29 students or around 91% of students have reached KKM. In cycles 1,2 and 3 the highest and lowest values are presented in Table 3.

Table 3: Average Cognitive Learning Outcomes

Average Cognitive Learning Outcomes					
Cyclus 1		Cyclus 2		Cyclus 3	
% Completed	Problem Trouble	% Completed	Problem Trouble	% Completed	Problem Trouble

78%	79	81,25%	75	91%	70

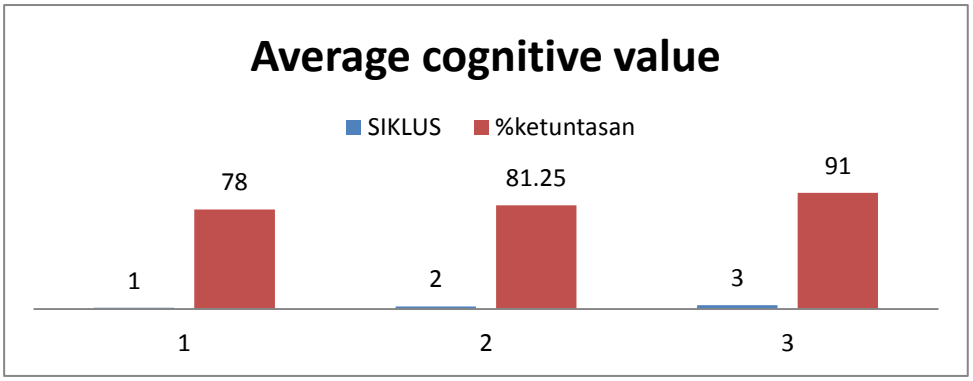


Figure 2. Graphic Completion of Cognitive Values Students cycles 1, 2 and 3

Steps in the application of CTL and PBL contained in this stage of initiation and acquisition of students divided into groups and elaboration stages where given the tasks done in groups and discussions. This is manifested in the form of an explanation of the concept of basic concepts in Software Engineering on Ps Computers, using concept maps where the explanation uses its own words. Without the opportunity to discuss, ask questions to practice with other students, the real learning process will never happen.

Affective learning is one of the variables that must be improved in the implementation of Lesson Study for Learning Community in the FMIPA Level. Students with an interest in learning and a number of attitudes will feel excited and even challenged to study a particular course so that it will gain success.

The results of affective learning or student attitudes toward the courses from cycle 1 to cycle 2 and then to cycle 3 have a significant increase. The acquisition of student scores for the affective domain in the highest value cycle is 94, and 94% have obtained the SB (excellent). When referring to the success criteria of all students obtaining a minimum of B, this indicates that the acquisition of affective values of students is categorized very well. Accordingto Krathwohl aspects of attitude include category receiving, responding, assessing, organizing, and catastrophizing values. Paul Eggen says that affective domains are important for learning, domains related to attitudes and motivations. Student motivation is important if they want to excel and affective sphere will affect the cognitive and psychomotor aspects. It is evident in this study that when affective students increase from cycle 1 to cycle 2 and then to the third cycle, the implication is that the cognitive value at the end of cycle 3 is very good, 94% of 29 students out of a total of 32 students get very good grades. At the end of cycle 3 the affective student's mean score of 84, and 91% of KKM completion students proved that the application of lesson study model based on Contextual Teaching and Learning and Problem Bassed Learning succeeded in improving students' affective learning outcomes and

can foster interest and motivation of students in learning process . As Howard Gardner puts it in the Quantum Learning book that one will learn with all his ability if the student likes what he or she is learning and will then feel happy to be involved.

Assessment of learning outcomes psychomotor domain for the course of Software Warfare in Ps Computer Science in this study is observation activities conducted by the observer. Observed is the skill of students in discussions, ranging from skills in expressing opinions, answering questions and cooperation in groups. In cycle 1, there are 7 students get the predicate B, which is categorized incomplete, in cycles 2 and 3 there is an increase of students have obtained value above B. This proves that the application of Lesson Study method based on Contextual Teaching and Learning and Problem Based Learning can improve the skill students in the discussion.

Referring to the result of Reflection on cycle 1, it is deemed necessary to encourage students to actively communicate their opinions and answer questions. As Uzer Usman said that active involvement of children in teaching and learning activities is necessary for learning to be effective and to achieve the desired results. Strategy is implemented so that all students want to ask any group any presentations, representatives of the groups who ask are asked in rotation. The classroom management strategy must be mastered by the lecturers of the model so that the learning will be done according to the expectation of improving the quality of learning innovation, building the learning community among lecturers, among students and determining the innovative learning model. Enthusiasm and high interest in learning, followed by attitudes and motivation are also high, full student engagement activities in the learning process, it will affect student cognitive outcomes. Likewise for affective and psychomotor domains will affect students.

D. Conclussion

Based on the results of research through LSLC in FMIPA seen to improve student learning outcomes in learning in each course include cognitive aspect 94%, affective 94% minimum students get very good value and psychomotor equal to 96,2% than at first reflexive moment in third cycle There was a significant change. The quality of learning innovation, the building of learning communities between the lecturers, among students, is seen an increase in student enthusiastic learning on the third cycle ontask 94,72% while offtask decreased by 6.88%. Learning model Lesson study based on CTL and PBL quite good as innovative learning model Which is in accordance with the conditions and situation in FMIPA.

References

Zukas Miriam. (2006). Pedagogic Learning in the Pedagogic Workplace: Educator<s Lifelong Learning and Learning future, dalam International Journal of Pedagogies & Learning

Richard Jack.(2001). Curriculum Development in Language Teaching, London : Cambridge University Press.

Krathwohland Anderon .L.W (2001). A Taxonomy for learning Teaching and Assesing A revision of Bloom"s Taxonomy of Education Objectives New York: Addison Westey Lonman Inc.

Eggen, Paul., Don Kauchak. (2012). Strategi dan Model Pembelajaran: Mangajarkan Konten Dan Keterampilan Berpikir. Jakarta: Indeks.

Kemmis, Stephen & Mc Taggart, Robin (1992). The Action Research Planner. Victoria: Deakin University Press.

Gardner, Howard. (2003). Kecerdasan Majemuk. Batam: Interaksar

Ingvarson Lawrence.(2014). Standartds –Based Professional Learning and Certification: by The Profession, for the Profession. Bauserman (editor), the Guliford Press, 2014, h.392

Uzer UsmanMoh. Uzer Usman.(2008) Strategi Pembelajaran, Jakarta : Erlangga

The Effects Of Instructional Methods and Attitude on Student's Learning Outcomes in Writing Scholarly Work (Experimental Study on Study Program of Indonesian and Art Language Education STKIP Hamzanwadi Selong)

Padlurrahman
Hamzanwadi University, Selong, Indonesia
rahman_dicharief@yahoo.co.id

Abstract

This research aimedat determining the effects of instructional methods and attitude in Indonesian language on students' learning outcomes in writing scientific work. This instructional methods comprised drill, practice and tutorial. This was an experimental research with treatment by 2x2 level design. The participants of the research consisted of two groups; experimental and control group. The data collected werestudents' attitude on Indonesian language and learning outcomes with survey and test. Data were analysed with ANAVA and with F-Test and T- test.The research depicted that 1) there wasgreater result for those students taught with drill and practice than tutorial, 2) It was also found that there was strong interaction between instructional methods and attitude in Indoesian language on learning outcomes, 3) there was higher score for those students taught with drill and practice than toturial for those students who had positive attitude on Indonesian language, and4) there was higher score for those students taught with drill and practice than toturial for those students who had negative attitude on Indonesian language.
Keywords: *Instructional Methods, Attitude on Indonesian Language, Learning outcomes.*

A. Introduction

Currently, the major issues faced by collegestudents of the study program of Indonesian and ArtLanguage Education of STKIP HamzanwadiSelong are the difficulty in writing various effective sentences onacademic paper. These difficulties included: 1) expressing ideas, thoughts, and ideas by using appropriate word choices; 2) linking up with ideas between one paragraphs with another; 3) arranging sentences with appropriate sentence patterns; 4) using other appropriate formal lingking words and markers; 5) using proper punctuation and spelling; And 6) arranging several types of paragraphs that fit the various scientific work criteria. These problems had implications for the low ability of students in various writing activities such as: 1) writing official letters ;non-admission to attend the class, letters of invitation between units of student activities division, letter of cooperation request to other institutions 2) writing papers for presentation materials; 3) writingreport; 4) and writing the final assignment.

The prilimenary results of the study indicated that there were some examples of mistakes often made by college students in writing various effective sentences on academic paper included: 1) The flow of the content was not considered well, 2) writng focused on the author, not on the idea or thing that was disclosed, 3) The use

of inappropiriate Compulsory elements; subject and predicate, 4) improper use of instruction, 5) improper use of spellings such as capital letters, abbreviations, punctuation, etc. 6) The use of prefixes "in" and "to" Should be written attached to the word that followed it but the college student mostly wrotethem by separating "in" and "to" prefixes on the word that followed. These identified errors resulted in the low students' learning outcomes of the scientific writing techniques.

Learners' Learning outcomes are characterized by various aspects that according to Bloom included the cognitive, affective, and psychomotor aspects. Benjamin S. Bloom (1956: 7) says that our original plans are called for a complete taxonomy in three major parts - the cognitive, the affective, and the psychomotor domains.

In general, the above empirical conditions are caused by several factors; 1) the low understanding and mastery of students about the concepts of language 2) the existence of negative perceptions of the Indonesian language, 3) the perception on easy writing for indonesian course, 4) the habit of writing Indonesian using non-acadimic language, and 5) the assumption that writing requiredonly the terms of communication.

The skill of writing scientific work is as one of the intellectual form or marker of the scientists. The skill to write a scientific work is not obtained suddenly but can be obtained through systematic exercises. Lou Russell (2012: 261) says that fast learning practitioners believe that the best learners learn from the exercises in which the exercises taught to be the most important part of this issue. This exercise is intended for knowledge and writing skills to be owned by learners and can be mastered completely. Merrill & Salisbury in Roblyer and Doering (2010: 79) mentions that the exercises and practices can meet the needs of learners. This activity provides a more concrete or real learning experience through the creation of copies of experiences that approach the true atmosphere.

In addition to this, writing skills can also be achieved through tutoring performed by the mentor. This tutorial can immidiately be done by a tutor or through a module or other teaching materials. Tutors can provide special assistance to learners who are having difficulty with certain skills.

The above description shows the importance of systematic training and guidance to learners to build students writing skills. OemarHamalik (2011, 95-96) mentions that the benefits of training in learning include: 1) can provide educational experience, 2) to establish learning outcomes , The mastery of aspects of student behavior change, such as: habits, skills, attitudes, understanding, appreciation, etc. 3) to develop thinking ability to solve problems faced both individual and in groups, 4) Meaning for the daily life of the students, transfer of learning for example, 5) to help more effective ways of learning such as memorization, replication, and automation of answers, and 6) to encourage and expand students' learning motivation

Psychomotor skills are one aspect of learning outcomes allegedly impossible to achieve even though learners have been given repetitive exercise or continuous training. This is predictably caused by other factors that can affect the learning

outcome on the attitude towards the Indonesian language itself. The result of Budiawan's research (2008) concluded that language attitudes and learning motivation influenced the learning achievement of Indonesian and English subjects.IcekAjzen (2005: 3) explains that attitude is seen as a combination of affection, cognition, and conformity reaction toward attitude objects. The same thing was put forward by Bagozzi and Burnkrant Mc. Guire quoted by MyintSweKhine (2015: 7) that the components of attitude always refers to the question of what is known (what we know), what we perceive (how we feeel), and how to act (How we behave).

Based on the above description and to realize the ability to write scientific papers in accodance with positive attitude on the language used then needed a instructional methods. Instructional method in question should be able to allow lecturers to encouragepyshicomotor skills, habits and students' confidence so that the material learned can be more meaningful and effective. Margaret D. Roblyer and Aaron H. Doering (2010: 80) mention that although curriculum increasingly emphasizes the problem of solving and higher order skills, teachers still have to learn and remember correct procedurs. Learning meant by Roblyer and Doering is learning by drill and practice model. Drill and practice model.

Drill and practice method are based on 4 theories of Indonesian language learning; behavioristic theory, constructivism, nativism, and cybernetics. Behavioristic theory explains the existence of aspects of language behavior obtained from the relationship between stimulus and response. While constructivist theory focuses on the development of self and group significantly in building knowledge (Gagnon and Collay, 2001: 12). The theory of nativism views that knowledge of the language actually already exist and attached to each individual. Thus, this knowledge is maintained and developed more deeply through exercises and practices. Meanwhile, the theory of cybernetics is understood as a theory that studies mutual relationships. Bruce Joyce and Marsha Weil (2009: 380) mentioned that humans have a control system that produces an action or behavior that expects feedback from others.

Drill or exercses methods are not only used to increase the knowledge and skills of learners, but can also improve the talents and interests of learners of certain skills. While the practice given by teachers / lecturers aims to provide opportunities to learners develop the basic skills of their techniques and foster attitudes toward psychomotoric development of the learners.

In relation to the above description and to realize the ability to write scientific papers based on positive attitude on the language used, it is required an instructional method that allows lecturers to encourage students' pyshicomotor skills and spur the habits and students' confidence so that the material learned can be more meaningful and effective. The main issues that would be discussed in this study is whether there is an effect of instructional methods and attitudes on the Indonesian language towardlearning outcomes of scientifc writing techniques of college students in the study program of Indonesian and Art Language Education in STKIP Hamzanwadi Selong? Thus, this study aimedat determining the effect of

instructional methods and attitudes on the Indonesian language toward the students' learning outcomein writingscientific work. The instructional method consisted of drill and practice method and tutorial.

B. Method

This study used a quasi experimental design (quasy experiment). The independent variable used was the learning method consisting of drill and practice method, and tutorial. The dependent variable was the students' learning outcome in writing scientific work. The varaiabel attribute was the attitude on the Indonesian language. Attitudes on the Indonesian language were divided into 2 categories of positive attitudes and negative attitudes on the Indonesian language. This research used design treatment by level 2x2 and presented in constellation of research as follows.

Treatment Attribute variable	Instructional method (A) *Drill and Practice* Method (A_1)	 Tutorial Method (A_2)
Positive attitude on Indonesian Language (B_1)	A_1B_1 $(X, Y)_{11}K$ $K = 1,2 \ldots n_{11}$	A_2B_1 $(X, Y)_{21}K$ $K = 1,2 \ldots n_{21}$
Negative attitude on Indonesian Language (B_2)	A_1B_2 $(X, Y)_{12}K$ $K = 1,2 \ldots n_{12}$	A_2B_2 $(X, Y)_{22}K$ $K = 1,2 \ldots n_{22}$

The population of this research was the fourth semester students of Indonesian and Art Language Education study program in academic year 2014/2015 STKIP HamzanwadiSelong.This comprised 92 people and consisted of 3 classes. The sample of this study was taken from 2 classes determined at random by assigning 1/3 of the number of students who had a positive attitude and 1/3 students who had a negative attitude to the Indonesian language.

Instruments used in collecting data were a questionnaire of students' attitudes and test of students' learning outcome in writing scientifc work. All instruments used had been tested through instrument validity test and item validity. Furthermore, in order to maintain internal validity, there had been control of threatening things such as the bias of the above group selection, the effects of the tests given, and the instruments used. For group selection was done carefully and based on the results of randomization with the assumption that all subjects werehomogeneous. While the effects of the tests given were tested on an objective

test and actually used instruments that had been tested for validity and reliability both content and empirical.The data of the collected research were analyzed using 2-tailed variance (ANAVA) analysis with F test and continued with the Dunnet test.

C. Findings and Discussion

1. The students' learning outcome in writing scientific work technique taught using the method of drill and practice were higher than the students' learning outcomes taught using tutorial.

The result of variance analysis showed that F-test 22.87>F-table (0.05; 1/38) = 4.17 then Ho was rejected. In essence, it was concluded that there were differences in students' learning in writing outcome taught using the method of drill and practice from the learning outcome of students' writing scientific paper technique taught using the method of tutorial. This meant that the value of F-test produced purely derived from the effect of treatment of drill and practice methods given to the students. This was in accordance with the average learning outcomes of students who were taught with drill and practice method of 77.76 higher than the average student learning outcomes that were taughtby tutorial method of 60.47.

The findings of the research above were due to the fact that learning using drill and practice method emphasized skill aspects. This finding suggested that language learning including the skills of writing scientific papers should be able to support anindividual mastery of a language used that was called the competence and the real appearance shown directly by the learners themselves called performance. Thus, to achieve these two aspects was very appropriate when teachers or lecturers used drill and practice methods in learning Indonesian language including writing scientific papers. Kongskey itself defines learning as a change that occurs through exercises and practices.

In addition, the findings of research showed that the learning outcome of writing scientific papers on students who are taught using the method of drill and practice was higher than the tutorial method reinforced the theory of behavioristic learning pioneered by Thorndike, Pavlop, and Skinner which mentioned that learning happens to each the individual is a behavior that can be observed. This observable behavior can be seen from the practice and practice done directly by each learner both individual and groups.

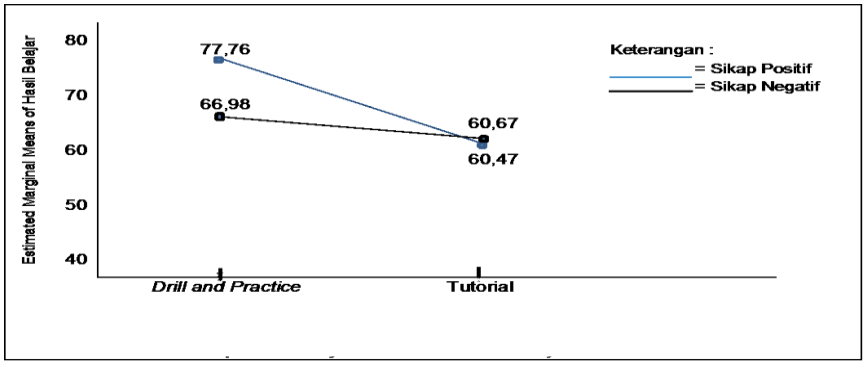
Behavioral changes called attitudes, knowledge, and skills can be obtained through structured exercises and practices. These exercises and practices for learners should be an activity undertaken independently by each individual learner. This is because knowledge and understanding of learners can not be obtained passively but can only be obtained actively through individual experience in accordance with constructivist learning theory. This theory emphasizes that learning should be centered on learners and that learning is the responsibility of learners. Teachers or lecturers should always act as facilitators and motivators during the lesson.

Both theories above were theories that underlied the need for drill and practice methods in learning that prioritized aspects of writing skills. Similarly, the tutorial method that also prioritized aspects of behavior that can be observed but in the implementation still occured the role of tutors so that the responsibility of learners less attention, Even learning using tutorial method was seen as classroom instruction by tutors. Thus, the theoretical basic differences between these two methods of learning reinforced the finding of differences in the effect of drill and practice methods with tutorials on learning outcomes, where drill and practice methods were more effective than tutorials in influencing student learning outcomes. These findings supported Arwani's findings in 2014 that active learning models and drill methods could improve learning outcomes by up to 78.38% from the previous state of 50.9%.

On the other hand, the theory of cybernetics which stated that the need for feedback from others on individual actions or behaviors is the basis of both methods, both of which require feedback from teachers or lecturers on the learning outcomes achieved by learners. One approach that is currently used in language learning is information-integration that prioritizes the formation of information and changes in attitude of the perpetrators of communication. Thus this theory reinforces the research findings that the method of learning both drill and practice methods and tutorials had a significant influence on the results of the study subjects of scientific writing techniques on students of the fourth semester program of Indonesian Language and Art Educaton STKIP HamzanwadiSelong

2. There is influence of interaction between instructional method and attitude of student to learning outcome toward writing scientific paper technique.

The analysis results showed that F-test 4.95 > F-table (0.05; 1/38) = 4.17 then H0 was rejected. Thus it can be concluded that there was an interaction effect between instructional methods and college students' attitudes on the learning outcome of writing scientific paper technique. The existence of interaction between learning methods and attitudes on the Indonesian language to the learning outcome in writing scientific paper techniques can be seen in the following graph.



The above findings reinforced the opinions of Vincent Greaney and Thomas Kellaghan (2008) which concluded that learning outcomes are determined by factors including family characteristics, teacher training level, attitudes on curriculum, teacher knowledge, and availability of learning materials. This was achieved maximally when supported by teachers as individual factors that carry out the learning, knowledge, level of training that has been followed. In addition, individual attitudes of learners including teachers to learning activities also helped determine the learning outcomes of the learners themselves. Meanwhile, according to Robert Gagne (1988: 63), the results of learning can be evidenced by a change in behavior that appears in the learners themselves. In behavioristic theory of learning states that aspects of behavior or behavior of a person obtained from the relationship between the stimulus and response. Thus, the learning outcome can be said as the impact of the interaction between the stimulus built of learning activities with the response formed by the individual. The response in question can be an attitude or feeling of receiving and / or rejecting the stimulus.

In relation to learning techniques of writing scientific papers, the results of learning techniques of writing scientific papers can not be separated from aspects of knowledge about Indonesian language, especially aspects of writing and sources of input in Indonesian as described in the theory of Integrated Groupwork Model (IGM) by Spolsky. Knowledge of Indonesian especially the aspect of writing scientific papers can be a collection of writing materials of scientific papers received / understood by learners through various sources of input such as books, audio-visual media, educators, and the environment. These input sources can be obtained by learners from learning activities undertaken by educators through a variety of techniques, methods, approaches and strategies. Nevertheless, the knowledge of Indonesian language including the skills of writing scientific papers can not be obtained if the sources of input can not be utilized by learners and not supported also by the tendency of learners in using the appropriate Indonesian language for social interaction. The tendency to use Indonesian in social interaction is seen as a very important domain of attitudes, in addition to trust and feelings of love or dislike of the Indonesian language.

In addition, the attitude of students to the Indonesian language was also very determined by the stimulus provided by the lecturer through the learning method used. This learning method was a process component that was determined by the input (input) components such as teachers, environment, facilities, students, and curriculum. If both of these components can be integrated well by the teacher as the implementer of the lesson then it is believed will affect the learning outcome of techniques of students' writing scientific papers. Thus, it can be concluded that between the instructional method and the attitude of students had the effect of interaction with the learning outcome courses in scientific writing techniques. It can be said that the better the method used by lecturers in learning and supported also by a good attitude of the learner to the subjects taught it will be the higher the learnng outcome of techniques of writing scientific papers obtained.

3. The learning outcomeof students' scientific writing technique taught using the method of drill and practice was higher than the method of tutorials on students who had a positive attitude on the Indonesian language

The result of t-test analysis found that the learning outcome of students' scientific writing technique used by using drill and practice method was higher compared with the learning outcome of students' scientific writing technique which was taught using tutorial method for students having positive attitude on Indonesian language. These findings reinforceed previous findings that the drill and practice method were more effective in influencing students' learning outcomes than the more advanced tutorial methods when students had a positive attitude toward the Indonesian language. This finding was based on the result of t-test analysis showing that t-test = 4.95>t-table = 1,687.

Learning using drill and practice method caused students to learn according to their ability so that pressure from other people or environment can be reduced. Students who had the ability to quickly solve simple learning problems can continue to more difficult or complex learning problems. Meanwhile, students who had low ability in solving learning problems can not continue to other problems of learning more complex or difficult until the relevant can solve the problem through the help of teaching materials. Thus, this instructional method is aided by teaching materials and a collection of exercises and practices.

On the other hand, learning by tutorial method emphasized the role of lecturers as tutors so that problems that occured during learning activities were always overcome by lecturers. This was in contrast to the theory of constructivist learning, which in this theory mentioned that learners can be responsible independently of all learning activities. In this theory, lecturers only acted as facilitators and motivators.

4. The learning outcome of students' scientific writing technique taught using drill and practice was not lower than the method of tutorials having a negative attitude on the Indonesian language

The result of t-test proved that t-test = 1.80>ttable = 1.687 then Ho could not be rejected. This showed that the learning outcome of students' scientifc writing technque who were taught using the drill and practice method was not different or the same compared with the learning outcome of students' scientific writiing technique which was taught using the tutorial method to the students having negative attitude on the Indonesian language. However, when viewed from the average learning outcomes in the group of students having a negative attitude on the Indonesian language and taught using drill and practice method of 66.98 was not lower than the average student learning outcomes that had a negative attitude and taught using tutorial method by 60.67. Thus, statistically this difference was

meaningless. It can be argued that the findings of this study proved that the fourth hypothesis was untested.

According to the researchers, there were several things that caused this untested hypothesis; instruments and research samples. Lesson learned using drill and practice method had not been applied in scientific writing technique by lecturer in study program of Indonesian Language and Art Education, so it was possible that the lecturer did not have ability in applying this method despite being trained repeatedly. This also resulted in the presence of indicators in learning outcomes that had not been submitted completely. In addition, the probability of sample size was also the cause of this happening so that in subsequent studies, it took a larger sample size.

In addition to the above factors, learning using drill and practice method was a learning that emphasized the change in writing behavior through habit-habit independently and supported also by the provision of reinforcement to learners. If the drill and practice method is implemented with the right mechanism then it will be very effective in learning techniques of writing scientific papers. Conversely, if implemented with a mechanism that is not right then it will be boring for the student. The effectiveness of drill and practice methods, if properly implemented, is evidenced by the results of the Resien research (published via http://digilib.unimed. ac.id/UNIMED-Master-943) on the influence of interactive learning media of the tutorial model and the interactive learning media of the exercise model and The practice of ICT learning outcomes is seen from innovative attitudes. Where concluded that the result of ICT learning in group of students who had negative innovative attitude and taught using interactive media model of practice and practice had average 34,66 higher than mean of ICT learning result in group of students who had negative innovative attitude and learn to use Interactive tutorial media of 28.00. This research was conducted at Methodist SMA TanjungMorawa in 2010.

On the other hand, tutorial method was a learning method that emphasized the role of tutors in guiding students to complete learning tasks more for students who had a positive attitude on the Indonesian language. The tutorial method viewed learning as the process of transferring certain knowledge or skills through the guidance of others. Even learning through the tutorial method was seen as the classroom instruction by lecturers so that the use of this method in learning did not significantly affect the learning outcomes of both students who had positive or negative attitudes. But if you get a detailed explanation and with proper direction then students who had a positive attitude on the Indonesian language was not impossible will be able to adjust to the tutorial method because they had the ability to adjust the material better than students who had a negative attitude on the Indonesian language. This was due to the fact that students who had a positive attitude towards the Indonesian language had a tendency to understand learning materials easily. It can be said that a strong and stable attitude towards an object was certainly related to the belief that the positive effect brought a certain benefit or value for each individual. This concept was in line with Rosenberg's

organizational theory of attitude, the theory of affective-cognitive consistency. In addition, Thorndike in the theory of behavioristic learning mentions that the main law of learning was the law of effect (low of effect). According to this theory, the learning outcomes obtained by students was the effect or impact of the teaching method used by the lecturer.

The drill and practice method described above was based on a behavioristic view which states that learning acknowledges only the stimuli and observable responses, where this view does not take into account the influence of thoughts or feelings that bring together the observed elements. Psychologists call for "we have examined enough what men think and feel; Let's begin to examine what humans do". This view is known as Watson's behaviorism. It can be said that anything done or produced by anindividual is a connection between the stimulus and the response. New stimuli can be formed through habits acquired through continuous exercises and practices.

The exercises and practices experienced by the students themselves can act as a stimulus that can shape behavior in the form of skills or ability to speak Indonesian. Exercises and practices using Indonesian language in scientific writing can provide a more concrete experience to the students, especially when students can do it independently without the intervention of others.

Learning through practice and practice (drill and practice) can assist students in constructing existing knowledge with new knowledge being studied. Students will more easily learn the skills of scientific writing if it is given the opportunity to do it independently. Lecturers as educators can act as motivators and evaluators that can be done through giving feedback to students. This is in line with the constructivist view that learners have full responsibility for learning. While in view of cybernetics theory emphasizes the importance of feedback conducted by lecturers to students. This feedback is as much as possible directly so that students can improve their behavior quickly. In addition, learning using drill and practice methods can provide an opportunity for all learners to test their own abilities through structured exercises ranging from the simplest to the complex material.

Scientific study using drill and practice method gave students the opportunity to check their ability independently and step by step. Students may continue with other learning materials if they already have the required skills on the previous material. In this case, the lecturer provides the exercises gradually and starts from the exercises using the right words, composing the sentences, preparing the paragraphs, applying the Enhanced Spelling (EYD) to composing the flow of discourse in scientific papers. All stages of practice and practice are controlled by lecturers of course subjects through evaluation or assessment of student exercise results.

The results of this fourth hypothesis test showed that this hypothesis was untested. This was due to the weakness or limitation in this research;1) the lack of understanding of lecturers in applying the instructional method despite being trained repeatedly resulting in the existence of indicators that have not been

completed, 2) the lack of control of the initial knowledge and student learning environment, And 3) the number of research samples was considered too small.

D. Conclusions and Suggestions

The conclusions of this research were 1) The learning outcome of students' scientific writing technique taught using the drill and practice method was higher than the tutorial method; 2) there was influence of interaction between instructional method and attitude of student to learning outcome ofstudents' scientific writing technique; 3) the learning outcome of students' scientific writing technique which was taught using drill and practice method wasgreater than tutorial method for students who have positive attitude on Indonesian language; And 4) The learning outcome of students' scientific writing technique taught using the drill and practice method was not lower than the tutorial method for the students who have negative attitude on the Indonesian language.

The logical implications or consequences of the conclusions of the results of this study are: firstly, to improve the the learning outcome of students' scientific writing technique required drill and practice methods; Secondly, to improve the learning outcome of scientific writing technique to consider the attitude of the students on Indonesan language, thirdly, to improve the learning outcome of scientific writing technique who hade positive attitude on the Indonesian language required the drill and practice method and fourth, scientific writing technique for students who have a negative attitude on the Indonesian language needed drill and practice method.

E. References

Ajzen,Icek. (2005). *Attitude, Personality and Behaviour.* England: Open University Press.

Bloom, Benjamin S. (1956). *Taxonomy of Educational Objectives : The Classification of Educational Goals*. London: Longmans.

Creswell, John W. (2008). *Educational Research, Planning, Conducting, and Evaluating Quantitative and Qualitative Research,* Third Edition. New Jersey : Pearson Merrill Prentice Hall.

Gagne, Robert M. (1988). *Prinsip-Prinsip Belajar untuk Pengajaran* terjemahan Abdillah Hanafi dan Abdul Manan. Surabaya: Usaha Nasional.

Gagnon, G.W. dan Collay, M. (2001). *Designing for Learning : Six Elements in Constructivist Classroom.* California: Corwin Press. Inc.

Greaney, Vincent dan Kellaghan, Thomas. (2008). *Assessing National Achievement Levels in Education.* Washington: The World Bank.

Hamalik, Oemar. (2011). *Kurikulum dan Pembelajaran.* Jakarta: Bumi Aksara.

Joyce, Bruce.dan Weil, Marsha. (2009). *Models of Teaching.* New York:Pearson Education, Inc.

Khine, Myint Swe. (2015). *Attitude Measurement in Science Education : Classic and Contemporary Approaches*. Charlotte, NC : Impormation Age Publishing, Inc.

Roblyer, Margaret D. dan Doering, Aaron H. (2010). *Integrating Educational Technology into Taaching : Fifth Edition.* New York: Pearson Education, Inc.

Russel, Lou. (2012). *Panduan Belajar Cepat untuk Pelajardan Umum* terjemahan M.Irfan Zakkie. Bandung: Nusa Media.

Stern, Mandy. (2012). *Evaluating and Promoting Positive School Attitude in Adolescents*. New York: Springer.

Improving Students' Writing Skill On Expository Text Through Web Blog

Sri Wahyuni
Hamzanwadi University
sri.wahyuni.khalidi@gmail.com

Abstract

No doubt that most of the EFL learners, especially at senior high schools, frequently consider that writing is the most difficult skill compared to the three other language skills. This difficulty is also faced by the second year students of SMAN 2 Selong East Lombok West Nusa Tenggara. The results of students' writing performance at the preliminary research indicated that on average they achieved low grades in writing expository texts. Moreover, the students in this school were not motivated in writing. As the digital era has been increasing rapidly in few decades, most people all over the word are addicted in using the internet. Therefore this paper presents the study on the use of ***web blog*** *as a strategy for teaching writing which is able to make the students more active and enjoy the learning activity enthusiastically. The strategy was implemented in action research through four steps: planning, implementing, observing, and reflecting. The results of the findings showed the improvement of the students' skill in writing expository texts and also the improvement of the students' involvement in the writing activities during the teaching and learning process.*

Keywords: Web blog, improvement, expository text, writing Skill

A. Introduction

It is not surprising that there have been ample of studies (e.gAlsamadani, 2005, Talebinezhad and Negari, 2007; Santangelo, Harris, and Graham, 2008Magno and Carlo, 2009) revealing that writing is difficult skill to master because it involves high level of the cognitive process. As a result, language learners frequently feel that learning to write is the most difficult process to practice compared to the process of learning the other language skills.This idea is supported by Richard and Renandya (2002) who reveal that there is no doubt that writing is the most difficult skill for second language learners to master. The difficulty lies not only in generating ideas but also in translating these ideas into readable text. Cahyono and Widiati (2011) reveal that writing is often believed to be the most complex one compared to the other three skills. Moreover Alsamadani, (2010) explains that this skill is also assumed as a complex, challenging, and difficult process because it includes discovering a thesis, developing support for it, organizing, revising, and finally editing it to ensure an effective, error-free piece of writing. Therefore, based on the assumption that writing is the most difficult skill, it should be taught as attractive as possible. A teacher should find the effective and interesting strategy or method in teaching this skill in order the students get a pleasure in producing a written text.

Grabe and Kaplan (1996: 6) state that writing is a technology, a set of skills which must be practiced and learned through experience. Defining writing in this way helps to explain why writing of the more complex sorts causes great problems for students; the skills required do not come naturally, but rather are gained through conscious effort and much practice. It is also very likely, for this reason, that numbers of students may never develop the more sophisticated composing skills which transform information into new texts.

Improving students competence on writing was the main goal of conducting this research. As stated in the curriculum that the students of SMA should be able to complete the competence standard which is defined by the BNSP (the national comitee of education standard). Therefore English teachers must conduct optimal efforts in making the classroom as alife as possible to gain the aim of their teaching. The writer of this research found that problems faced by the students of SMAN 2 Selong on writing an analytical exposition were writing the correct spelling and correct punctuation,using suitablewords,writing correct English grammar and structures, developing ideas, and writing paragraph coherently. Tricia Hedge (1988:5) states that compare with speech, effective writing requires a number of things: a high degree of organization in the development of ideas and information; a high degree of accuracy so that there is no ambiguity of meaning; the use of complex grammatical devices for focus and emphasis; and careful choice of vocabulary, grammatical pattern, and sentence structures.

The indicators of the problems faced by the students when they were practicing writing text are: Firstly, some of the students had problems on writing the correct spelling of the words and correct punctuation. They usually wrote the words as it is spelledin *bahasa Indonesia*and often ignored the correct punctuations.

The second problem was the students couldn't identify the class ofwords correctly. For example, they couldn't differentiate between the using of adjective and noun very well. They had also problem in using correct pronouns, they couldn't differentiate between the subject pronouns and object pronouns as well as using the possessive pronouns. The example below was taken from one of the students' writing tasks: *"*Praying five times a day is obligation we"*. In other words it can be said that the studentscouldn't choose the diction of the words very well.

The next problem was on writing sentences by using correct English grammar and structures.For example, they couldn't use the adverb of manner properly; the following sentence is the example of one of astudent's sentences: *"*smoker usually spent money with careless"*They had difficulty in writing sentences in correct words order, especially in using noun phrases. They were still formulated by the Indonesian noun phrase pattern. When they wrote a noun phrase in a sentence, they wrote the head of the phrase first then the words used as the modifiers. This is the example of the sentence that one of the students composed: *"*I went to house my friend."* It was also difficult for them to place the correct use of sentence elements. For example most of the students wrote *to* after modal auxiliary and before verb, the following is the sentence taken from one of the student's sentences: *"*Praying dukha can to make us close to Allah SWT."*Moreover, They also had a problem and

difficulties to write sentences in correct tenses. It was difficult for them to create pasisive voice; they could not use the correct form of a passive sentence pattern. In addition, they had difficulty in distinguishing the using of singular and plural noun; as a result, they often composed a sentences which consisted of improper use of to be, for example *"* students class XI IPS 1 is praying dhuha."*

Developing their ideas in writing was the next problem of the students. They got difficulty to make or to write the main idea of a paragraph. It was difficult for them to compose a topic sentence as well as to develop the supporting sentences. The students of grade XI in social department in the first semester learned the text of analytical exposition. Based on the latest observation in the classroom, the students had difficulty to write the supporting sentences for every main idea in each paragraph to support the arguments in writing an analytical exposition.

The last identified problem was the students had difficulty to write a coherent paragraph. It was difficult for them to connect one sentence to other sentences, or combining one clause to other clauses to make complex and compound sentences as they didn't understand very much about the use of the transitional words properly in constructing the sentences. In adition they often composed a paragraph which was unrelated to the other paragraph. For example they wrote about praying dhuha in the firt paragraph, but next paragraph they wrote about the benfits of reciting *Asmaul Husna.*

The students' problems in writing mentioned above were caused by the following factors. Firstly, based on the observation during the students' activities in writing, they needed more time to start writing. Some students started writing at the third minute, some others started at the fifth minute, some of them started at the seventh minuteand even some of them spent half an hour just to start to write a single English sentence. They spent their time to look at their friends' work first before they start writing. Moreover, during the time for writing in the classroom, most of the students spent their time to open dictionary to find the word they used in writing. Some of the students liked to copy their friends' work as they got difficulty to get an idea about what to write.

Secondly,the teachers had limited time to help the students in classroom. The students' number in classroom could be as the problem for the teacher in guiding every student in classroom. The number of the students in a classroom was 38 students. This number was certainly considered as the big one. As a result, the teacher couldn't control all of the students individually, since the time was limited for guiding all the students just in a certain period of time.

Next, the problem on books that were used in studying English became the cause of students' difficulty in learning English. Not all of the students could buy books which were used for studying in the classroom or at home. It means the students had very limited references for studying and practicing. So, they couldn't learn optimally about the language grammar and read the samples of the written text as the limitation of the books or sources for reading. The students' economic backgrounds became the problem in *SMAN 2 Selong* to own the book. It means that not all of the students couldn'tafford to buy the books. Besides, this school couldn't

provide the adequate books for such numbers of the students and the books available in the school library were still very limited. *SMAN 2 Selong* has 730 students every year. So, when the teachers used the book to explain the materials, the students who didn't have the book could not concern and follow the teacher's explanation very well.

The next cause of the writing problem was the studentswere not accustomed in writing. They prefered spending their time for useless activities such as playing computer game or play station, chatting through hand phone and internet or just playing around. Most of the students were very lazy to fulfill the assignment that the teacher gives. It means the students were not interested in finishing their homework as they did not feel that finishing the homework was their necessities. They felt that doing the homework was as their obligation only and not as their pleasure. This phenomenon might be also caused by the lack of parent's attention in participating to controltheir children in studying.

In writing class, teachers usually gave assignment to the students without giving the follow up for the result of the students' composition. The teacher's limitation of the time to correct the students' workswas as the reason to be unable to guide the students writing very well. Moreover, the teachers just gave the assignment without involving the students in correcting their results.

Due to the problems mentioned it was very crucial to find a certain strategy to cope the problems. Teaching writing using web blog was concidered suitable to cope the problems on writing for the flowing reasons. Using blogs in teaching English skill especially in writing have so many advantages not only for teachers but also for students.

Johnson (2004) points out that the application of blogs is a useful supplemental aid to teachers. From any computer connected to the Internet, teachers can create, edit, or delete their teaching handouts such as notes, homework assignment, and review materials. All these teacher's messages will be organized in a reversed chronological order with the latest postings on the top.

Furthermore, Campbell (2004) asserts that blogs can promote exploration of English websites. Since it is quite simple for teachers to put English materials on line with links to their source websites, students have more chances to read related articles. The feature of automatic date-stamping for each post is quite useful. Students' emails may, for some technical glitches, not reach their teachers or be carelessly deleted by their teachers. With the automatic date-stamping function, both teachers and students know clearly when students turned in their assignments. On the other hand, the automatic archive of past posts by date or theme can help teachers and students easily locate the message they are searching.

If students do not have their own personal websites, an easy-to-use blog is a good start for them to interact with users of the cyberspace community.As Campbell (2004) emphasizes that simple customization of templates can help students build "a sense of ownership and unique online identity". Most students will write more carefully if they know that they are going to publish their articles online for authentic readers who may comment on their postings. The other advantage of blog

is teachers can easily use the blog to organize a collaborative learning environment in which students can peer edit others' postings (Dieu, 2004; Mitchell, 2003). Students should be encouraged to comment their partner's postings, which can also be shared by other classmates.

Based on the problems described above, the researcher has positive insight that teaching writing by using web blog would make the skill of the student in writing improved. Furthermore, the students who learn English stressing on practicing writing skill by using internet-web blog will get better achievement and motivation compared to the other classes which do not apply the web blog.

The problems can be formulated as follows: (1) Does and to what extent the web blog improve the students' English writing skill of *SMAN 2 Selong* in the academic year of 2010/2011? (2) How is the situation of teaching and learning at writing class when web blog is applied?

There are two different kinds of contributions of this research, they are theoretical and practical. Both of them are expected in connection with the results of the study. Theoretically, this research result can develop the instructional technology media in the teaching of English as a foreign language. The participants, namely the teachers and students, can access and produce authentic communication in the form of written text through web blog. Practically, this research is expected to give contribution to the change of classroom atmosphere in using instructional technology media, so, the teachers and students do not only interact in the classroom.

B. Method

This research applieda classroom action research approach to improve writingskill of the students of grade XI social program at *SMAN 2 Selong*. According to Carr &Kemmis in McNiff (1988) action research is a form of self-reflective enquiry undertaken by participants such as teachers, students, researcher in social situation and including the social educational situation in the classroom, for example, to improve the rationality and justice of (a) their own social or educational practices; (b) their understanding of these practices; and (c) the situation in which these practices were carried out.

The choice of classroom action research (CAR) approach in this research was based on the statement above to improve and revise the practices of language teaching in the classroom. This research characteristic was relevant with the aims of this study which overcame the student problems in order to develop their writing ability through instructional technology medium. All the steps of this design such as stated by Burns (1999) that re-cycling of planning, action, monitoring, and reflection would be conducted into some meetimgs. Analyzing the data, interpreting them and developing theories related to the problems are constantly feedback into revising practice. In the practice, she adopted John Elliot's model. It was a detailed model in which each step of the action was informative and applicable in this

research. There were some manipulated steps in actions to match them with the research problems.

C. Findings and Discussion

There are four major points in the research findings related to the improvements of students' writing skill, students' writing achievement, writing class situation and other findings about students' responses toward the research implementation.

The students' writing score improvement could be analyzed through the result of pre-test and post-tests. Pre-test was held before the action and the post test was held twice in every cycle. From the base-line data of pre-test and post-test, it could be said that the students' writing score was improved through the implementation of web blog. The result of the students' post -test shows a significant improvement.

The research which is applying action research to improve students' writing skill through internet-web blog brought satisfying result both in terms of improving students' English writing skill and class situation. Then the findings can be theorized at least in two major points as follows: (1) internet web-blog can improve the situation and(2) internet web-blog can improve writing class situation. The discussions of the theories are described in the following section.

1. Internet-Web Blog Can Improve Students' English Writing Skill

The findings of the research showed that internet-web blog brought satisfying result in terms of improving student' English writing skill grammatically, including the improvements on writing correct words order, tenses, pronouns, vocabulary, sentence patterns and other grammar forms. The improvement can be seen in the diagram of overall averages improvement from cycle to cycle.

The enhancement of writing skill improvement, especially writing sentences with correct grammar forms are caused by using internet-web blog provided by teacher to give the students more opportunities to observe their writing from stages to stages. Web blog equipped the process of peer assessments, so that they get better correction of their mistakes and better solution of their writing difficulties. It is supported by Campbell (2004) emphasizes that simple customization of templates can help students build "a sense of ownership and unique online identity". Most students will write more carefully if they know that they are going to publish their articles online for authentic readers who may comment on their postings.

Gavin and Nicky (2007: 87) defines that the most common type of blog is kept by one person, who will regularly post comments, thoughts analyses, experiences of daily life, interesting links, jokes or any other form of content, to a web page. Blogs may consist of written text only, or they may include pictures or photos-photo blogs-or even audio and video.

Gavin and Nicky (2007: 90) explains that one of the issues to bear in mind when setting up students or class blog is that of correction-how much help are learners given with their written working a blog to be as accurate as possible, given that the blog publicly accessible, and the teacher needs to be prepared to give learners plenty of time for writing, reviewing, redrafting and checking postings before they are added to the blog. Asking learners to prepare blog entries in a word processing

program, beforehand, and encouraging peer review of work in progress, for example in pairs, can help with this process. Moreover, the students in writing are more careful since their texts will be able to be read by many people. Before posting their text, they should be sure that their text is correct grammatically. Therefore, by using blog, the learners can develop their language skills, especially writing skill as they will write their ideas to be posted in blog. And they will be more careful in writing because they know that their writing will be able to be read by others. As a result they will correct their writing work before they post it to the blog. So, by writing in their blog, the students are more careful in creating correct sentences. Before they post their writing, they must ensure themselves that the sentences they write are correct grammatically.

Furthermore, admin (2005 March) explains that because students are writing for publication, they are usually more concerned about getting things right, and usually understand the value of rewriting more than if the only audience for their written work is the teacher.

Tricia Hedge (1988:61) explains that writing in English classroom can become unreal if it is only ever produced for one reader, the teacher, and its purpose is limited to enabling the teacher to access the correctness of the linguistic form used.

Then, Aaron Campbell (2003) explains that individually, blogs can be used as journals for writing practice, or as free-form templates for personal expression. The idea here is that students can get writing practice, develop a sense of ownership, and get experience with the practical, legal, and ethical issues of creating a hypertext document. In addition, whatever they write can instantly be read by anyone else and, due to the comment features of the software, further exchange of ideas is promoted.

So, based on the elaboration above, it is very obvious that the students' writing skill was improved by using the internet-web blog. The findings of the research showed that web blog can improve students' English writing skill syntactically, including the improvements on writing text in better content, in longer paragraphs,and in more supporting sentences.

2. Internet Web Blog Can Improve Writing Class Situation

The findings showed that internet web blog can improve writing class situation. Internet web blog process stimulates the writing class to be more alive by the application of various activities during the process of teaching and learning. It stimulates students to be more active in learning process, so, it can be called that the class activities was students' center. By using the internet based blog, students were more active in writing draft of their text in group as well as individually. They were also enjoying using the web blog to find the material related to the text they were writing. As a result, they found more ideas to create more supporting sentences.The use of blog to guide students to online resources is appropriate for their level**.** The Internet has a bewildering array of resources that are potentially useful for students. The problem is finding and directing learners. For this reason, tutor blog can be used as a portal for the learners. Johnson (2004) points out that the application of blogs is a useful supplemental aid to teachers. From any computer

connected to the Internet, teachers can create, edit, or delete their teaching handouts such as notes, homework assignment, and review materials. All these teacher's messages will be organized in a reversed chronological order with the latest postings on the top.

The other finding showed that through peer correction by group blog and individual blog, the students were more active to participate in discussion to get better correction of their own mistakes from draft so that they can improve their writing skill and would be better writer. Because of their writing improvement, they were motivated in writing. Dieu, (2004) and Mitchell (2003) reveal that teachers can easily use the blog to organize a collaborative learning environment in which students can peer edit others' postings. Students should be encouraged to comment their partner's postings, which can also be shared by other classmates.

Moreover, the classroom situation was more alive and attractive, since the use of blog in writing class occupies every student to be more active communicatively. For the students who were not used to in writing was motivated to write as they enjoyed writing through web blog. They felt more relax and confident in writing as they could find a help in developing their ideas. The students who are quiet in class can find their voice when given the opportunity to express themselves in a blog. They feel more free to express their idea in the blog than express orally.

The finding showed that the students and teachers made writing class more active. Both teacher and students kept various interesting activities in writing class. First, the students explored the material related to the text use, the construction of correct sentences, and the most important activities are, teacher was able to upload any material such as the examples of the texts with their elaboration of their characteristic and also the aspects of writing. So, when the students were writing the text, they could open the blog to find some helps. According to Campbell (2004) Blogs can promote exploration of English websites. Since it is quite simple for teachers to put English materials on line with links to their source websites, students have more chances to read related articles.

Using blogs in teaching English skill especially in writing has many advantages not only for teachers but also for students. The major findings of the research, including both: (1) internet-web blog can improve the students' writing class; and (2) internet-web blog can improve writing class situation were in line with Andrew Johnson (2004) who specifies the advantages of blog for teacher and for students. For teachers; (1) the use of blog is a supplemental aid to the teacher. The amount of time students use their blog is at the discretion of the teacher. Students can use it once in a semester to submit a paper, weekly for class assignment and notes, or anything in between. (2) All of the teacher's note will be viewable together in chronological order. This is very convenient when preparing lesson that build upon previous material taught in the class. (3) It is simple to edit class material if the text can be improved or if something new need to be added. (4) All students' writing samples are kept in one place and can be read from any computer connected to the internet. (5)Teacher can give collective feedback to the class when reoccurring mistake is found by adding entries to a "writing feedback" class blog. Additionally,

individual feedback can be given to individual students' blog. (6) In order to save time when giving feedback, save a copy of the messages at an additional teacher-only blog. If a class is taught for several years with different students, the teacher can select the appropriate message to send to a student regarding their feedback to their homework and writing samples. For students; (1) Students have access to your complete notes on the internet. Students have the option of previewing the class meterial before class and reviewing after class. (2) Because students are connected to the internet, they have access online English dictionaries. Students can easily look up words they do not understand by cutting the unknown words and pasting it into an outline dictionary. (3) Because class material is organized into section, students can easily find information. (4) Students can read comment for the class as a whole and comments directed at them individually. This maximizes feedback and contact with the teacher.

The other finding showed that internet-web blog improves students' motivation to write English and they want the internet-web blog implementation be continued in teaching and learning activities, especially in writing class. The students realize that there are many advantages of internet-base blog, so they are more interesting and enjoy writing English through internet-base blog implementation. This finding is supported by Gavin and Nicky (2007: 91) who states that both teachers and learners will have spent some time on learning to use blogs, and on posting their initial blog entries, so it is well worth carrying on using the blogs for more than a couple of classes. Learners can be encouraged to post regularly over a certain period of time, for example, a term or semester, with the teacher providing ideas and suggestions for content. The blogs can be kept as an internal class project, or other classes can be encouraged to visit and to comment on the blogs. Teachers can even join an international network of teachers and get learners from other countries to visit and to comment on the students' blogs. Blogs can be set so that only invited members have commenting privileges, which give the blog some measure of security. This will be particularly important if you are working with younger learners. Note that it is normal for blogs to have limited lifespan. Only 50 percent of blogs are estimated to be active three months after being set up. Blog fatigue, or blog fade, will set in, so it is often good idea for the teacher to have a clear time frame in mind for a blog project, such as term or semester or a couple of months. If learners' interest doesn't flag after this time, the blogs can always be continued! You may want to experiment with using blogs for different purposes with the same classes.

Because of the advantages of internet web blog implementation, the students gave good responses toward the action of the research. They expect that the implementation of internet web blog will be applied for the next teaching and learning activities of English especially in writing class. They are obsessed to improve their writing skill continually.

D. Conclusions and Suggestions

In this research, the conclusion is presented based on the findings of improving students' English writing skill through web blog.The major conclusion of this research is that the implementation of web blog has many advantages to help students improving their writing skill and encouraging them to be more active in writing class. The data on the research result above presented the conclusion which are covered into three points as follows: (1) Web blog can improve students' writing skill, (2) Web blog can improve writing class situation, and (3) There are some strengths and weaknesses of using web blog in writing class. The description of those three points of the conclusion can be seen in the folowing elaborations.

First, web blog can improve students' writing skill; there are some improvements of students' writing skill in gramatical and other asfects of writing from cycle one to cycle two. They wrote less mistakes of spelling, punctuation, vocabulary, word orders, tenses, pronouns, sentence pattern and other grammar forms. They also write more and longer paragraphs with more sentences and better in content. Moreover, students' writing achievements are also improved from pre-test (before action) and post tests (after action in Cycle 1 and Cycle 2).

Second, internet-web blog can improve writing class situation; The situation of the classroom become alive and attractive. Students are more active in writing, they are active in discussing the elements of writing such as the content or the ideas, the developments of the ideas or supporting sentences, the words order, sentence pattern, the organisation or the coherence and the cohesiveness of the text. They were active in giving comments and corrections to their friends' writing by visiting blog of each other. In this research, the teacher is more innovative in planning, teaching, conducting discussion, evaluating and doing teaching reflection.

Third, there are some strengths and weaknesses of using the internet-web blog in writing class. The strengths are web blog improves the students' writing skill in writing text. Their writings consist of correct spelling and punctuation and correct grammar. They used proper dictions or vocabularies, correct word orders and sentence pattern in their writing by searching in the web blog. Moreover, they could write longer paragraph which consist of many supporting sentences to support the main ideas or topic sentences since they can find the information through accessing the informations or evidences to support the arguments of the text in the blogspot. As a result, the paragraph has better content and the text is in good organisation . Then, there is improvement in writing achievement from pre-test (before action) and post tests (after action). Next, there is also improvement of the teacher and students participation in discussing students' writing difficulties. The last, the teacher is more innovative and creative in teaching writing through internet-web blog.

However, in contrary to the strengths, there are some weaknesses of using the web blog in writing class. Firstly, teaching writing through internet-web blog needs more times as the teacher need to set each students blog. It also needs more time to prepare the students' blog. The next weakness is that teaching English especially writing can be applied only in the school which equiped by more than 30 computer

sets and apply the internet site. So, for the schools which have no complete computer set or computer laboratory, find difficulty to apply internet-web blog in teaching writing. The other weakness is that the students who are not very skillful on operating computer will take more time in posting their writen work.

The implication of web blog for teaching writing in this research show a clear improvement to the students writing skill. Therefore,the researcher would like to present some suggestions related to teaching writing skill. Firstly, English language teachers should be able to identify the students' problem in teaching and learning process especially in writing so that the teachers are able to decide a proper technique as well as media to apply the lesson plan in writing class. Secondly, as writing skill is supposed as the most difficult skill, teacher should use various technique and media in teaching writing especially in writing the genre. Thirdly teacher should teach as interestingly as possible to raise the students' motivation to write a text. Therefore, the teacher should be creative and innovative in conducting the writing class.Furthermore school should give chances the teacher to develope their skill in teaching by using the ICT aplication such as internet by providing adequate equipments. Besides, the school should also give chances to the students to develop their competence by using the ICT equipment in their study. It is expected that school can supply the teachers needs for their teaching for example, school should hold a workshop for the teachers on the using of ICT aplication in their teaching. Furthermore, schools should always activate their website in order the students and the teacher can always access it anytime they need.

References

Alsamadani, H.A. 2010.The Relationship between Saudi EFL Students' Writing Competence, L1 Writing Proficiency, and Self-Regulation.*European Journal of Social Sciences* – Volume 16, Number 1, 2010.

Andrew W Hart and James A. Reinking.1986*Writing for Career-Education Students.*St. Martin's Press

Brown, H.D. 2000.*Principles of Language Learning and Teaching*. Addison Wesley Longman: A Pearson Education Company.4th ed.

Burns, A. 1999.*Collaborative Research for English Language Teachers*. Cambridge. Cambridge university press.

Byrne, Donn. 1998. *Teaching Writing Skills.* London. Longman Group UK.

Cahyono, B.Y. &Widiati.U.. 2011. *The Teaching of English as a Foreign Language in Indonesia.* Malang. State University of Malang.

Campbell, A. P. (2003, February). *Weblogs for Use with ESL Classes*. The Internet TESL Journal, Vol. IX, No. 2. fromhttp://iteslj.org/Techniques/Campbell-Weblogs.htm . Retrieved 2009-10-09.

Daniel L.Duke. (1979). *Classroom Management. The Seventy eighth Year Book of the National Society for the Study of Education*. Cambridge: Cambridge University press.

Depdiknas. (2003). *StandarKompetensi Mata PelajaranBahasaInggris*; Papers

Dudeney, Gavin. (2007). *The Internet and the Language Classroom. A Practical Guide For Teachers.*Cambridge University Press.

Dudeney, Gavin and Hockly, Nicky. (2007). *How to….. Teach English with Technology:* Longman. Pearson Educational Limited.

Duffy, Peter and Bruns, Axel. (2006). *The Use of Blogs, Wikis and RSS in Education;A Conversation of Possibilities*. From http://www.heacademy.ac.uk/assets/hlst/documents/johlste/ vol5no2/0138.pdf. Retrieved: 2009-10-09.

Duncan. (2005, March). Availablehttp://www.blogherald.com/2005/03/06/a-short-history-of-blogging/.Retrieved2009-10-10.

Johnson, Andrew. (2004, August*).Creating a Writing Course Utilizing Class and Student Blogs*.The Internet TESL Journal, Vol. X. Available in http://iteslj.org/Techniques/Johnson-Blogs.Retrieved: 2009-10-09.

Magno, Carlo. 2009. Self-Regulation and Approaches to Learning in English Composition Writing. *TESOL Journal.* Vol. 1, pp. 1-16. From http://www.tesol-journal.com

McNiff, J. (1988). *Action Research*: *Principles and Practice*. Great Britain: Mackays of Chatham.

Mintzberg, Henry.1994. *The Rise andFallof Strategic Planning*. Great Britain: Prentice hall international.

Richard, J. C, and Renandya, W. A.2002.*Methodology in Language Teaching: An Anthology of Current Practice*. United Kingdom. Cambridge University Press.

Stern, H.H.1983. *Fundamental Concepts of Language Teaching*. Oxford: Oxford university press.

Stringer, Ernest T. (1986) *Action Research.A Handbook for Practitioners.*London New Delhi: SAGE Publications. International Educational and Professional Publisher.Thousand Oak.

Terry, Fellner and Matthew.Apple.*Developing Writing Fluency and Lexical Complexity With Blogs*.Available in http://www.jaltcall.org/journal/articles/2_1_Fellner.pdf. Retrieved 2009-10-09.

The Implementation Of Lesson Study In Natural Science Learning At Mts. Muallimat NW Pancor: To Train Students' Science Process Skill

Marhamah

Biology Education Study Program, Hamzanwadi University
mansaniki@gmail.com

Abstract

Most teachers at MTs Muallimat NW Pancor did not understand completeley about the nature of lesson study especially the teachers of natural science lesson, including what and how to implement it. The implementation of lesson study in learning natural science was expected to train students' science process skill. Subject of this reserach was the 32 students of VIID class. The involved team consisted of four natural science teachers, three biology lecturers, and two physics lecturers of Hamzanwadi University. Lesson study was conducted in three cycles, each of the cycles was plan, do and see phase. Data collection instrument was observation sheet. Data analysis technique was done in decsriptive qualitative method. Reserach result showed that in learning process, science process skill could be taught among others were: observation skill, inferention skill, data collecting skill and drawing conclosion, as well as communication skill through presentation.

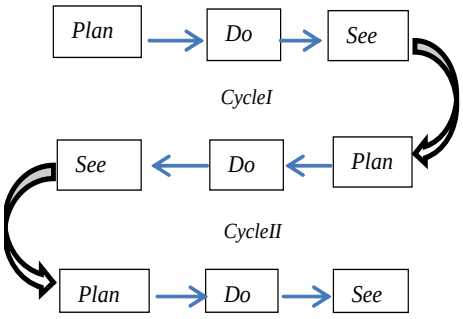
Key words: Lesson study, natural science learning, science process skill.

A. Introduction

Lesson study is a new term for most teachers at MTs. Muallimat NW Pancor. What and how is lesson study was not understood completely especially the natural science teachers who supposed that lesson study was impossible to apply because too many topics which have to be taught. As an addition, the teachers were comfortable to the previous learning strategy. The students have mastered concepts of natural science in teaching and learning process which have been conducted. Due to this fact, socialization were held to introduce the nature of lesson study for the teachers directly and how to intrduce it. Lesson study did not belong to learning method instead it was an activity to guide and improve learning quality which were conducted by a team of teachers and lecturers collaboratively and continually in planning, doing, observing, and reporting learning result. (Lewis, 2000, Ono dkk, 2010). Syamsuri et al (2008) states that " lesson study could improve learning quality because it is conducted based on a team sharing result". Natural science lesson study team were formed to prepare the implementation of lesson study. The team consisted of natural science teachers at MTs Muallimat, biology education lecturers, and physics education lecturers of Hmazanwadi University. It is expected through lesson study that the instructional process of natural science becomes meaningful, not merely a learning process whose purpose is to understand concepts. In accordance with the purpose stated previuosly, the team designed learning process to educate science process skill in natural science teaching process.

B. Method

The research method applied was decsriptive qualitative, that was to decsribe the implementation of lesson study at MTs Muallimat Pancor to train students' science process skill. subject of the present research was 32 eighth year students at MTs. Muallimat NW Pancor. Lessson study was done from June to August 2017. Lesson study was conducted in three cycles. Each cycle consisted of plan, do and see phase. Lesson study implementation design in natural science learning can be seen at picture 1. The team involved in this activity consisted of three natural science teachers, three biology teachers, and two physics teachers. Instrument used was observation sheet to record learning process when teaching students'science process skill. Observation sheet and documentation were used to record lesson study implementation too.



Picture1. Lesson study implementation design in natural science learning process.

C. Findings and Discussions

The implementation of lesson study on natural science at MTs. Muallimat NW Pancor was described as follows.

1. Cycle 1

a. learning purpose: how does a scientist?

b. Lesson study procedures:

Plan 1: plan was conducted by the team to discuss lesson study in order to reach learning purpose. Students' activity plan was the students would observe a plant as a natural science object. The students were asked to measure, find out the features of the object and draw conclusion on the object. The activity was planned and conducted in group. Based on the observation, it was expected that the students would find why there were differences on measurement in each group. Next, the team hoped that students would say..”oh, so this was how the scientist works, it was easy...”

Do 1: open class was conducted in class VIID by the team accompanied by natural science model teacher from MTs Muallimat NW Pancor who taught in the classroom. Learning process was held based on design lesson which has been discussed in which students in group would measure euphorbhia (a plant) with

different size for each group. Next, the students measured the plant height, stem diametre, and count the leave number. During this learning process, the students were trained to do process skill like measuring (part of observation process), inferencing, collecting data, drawing conclusion, and conveying observation result by presentation.

See 1: based on the learnin proces which has been conducted, the author found learning facts among others were : (!) most students measured the plant height starting from the bottom of the pot, the measurement should start from the bottom of the plant. (2) some groups who got a tree with a lot of branches in the bottom of the tree measured the stem diametre by tying up the branch with rope first then they started to measure. (3) there were two groups who had euphorbia plant of different variety in which the stem, leaves and flowers were small. (4) all groups drew almost similar conclusions, those were different data caused by various size of the plants measured, it meant that nobody stated that the different data or plant size were caused by the age, fertility, variety and etc. (5) all students in each group were involved actively during the measuring activity except one student in group VIII who did not have learning spirit in the name of Silviana, (5) all students drew a conclusion that " it is uneasy for a scientist to work".

2. Cycle II

a. Lerning purpose: Let us learn basic unit and non basic unit.

b. Lesson Study procedures

Plan II. The second lesson design and plan initially was planned that students would measure the table length by using ruler to know the concept of basic rules and measure the table length by using hand to know non basic unit concept.

The first plan was changed in which during the instructional process, the students were asked to measure some objects which have been prepared among others were: table, sand, water, and their own friend. Measurement tools prepared were : rulers, body scales, weight scales, and mineral water bottle of 600 ml (it was planned to measure to obtain the concept of basic unit), a glass of mineral water (it was planned to use to obtain non basic unit concept for measuring water and sand). Furthermore, it was hoped that students would use their hand to measure table and their friends' height, as well as using indicators of fat and thin for body weight.

Do II. Learning activity were done by the students in group based on the instruction in the students' worksheet. All students were involved actively in measurement of the object by measurement tools prepared, included water and sand were also measured with scale. It was because there were two body scales and common scale was only one that each students' group used those scales by turn. During this activity, the studenst measured (part of observation), did an inference, noted the measurement result by the measurement tools used, and presented their group discussion in front of the classroom.

See II. Based on the learning process which has been conducted, there were learning facts found among others were: (1) all students measured objects which have been mentioned in students' work sheet by using measurement tools which have been prepared. There were no students' group who used athe mineral water glass as a tool to measure the water and sand, there were no students' group who used fat and thin indicator for their friends' weight, there were no students' group used their hand's span to measure table and their friends' height. (2) students were still confused to fill the table in the students' work sheet, (3) different object measurement confused the students, this may be caused by the limited number of tools, (4) the member of group who give less influence for the group spirit. (5) most students were involved actively in learning activity except one student in the name of Silviana. She was not motivated yet although her teacher has approached her.

3. cycle III

a. learning purpose: to differenciate the characteristics of living things and non living things.

B lesson study procedures:

Plan III. Plan III discussed lesson design to differenciate the features of living things and non living things. The objects prepared for learning process among others were robot, some species of insects and fish, five kinds of plants. Students would be asked to identify the characteristics of living things based on the observation toward the object and give mark on the column prepared in the students' work sheet.

Do III. During the third cycle, the group members were switched with the purpose so the inactive students in the learning process previously became more active and more motivated to study., in this case Silviana who previously belonged to group 5 was moved to be the member of group 8. Learning process occured as it was planned, that was the students obsreved the object prepared. They discussed with their own group to distinguish the characteristics of living things. Next, observation result was noted in students' work sheet and presented in front of the classroom. Questions in jumping task was also tried to discuss with students.

See III. The facts found during learning process among others were: (1) a concept that plant and animal are living thing was got be the studnets when they were in primary schools, but how to prove the characteristics of living things is an important thing to understand. This was seen when the students discussed with their group, there was a student who said" if this plant was categorized into living thing, how does it move?. " have you ever seen a spider excrete?".

(2) discussion result of group 8 toward the question in jumping task was rinjani mountain was categorized into living thing because it could "deliver" a new mountain. (3) student in the name of Silviana who was inactive in previous learning process became active in discussion process after she was switched to group 8.

Based on learning process which has been done in cycle 1, sentence which has been stated in students' work sheet related to the part of stem which must be measure needed to clarify so the misconception about stem concept could be

avoided. In this case, teachers played an important role to guide the students in observation activity. Then, in cycle II and III, the sentence used related to students' activity needed to be more communicative so that the learning purpose could be accomplished by students. In cycle 2, all objects were weighed by students with the available tools because in the students' work sheet there is no instruction to measure objects with mineral water glass, measure in fathom, weigh the body weight by the fat and thin indicator. It was in this part that the teachers' role to guide students in understanding what is asked in learning process. According to Marhamah (2013), the experiment successful relies on teacher's role when guiding experiment activity.

Learning process in cycle 3 showed that the students has understood the concept of living things and non living things. An important point which should be conveyed was the proofs about the characteristics of living things and non living things. Aparted from the problems found, the students involved actively in learning process because they learn real object. Learning process which involve students actively will make meaningful learning. (Nurhadi, dkk,. 2004, Marhamah, 2013)

The implementation of Lesson study into natural science learning at MTs Muallimat NW Pancor provided positive benefits for the involved team. The team could learn together from the learning facts. How should we teach a lesson which is suitable to the learners' condition. This is in line with Sato's statement (2014), "that through lesson study, the involved team could learn from each other **from sequence of learning process, not "teach ecah other".**

D. Conclusion and Suggestion

Conclusion

Based on the result and discussion of this research, it could be drawn conclusions as follows.

1. Based on the learning process which has been conducted, the students were taught science process skill, those were doing measurement which was a part of observation, recording observation result which was a part of collecting data, doing inference, drawing conclusion and communicating observation result through presentation.
2. Through lesson study, team could learn how to teach lesson which is suited to students' characteristics.

Suggestions

Meaningful learning facts could become examples for the nest classroom instruction, whereas less meaningful facts could be used to improve learning process for the next class.

References

Lewis C., (2010). *Lesson Study: A Handbook of Teacher-Led Instructional Change*. Philadelphia: Published by Research for Better Schools Inc.

Marhamah, Hasanussulhi, (2013). *Penerapan Metode Inkuiri Terbimbing untuk Meningkatkan Keterampilan Proses Sains pada Siswa SMP Laboratorium*

Hamzanwadi Selong. Prosiding Seminar Nasional (hal. 252-258). ISBN 978-602-1570-08-1. Graduate ProgramMataram University.

Marhamah, Irawati M. H., Susilo H., & Ibrohim, (2016). *Improving Critical Thinking Skill through the Integration of Problem Based Learning and Group Investigation.* International Journal for Lesson and Learning Studies. Vol. 5 Issue 1, pp 60-75 http://dx.doi.org/10.1108/IJLLS-08-2015-0026

Nurhadi, Yasin B., dan Senduk A. G. (2004). *Pembelajaran Kontekstual dan Penerapannnya dalam KBK*. Malang:Malang University Press

Ono Yumiko and Johanna Ferreira, (2010). *A Case Study of Continuing Teachers Professional Development through Lesson Study in South Africa*. Suth African Journal of Education, Vol.30, 2010.

Sato M., 2014. Gakko O Kaikaku Suru, Manabi No Kyodotai No Koso To Jissen. Terjemahan Fatmawati Djafri. Tokyo:PELITA JICA

Syamsuri & Ibrohim, (2008). *Lesson Study*. Malang: Natural Science and Mathematics facultyMalang. State University

Tim Penyusun (2013). *Kementerian Pendidikan dan Kebudayaan*. Buku Guru: Ilmu Pengetahuan Alam SMP/MTs Kelas VII. ISBN 978-602-282-079-6

Students' Learning Achievement of Civic Education of Early Childhood Education Program Hamzanwadi University, 2016-2017 (Trend Analysis Based on Evaluation Components)

Dukha Yunitasari
Hamzanwadi University.
dukha.yunitasari@gmail.com

Abstract

Civic education has a pivotal role in the process of forming nation and character building. However, this lesson tends to have authority function instead of building the student's character. This research was designed to explore the tendency of learning achievement of civic education from numeric data gained from student assignment, such as Mid Test and Final Test result of the first year of early education student.

This study was descriptive qualitative research with trend analysis. There were 53 student of who participated in this study. Test was the main instrument to collect the data, and it was analyzed by descriptive statistic by considering the overage value, standard deviation and percentage.

The finding of the research defected that (1) there was fluctuation in the student's result at civic education, meaning that there was no positive correlation among one marking component to another; (2) if seen from the mean result, the student result was relatively very good with the average score of 78,8, (3) it was found that there were 54, 7% of the student had the higher score, and 37,7% with average categories and 7,5% with low categories; (4) there was tendency that deploying small group discussion has affect the student's learning achievement at civic education.

Keyword: Learning Achievement, Evaluation Component, Civic Education

A. Introduction

Civic education is one of the important subjects in higher education. This is predominantly based on Indonesian law number 20 year 2003 about education system stated that civic education is provided to raise sense of nationality of the student. This means civic education play a significant role in forming the nation and the character of the people. However, the intimate purpose of this subject is not fully achieved as many cases are found in the community that contradicts the value of the nation. As a consequence of this, non *Pancsilais* or acting which is not based on five pillar of Indonesia is one of buzzwords in the community. Besides, the practice of civic education tends to have authority instrument instead of way of forming the charter of the student. This practice is highly likely to happen as the lesson is closely related to practical political bias of the government.

In addition, the civic education has been influenced the global development where other countries in the words have interfered one nation politic as well as global defense system. World has become a small village as a result of rapid development of information system and technology. This change has inevitably

influenced a way of thinking, paradigm, attitude of Indonesia people, and contradict to the Indonesia philosophy, that is *Pancasila* (five pillar of Indonesia).

The current issues faced nowadays is the injustice of law implementation which leads to corruption, anarchic demonstration, the emergence of radical school/line among young people and student and a group of people's interest to change Indonesian country system. These issues rose as a result of lack of sense of belonging and loving to nation. Therefore, it needs high commitment from many aspects, including academician in higher education to implant attitude and pride to Indonesia citizen thorough effective civic education. It is believed that it will anticipate all problems faced by this country.

One of the ways that academician in higher education should do, especially lecturers to implant positive attitude and sense of nationality of the learners are to function them as a subject, and the lecturers should be a facilitator and students' partner. It is believed that this strategy should improve the humanistic principles in the learning process, especially in learning civic education. Ideally, civic education should be main instrument to solve the current country's problem and encourage the young not to betray the positive value and ambition of the country. It is hoped that civic education can education people to love the country, to be democratic through comprehensive understanding. This could be used as successful indicators of learning civic education.

Learning achievement is an important thing to be considered in the process of grading which is based on knowledge and skill that students have. As Mary Bringgs stated

> *"One term not in the terminology list is 'achievement', because this is an important area to consider within the assessment process and needs consideration in greater depth. In deciding what the objectives will be for a lesson and therefore what you expect children to learn, you are making judgments about what is valued in terms of knowledge and skills".*

> Another comprehensive argument put forward by E. Grounlund that learning result can be seen from knowledge, intellectual ability and general skills, and attitude. This is stated in his book entitled "constructing achievement test as follows.
> *"Despite the variation from course to course, most lists of instructional objectives include learning outcomes in the following areas: (1) knowledge, (2) intellectual abilities and skills, (3) general skills (laboratory, performance, communication, work-study), and (4) attitudes, interests, and appreciations".*

Based on these two arguments stated above, the learning outcome of civic education do not merely depend on the learners' ability in mastering concept or theory of civic education but more importantly on the students' attitude either inside or outside classroom, their ability to explore a new concept to solve the current nation problem as well as the ability to find ideas or concept to develop the nation.

The outcome of civic education will not merely achieved through traditional and conventional learning and teaching strategies but intensive discussion, sharing idea, brainstorming, case study and problem solving.

It is common to witness today that many lecturer teaching civic education through lecture, understanding concept and telling story. This would result in understanding the concept or theory of civic education without problem solving skill that will improve the condition and situation of the heated problem. This contradicts the main purpose of learning civic education that is to form an individual who has strong sense of nationality which is commonly known as nation and character building. Pribadi stated that learning is a part of system with interrelated components to synergize an activity to achieve determined learning goals. Furthermore, Raiser and Dempsy contested that there are three components of learning; modes, method and media. Learning Method is one of aspect addressed in this study. This refers to teacher's strategy to provide learning process and the way the learners respond to the learning itself.

To achieve an effective leaning outcome of civic subject, it needs comprehensive discussion among student and student and teacher by exploring the nation problems. This can be gained through small group discussion followed by classroom discussion.Discussion is a method used by the educator to familiarize the student to state opinion and find solution to a certain problem. This method can stimulate a sense of working together in solving a problem and appreciate the difference. Soetome (1993: 153) stated that discussion a method where the teacher present current issue and ask student to work together to find the solution. Likewise, Slamto (1991: 1010) argued that group discussion is a planned discussion among three students or more about a topic with a leader. Therefore, discussion is seen as one way to achieve better learning result, especially when talking about the current issues that reflect daily life.

Based on explanation mentioned above, the main problem in this research is how the student's result of civic education after deploying a small group discussion as a main method in learning process. This research aimed at exploring the student' result based on two main component, that is mid and final test as well the combination grade of presence and assignment of the student of early education at Hamzanwadi university 2016.

B. Method

This is descriptive qualitative research aiming at exploring the issue related to t result of civic education of early education student through numeric data obtained from middle and final test. This research was not intended to compare all the grading components, instead of explaining the component mostly contributed mostly in determining the final test result of civic education. Therefore the research approach deployed was analysis trend. There were 53 participants of this research from first year student of early education. The data was gained from the all student test result after employing group discussion method. This method is not treatment instead of teaching method used for teaching civic education. The data gained was

analyzed by descriptive statistic by calculating the average score, ideal average and ideal standard of deviation and percentage.

C. Finding and Discussion

Operationally, the learning result of civic education can be seen from learning achievement after experiencing the learning process. The result of the student' achievement are from three main grading component; mid test, final test and combination grade from varies grading aspect. Trend analysis of civic education of early education student can be seen from the following table.

Table 1 . Trend analysis of student grade of civic education of all components

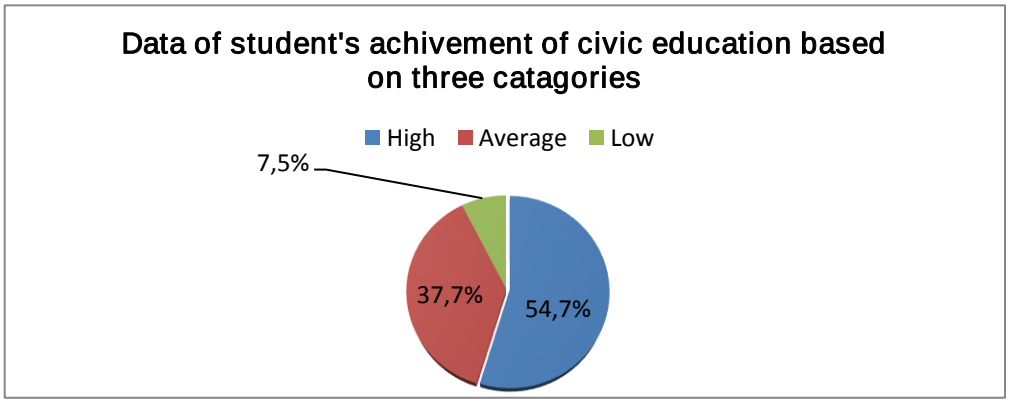
Aspect	Means	Mi	SDi
Assignment	76,5	72,5	2,5
Mid Test	80,8	77,5	2,5
Final Test	80,7	77,5	5,8
Final Score	79,8	77	3,6

The able showed that the Middle Test ranked the highest score compared to other components. Meanwhile, assignment was the lowest one of the all score. This indicates that the assignment provided is more difficult or challenging for the student than that of middle and final test. However, the best score of the middle and final test is directly influenced by the assignment assigned, reaching from 76, 5 to 80,8. The assignments provided whether individually or in group are designed to increase the students' cognitive, affective and phychomotoric (Suherman and Winataputra 2002).

The score of Final Test showed the least compared to Middle Test, indicating that Middle Test as a form of formative test has no significant effect in improving the student's performance at final examination. Ideally, the formative assessment could be used to improve student score at final test, resulting in better achievements at the end of the learning process. Zainul made an analogy of Bob Shake quoted from Scriven (1981) that *when the cook tastes the soup, that's* formative*: when the guests taste the soup, that's summative*. It could be argued that formative assessment through Middle test should be a guide to improve the learning process, and then positive impact on student's achievement. Moreover, many lecturers do not make a good use of student's performance to improve the learning process as a whole.

Beside this, if seen from the average score or all grading component, the result of student test of civic education is 79, 8 with the ideal mean of 77 and standard deviation of 36. This formulas is used as a converting guide with three main grading component, and found that the average score of 79,9 in the scoring range between 73,7% - 80,6 which is regarded as an average level. It could be argued that trend analysis of civic education has category of very good level. If seen from the

percentage of students who use this three categories, there are 54, 7% of them who gained very high score category, 37,7% with average category and 7,5% with low category. This can be seen clearly form the following chart.



The pie chart provides information that the final test result gained by the student was widely varied with highest and lowest score of 88 and 62 respectively. This figures show that teaching civic education with small group discussion is effective in developing the student performance academically.

It is believed that There several factors contributing to this improvement; 1) discussion method is able to stimulate the student's creativity in conveying his/her idea, 2) discussion can help student find the problem and solution, 3) discussion can raise student's awareness of the importance of learning together, 4) discussion can help student find the best solution of the current issue. These four skills are important when student deepening their skill at civic education. Therefore, the use of discussion in classroom has several significance; 1) help student to explore the problem being faced, 2) help student to connect their theoretical experiment with practical one, 3) help both student and teacher to evaluate their academic performance in a form of group discussion, 4) motivate student to find and express new idea and concept and 5) train student to find the best solution to a certain problem being encountered.

D. Conclusions and Suggestions

On the one hand, the test result of civic education of early education student with three grading components has no positive correlation between one component to another. Middle test know as a formative assessment has no impact on improving student's performance at final test. On the other hands, student's assignment as a part of formative test can boost student's achievement gained from middle test. Trend analysis of civic education has category of very good and average if it seen from final test score with average of 79, 7%. There are 54,7% of student with high category , 37, 7% with average one and 7,5% of the low category. This means that teaching civic education with small group discussion is effective in developing the student performance academically.

References

Briggs, Mary. et al. (2008). *Assessment for learning and Teaching in Primary Schools, Second Edition*. Newcastle : Learning Matters Ltd.

Gronlund, Norman E. (1977) *Constructing Achievement Test*, *2nd Edition.* Englewood Cliffs:: Prentice Hall, Inc.

Pribadi, Benny A. (2009). *Model Desain Sistem Pembelajaran.* Jakarta: PT Dian Rakyat

Reiser, Robert A. dan Dempsey, John V. (2012). *Trends and Issues in Instructional Design and Technology : Third Edition.* (United States of America: Pearson Education.

Suherman dan Winataputra, (2002). Strategi belajar Mengajar. Jakarta: Depdiknas

Learning Eyes Under Entrepreneurship, Practice of Production Unit And Motivation to Readiness Entrepreneurs Students Vocational High School

Muhammad Rapii [1], Zalia Muspita[2]
Hamzanwadi University
rapii_rsi@yahoo.com

Abstract

This study aimed to determining: (1) the readiness entrepreneurship vocational students and (2) the influence of entrepreneurship subject, unit production practice activities and motivation entrepreneurship individually or simultaneously on entrepreneurship readiness of vocational students. The data collection used Documentation and questionnaire with likert scale of five alternative answers. Analysis of date used multiple regression analysis. The influence of each independent variable on the dependent variable was analyzed by using a statistical test with t test and F test with selected statistical level of significance, α = 0.05 with (95%) of confidence level. Descriptive analysis showed that the level of entrepreneurship readiness of vocational students is 60,0% students have a level of entrepreneurship readiness in very high category (40.0%) students have a level of entrepreneurship readiness in high category. The results showed that there is significant difference between the entrepreneurship traininng subject, unit production practice activities and motivation toward entrepreneurship readiness (R^2 = 0.351). This suggests that learning entrepreneurial subject, unit production practice activities and motivation entrepreneurship are able to explain the variance in entrepreneurship readiness vocational students by (35.1%).

Keywords*: Learning Entrepreneurship, Unit Production Practice, Motivation and Readiness Entrepreneurship.*

A. Introduction

One of the problems facing the Indonesia nation today is still the large number of poor people and high unemployment rate. Central Bureau of Statistics (BPS) shows that the number of Indonesian population who are below the poverty line in 2010 was 31.02 million or 13.33%. Meanwhile, from the number of work figures reaching 119.4 million, the number of unemployed reached 7.14% (Official Gazette No. 33/05 / Th.XIV, May 5, 2011). According to data from the Ministry of National Education (Kemdiknas, 2009) which also reported from the Central Bureau of Statistics (2009) the number of unemployed open 2009, as listed in the following table.

Table 1. Open Unemployment According to Higher Education Arrested

No	Highest Education Saved	2009
1	No / Never School / Not Graduated Elementary School	2.620.049
2	Elementary School (SD)	2.054.682
3	Junior high school	2.133.627

No	Highest Education Saved	2009
4	Senior high school	1.337.586
5	Diploma I / II / III / Academic	486.399
6	University	626.621
	Amount	**9.258.964**

Source: Kemendiknas (2012: 21)

So much hope of the government towards vocational high school, can cope with unemployment and improve people's welfare. But on the other hand the performance of existing Vocational High School is still not optimal. The not optimal performance of vocational high school, Suyanto (2007) is marked by the achievement of education indicator in vocational high school that has not been optimal. These indicators are: (1) the absorption of graduates in the business world and the world of work in accordance with the competence of the program expertise, (2) able to develop them selves in entrepreneurship so as to create new jobs and (3) able to compete in continuing education to a higher level. Related to the absorption of Vocational High School graduates by business world and industrial world, according to Samsudi (2008) in 2008 graduates of vocational high school who can directly enter the workforce about 80%-85%, while it is absorbed only 61%.

The low absorptive power of vocational graduates of causes limited employment. These conditions tend to lead to open unemployment. Various problems related to the quality, relevance, and competitiveness of education faced by need to find alternative solutions to the goal and vision of formation mission can be realized. In the context of developing vocational schools, efforts to improve teaching and learning process, curriculum and graduate competency improvement play a strategic role. To prepare a future planning required supporting data both input, teaching and learning process and output (graduates).

Education is done to make changes in the competence of students. the process of change is done to answer the guidance of the community for educational graduates are considered not ready to live life. During this process of education and learning is considered only make children as thinkers. Every day the children are fed with a variety of conceptual science without any applicative explanation for the concept. It is a reference to the idea that our education process is not effective.

For these conditions, education that has to be adjusted, modified according to need. One form of the right process is with training education. With training education, our educational orientation not only gives knowledge to students, but more to the skills aspect. Provide skills to the students so that in time they can apply skills in their life.

The results of the study by Howard S. Rasheed, entitled Developing Entrepreneurial Characteristics in Youth: The Effects of Education and Enterprise Experience, suggest that entrepreneurship education and corporate experience can influence the general characteristics associated with entrepreneurs among middle-level students. Specifically, students with entrepreneurship training have overall

entrepreneurial characteristics, and higher achievement, motivation, and more personalized control.

This is in accordance with the objectives of the vocational school, which is to prepare the to work in a certain field so that the needs to prepare the areas of expertise that the broad line of education and training programs divided into (Constitution, No. 2 Year 1989, Article 21), which includes (a) Normative, play a role in the formation of human nature of Indonesia; (b) Adaptive, participating in basic planting and professional development and (c) Productive, participating in the provision of productive skills in accordance with the needs of the world of work.

The purpose of the school production unit is to improve the quality of graduates in various aspects, especially in terms of knowledge and skills, namely (1) production based training vehicle, (2) the vehicle to grow and develop the entrepreneurship spirit of teachers and students in Vocational School, (3) assist funding for maintenance, (4) addition of facilities and other education operational costs, (5) increase the spirit of togetherness, because it can be a vehicle for increasing productive activities of teachers and students as well as providing 'income' and improving the welfare of citizens (6) developing self-reliance and self-confidence in the implementation of student practice activities, (7) training to take risks with mathematical calculation, (8) supporting the implementation and achievement of the Dual System Education System and the Complete Education Unit Level Curriculum , (9) provide opportunities for students and teachers to work on market-oriented practices, (12) to train students to be independent of others, (13) to be independent in particular in obtaining employment, (10) to increase the creativity and innovation among students, teachers and school management, 14) dual system education containers for students who are not employed in business and industry, (15) better relationships with business and industry and other communities for the opening of public facilities and products of production, 16) increase the intensity and frequency of intra, co, and extra-curricular activities of students and (17) build school capacity in establishing cooperation with outsiders and the environment and the wider community (Dikmenjur, 2007: 8).

Basrowi (2011: 65) motivation in a person that encourages the ability of individuals through activities in achieving goals. Related to motivation for entrepreneurship, there are at least six levels of entrepreneurship motivation and of course each has a different success indicator (Sunarya, 2011: 18), namely: (a) Material motivation, earning a living to earn income or wealth; (b) Rational-intellectual motivation, recognizing opportunities and market potential, initiating products or services to respond; (c) Emotional-ecosystemic motivation, creating added value and maintaining the sustainability of environmental resources; (d) Emotional-intrapersonal (psycho-personal) motivation, self-actualization or self-potential in the form of a marketable product or service; (e) Emotional-social motivation, establishing contact with or serving the needs of others; and (f) Spiritual motivation, manifesting and disseminating transcendental values, interpreting it as a mode of worship to God.

Hisrich-Peters (2002: 10), entrepreneurship is the process or creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psyhical, and social risks and receiving the resulting rewards of monetary and personal satisfaction and independence.

Suryana (2010: 27 quoted from *brastreet business credit services* stating that the level of compentence an entrepreneur muast: (1) *knowing your business*, which must know what to do; (2) *knowing the besic* business management, that is knowing the basics of business management; (3) having the *proper attitude*, that is having an attitude of seriousness to the effort undertaken; (4) *having adequate capital*, which has sufficient capital; (5) *managing finances effectively*, having the ability to manage finances effectively and efficiently; (6) *managing time efficiently*, ie the ability to manage time to efficiently and efficiently; (7) *managing people*, having the ability to control people in running the company; (8) *satisfying customer by providing high quality product*, that is ability to satisfy customer by giving good service or goods, (9) *knowing how to compete*, that is knowing competitive strategy in business world, and (10) *copyaing with regulations and paperwork* , that is an entrepreneur must have the ability to make clear rules or working guidelines in writing.

B. Methods

This research is an ex-post facto research (Sukardi, 2012: 165), which the data in research is obtained from the data of events that have been held and the researchers did not manipulate the state of the existing variable, in other words the researchers collect the facts through measurement against symptoms that have occurred before and look for the cause. Analysis techniques using descriptive and inferential statistics (multiple regression) data have been tested prerequisite analysis among others: normal, linear, multicollinary and heteroscedasticity test (Ghozali, 2009).

C. Findings and Discussion

Description of the data of each variable based on the data obtained in the field. This section presents descriptions of data from each variable including mean, median, mode and standard deviation (SD) values.

Table 2. Summary of Coefficient and Probability Values

Variable Name	B	Standar Error	t-value	t	Sig.
constants	31.851	13.408	2.376	2.000	0.020
Learning the eye of entrepreneurship training	0.369	0.177	2.084	2.000	0.040

the practice of production units	0.265	0.74	3.571	2.000	0.001
Motivation of entrepreneurship	0.494	0.185	2.670	2.000	0.009

Correlation coefficient (R) = 0.592 (a)
Coefficient of determination (R^2) = 0.351
Ajusted (R^2) = 0.328
F_h = 15.507
F_t= 2.72
Sig. F = 0.000 (a)

a. Predictable variables: learning of entrepreneurship training subject, production unit practice and entrepreneurship motivation
b. Dependent variable: entrepreneurial readiness

Based on the results of multiple linear regression test statistic obtained with the processing seen in the table above, then obtained the regression equation as follows:

$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + e$

$Y = 31.851 + 0.369X1 + 0.265X2 + 0.495X3 + e$

Of the three values coefficient on the independent variables above obtained variables of entrepreneurship motivation has the largest coefficient value with the coefficient value (0.369) while the smallest coefficient value obtained by the variable unit of production practice with a value of (0.265). Based on the results obtained that the motivation variable entrepreneurship is the most dominant factor which influences the readiness of entrepreneurship, whereas the variable of production unit practice activity has the smallest influence compared to other independent variables.

Table 3. Model Summary

R	R square	Adjusted R square	Std. Error of Estimate
0.592	0.351	0.328	6.989

Based on table 3 above The degree of closeness of the relationship between the three independent variables (learning of training subject of entrepreneurship, the practice of production unit and entrepreneurship motivation) with the readiness of entrepreneurship of vocational students including strong category, is shown by the value of correlation coefficient R (0.592). The value of coefficient of determination R^2 (0.351) indicates that (35.1%) readiness of entrepreneurship of vocational students is influenced by the variables learning of entrepreneurship training subject, the practice of production units and entrepreneurship motivation while the rest of (64.9%) influenced by other factors not observed.

D. Conclusion

The result of the data analysis above can be concluded as follows, ie learning of humanity training subject, production unit practice activity and entrepreneurship

motivation together have an effect on entrepreneurship readiness on vocational students with F-value (15.507) which is at significance level α = 5% (2.72) with a significance level (0.000). The value of coefficient of determination on the value of R^2 (0.351) or (35.1%) this means that the entrepreneurship readiness that can be explained by the regression equation (35.1%) influenced learning eye training entrepreneurship, unit production and entrepreneurship motivation, while the remaining (64.9%) influenced by another variable not observed in this study.

References

Buchari Alma. (2011). *Kewirausahaan untuk Mahasiswa dan Umum*. Bandung: Alfabeta.

Fernando Lourenço and Oswald Jones. (2006). Developing Entrepreneurship Education: Comparing Traditional and Alternative Teaching Approaches. *International Journal of Entrepreneurship Education* 4: 111-140.

Frinces, Z.H. (2011*). Be an Entrepreneur (Jadilah Seorang Wirausaha).* Yogyakarta: Graha Ilmu.

Hisrich, R.D., & Peters, M. P. (2002).*Entrepreneurship5thed*. New York: The McGraw Hill.

Imam Ghozali. (2009) *Ekonometrika: Teori, Konsep dan Aplikasi*. Semarang: Universitas Diponegoro.

Leonardus Saiman. (2011). *Kewierausahaan: Teori, Praktik, dan Kasus-kasus*. Jakarta: Selemba Empat.

Muhammad Saroni. (2012). Mendidik dan Melatih *Entrepreneur Muda: Membuka Kesadaran Atas Pentingnya Kewirausahaan bagi Anak Didik*. Jogjakarta: Ar-ruzz Media.

Mulyadi, N. (2009). *Kewirausahaan dan Managemen Usaha Kecil*. Bandung: Alfabeta.

Howard S. Rasheed. *Developing Entrepreneurial Characteristics in Youth: The Effects of Education and Enterprise Experience.Journal.*

Sukardi. (2012). *Metodologi Penelitian Pendidikan Kompetensi dan Praktiknya*. Jakarta: Bumi Aksara.

Sunarya, Sudaryono dan Saefullah.(2011). *Kewirausahaan*. Yogyakarta: Penerbit Andi.

Suryana. (2010). *Kewirausahaan Pedoman Praktis: Kiat dan Proses Menuju Sukses.* Jakarta: Salemba Empat.

Suyanto.(2007). *Perumusan Manajemen Berbasis Sekolah*. [Online]. Tersedia: http://media.diknas.go.id/media/document/4268.pdf

Wiedy Murtini. (2009). *Kewirausahaan Pendekatan Succes Story*. Surakarta: Sebelas Maret University Press.

Inquiry Learning to Train Creative Thinking Student

Baiq Fatmawati
Program Studi Pendidikan Biologi – Universitas Hamzanwadi
f baiq@yahoo.com

Abstract

Constructivist learning is a learning directed to learners has their own insights after experiencing the process by self, so the insights obtained awakened by itself.Inquiry learning is a form of a student-oriented learning approach (Student Centered Learning), student holdingimportant role in the learning process.Inquiry means is a questionor investigation and as a general process by which humans search for or understand information.Inquiry encourages and directs students to be actively involved in the learning process by performing various activities.Inquiryassists the process of assessment student ability; one of them is high order thinking skills, one of which is creative thinking). Creative thinking is way of thinking to find alternative answers that are logical or known as diverging thinking. A focus of this research is to know the ability of creative thinking in elementary level students. The result of data analysis showed that the level of creative thinking in experimental class obtained higher gain score (0.56) while control class (0.14). Obtaining creative thinking gain scores for male students' control class (0.21), female students (0.27). In anexperimental class; Male students (0.47) and female students (0.44). Therefore, inquiry can used as a model of learning to train creative thinking which impact on improving the results of creative thinking studentin the learning process.

Keywords: *constructivist learning,inquiry, creative thinking, male students, female students*

A. Introduction

Assessing higherorder thinking skill in the learning process needs to be done by teachers, higherorder thinking skillincludes (a) problem-solving, (b) making decisions, (c) critical thinking, and (d) creative thinking. Creative thinking is the highest level of cognitive level used by educational specialists Bloom and Presseisen. However, to assess the necessary routine exercises that to habituatea child's brain in the process of thinking, not just memorize and remember it.

Creative thinking is a habit of mind trained with regard to attentionintuition, turning the imagination, revealing the new possibilities, opening up stunning perspectives, and generating unexpected ideas. Divergent thinking is also called creative thinking is to provide various possible answers based on information provided with an emphasis on the diversity of numbers and suitability.

The learning process that occurs tend has a target to spend lesson material and less attention quality of comprehension students' toward the material submitted. In addition, the activities are more oriented to the teacher's handbook. Students are less to explore the abilities they have because their knowledge is limited to the package book. Many students only memorize the material so that they easily forget when the material was not studied again. Students are less to express their opinions systematically even many questions that are not directed. The assumtion that

knowledge can be transferred intact from the teacher mind to student's mind without notice the initial conception of the misconception student, causing the teacher feel that he has been teaching well but the students are not learning. It's means that students have not yet developed the process of developing and applying the experiences or materials learned with the preconceptions already possessed so that the concepts are developed.

As a result, thinking ability, scientific work, and problem-solving skills are encountered in they real-life. It can be one of the factors that can cause student boredom during learning in the classroom, impact on outcomes learning, and their ability thinking especially highorder thinking skills.

The learning process takes place internally and personal of students, in order for the learning process leads to the achievement of goals in the curriculum so the teacher must plan carefully and systematically a variety of learning experiences that enable changes in student behavior in accordance with what is expected, one example by using Constructivist learning strategy is Inquiry.Inquiry learning is a learning activity that emphasizes the critical and analytical thinking process to seek and find answers a questionable problem (Sanjaya, 2011). Inquiry learning is designed to invite students directly into scientific process, such as observing, questioning, gathering information, associating and communicating.In scientific process,needed approaches and methodslearningit can be help students to interact with their social environment, especially with other students so enable students to draw on their own experiences, share strategies and information, respect each other, encourage intelligent ideas, and engagecritical - creative thinking (Zanzibar & Surtikanti, 2015).

Inquiry as a process to seeking or understanding information, students are required to find concepts through the necessary instructions a teacher. The guidelines are generally guiding questions.In addition the questions, a teacher can also give explanations as necessary when the student will conduct an experiment, such as an explanation of how to experiment. Inquiry means is a series of learning activities maximally engage all students' ability to search and investigate systematically, critically, logically, analytically, so that they can formulate their own findings with confidence.Michalopoulou (2014) stated, creativity is important to be applied as a teaching approach because the children need to understand some things related to their emotions, imagination and cognitive. A creativechildren are often perceived as class threats because they ask too many questions for teacher. Therefore, one of the learning strategies to facilitate a creative of student is use the inquiry. The research question is whether Inquiry can train creative thinking skill of students at junior high school level?

B. Method

The participant is students of MTs Nurussalam Tetebatu in Year 2014/2015 first grade which amounted 50 students, divided into control class (24 students) and experiment (26 students). To measure students' creative thinking skill, used

questions in form description by referring indicators of creative thinking skillthat is fluency, flexibility and originality. The analysis data using descriptive statistics because researchers only want to describe the sample data and do not want make conclusions that apply to the public (Sugiyono, 2011). The data analyzes were: 1) creative thinking ability for control and experiment class, 2) indicator of creative thinking ability for control and experiment class, and 3) indicator of creative thinking ability based on gender specific experiment class. To know the creative thinking ability used the gain formula (d) and the criteria from Hake (Savinem & Scott, 2002) as follows:

$$g = \frac{(s\ post - s\ pre)}{(s\ max - s\ pre)}$$

Ket: g = score gain
S_{post} = posttest score
S_{pre} = pretest score
S_{max} = maximum score

The category creative thinking skills

No	Gain score	Category
1	g < 0,3	Low
2	0,3 ≤ g ≤ 0,7	Average
3	g > 0,7	Upper

C. Finding and Discussion

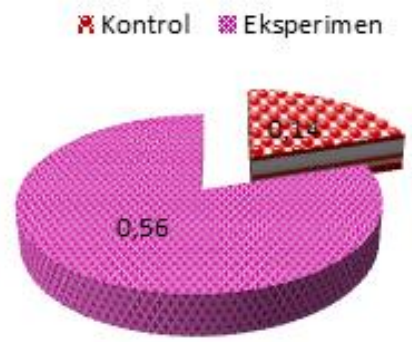
A general understanding for developing high order thinking should consider student engagement with learning tasks that exceed both Blooms' level of cognition 'understands', to encourage implementation, analysis, synthesis and evaluation activities in information processing. High order thinking skill includes thinking skills that required more than remembering or memorizing information.There are two ways to teach high order thinking skill that is (1) Infusion approach refers to the teaching of high order thinking skill in the specific content; Teachers integrate high orderthinking skill explicitly with the teaching of certain content, and (2) separate subject approaches are high orderthinking skills as general strategies used across the subject domain (not content specific; high order thinking skill teaching teachers as a set of skills or strategies to be gained (Yen & Halili, 2015).

Presseisen (Costa,1985) suggests there are two thinking skills: (1) the basic of thinking consisting of: (a) connect cause and effect, (b) transforming, (c) finding relations, and (d) provide qualification, and (2)) complex thinking that includes: (a) problem solving, (b) making decisions, (c) critical thinking, and (d) creative thinking. The thinking skills that occur in the students are still in the category of low order thinking skills which cover remembering, understanding, and applying.

Result of Creative Thinking

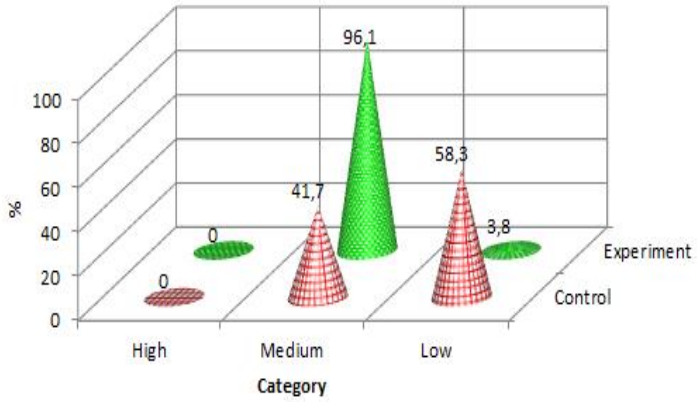
The Children develop dispositions for learning such as curiosity, cooperation, confidence, creativity, commitment, enthusiasm, perseverance, imagination and reflexivity, when they participate in based on ivestigation are rich and meaningful,

survive and feel satisfaction of achievement, persist when they looking for a difficult task (Michalopoulou, 2014). The application of inquiry learning has an impact on the experimental class (which uses inquiry) compared to the control class. The comparison of the gain scores presented in pie chart form (figure 1).



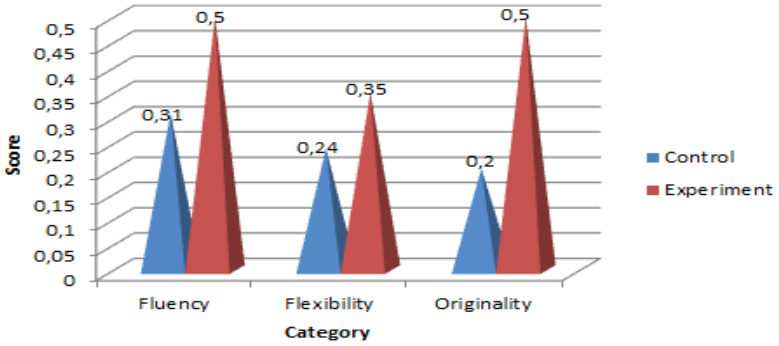
Picture 1. Gain score of creative thinking skill of control and experiment class.

The result of creative thinking that's obtained then is categorized into low, medium, and upper categories. The mediumand low categories that look good in experimental and control class. Creative thinking categories are presented in graphical form (figure 2).



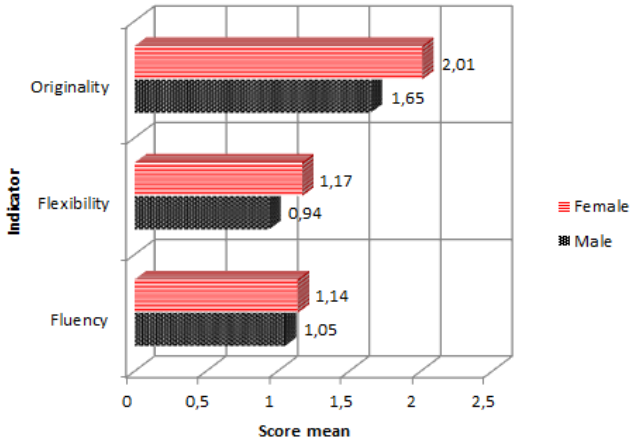
Picture 2. Category of Creative Thinking

The results of this research have been supported by: 1) Nurhadi, et al (2016) about inquiry that is inquirybased learning can improve students' creative thinking skill rather than using conventional learning. 2) Zanzibar & Surtikanti (2015) found the average of students' creative thinking skill before given learning 17, 13 and after given guided inquiry study 35,74 with include medium category to 0,59 which included in medium improvement category. 3) Longo (2011) states that the use of inquirybased learning can help students become more creative, more positive, increase curiosity, and be motivated. The existence of creative thinking skills in inquiry learning can improve students' creative thinking skills, as evidenced by the improvement of each indicator creative thinking skills. The score of gain creative thinking is presented in graphical form (figure 3).



Gambar 3. The result of indicator creative thinking

Figure 3 shows that the classes taught by inquiry are higher gain in each indicator creative thinking, the same is done by Zanzibar & Surtikanti (2015) with the following results: In fluency, N-gain of 0.59; Students can spark a lot of ideas or answers to a solving the problem. On flexibility, N-gain is 0.59; Students can generate ideas, answers or questions that variety and can see the problem from different perspectives. On originality, the N-gain is 0.52; Students are able to create new expressions as a result of their own thinking and think of usual ways of expressing themselves.The next creativethinking scoring is calculating the indicators ofcreative thinking of male and female students in classes taught by inquiry, the gain scores obtained are presented in graphical form (figure 4).



Picture 4. skor berpikir kreatif pada siswa laki-laki dan perempuan pada kelas eksperimen

A research findings presented in Figure 4 are in line with the results of the Siddiqi (2011) states that, male students get a slightly higher score compared to female students in each indicator of creative thinking. The scores are: Fluency; Male students 37.57, female students 37.32. Flexibility; Male students 32.65, female students 31.67. Originality; Male students 6.84, female students 5.07.When viewed in terms of the brain, the difference between the structure and function of brains men and women has major implications for the theory of education. Girls tend to use brain areas devoted to verbal and emotional functioning, while boys generally use areas of the brain directed toward spatial and mechanical tasks, the male brain needs to recharge and reorient by including what the brain scientists call as a state of rest (Zaidi, 2010).

The creative thinking is not skill to produce or create something that does not yet exist, but skill to generate new ideas by combining, altering or smearing existing ideas (Anwar, et al., 2012). Munandar (2012) says, operational creative thinking skills can be formulated as an ability that reflects smoothness, flexibility, and originality in thinking, as well as its ability to elaborate (develop, enrich, detail) an idea. The indicators of creative thinking skills measured in this study are five indicators: 1) fluency, 2) flexibility, 3) originallity, 4) elaboration,and 5)evaluation.

The inquiry learning is one of the learning models which are suitable with student effectiveness. The inquiry process uses students' intellectuals to gain knowledge of how to find, organize concepts and principles into an important set of values according to the students. The investigation not only develops the intellectual ability but the potential of all students, including the emotional and skill development.The inquiry learning gives students the opportunity to build their own knowledge, using the concepts that have been held to solve problems encountered. Activities of students to observe, guess, and conclude through group activities and communicate the results of inquiry with more emphasis on learning. The main goal of inquiry learning is to help students develop intellectual thought and discipline by asking questions and getting answers based on curiosity (Andrini, 2016).Some of the things that characterize inquiry learning: 1) Inquiry learning emphasizes maximal student activity to seek and find, 2) All activities undertaken by students are directed to find and find their own answer from something in question, so that expected to grow self-confidence, and 3) The goal of inquiry learning is to develop systematic, logical, and critical thinking skills, or to develop intellectual ability as part of mental processes (Sanjaya, 2011).

D. Conclusion

Inquiry learning can be used as a learning model to train students' creative thinking skills; it can be seen from the experimental and control classes scores in both male and female students. In the experimental class obtained a gain score (0.56) while the control class (0.14). The result of creative thinking is seen from gender; Obtain score gain control class of male students (0,21), female student (0,27). In experimental class; Male students (0.47) and female students (0.44). a resultof indicator creative thinking: control class; Fluency (0.31), flexibility (0.24), and originality (0.2). Experiment class; Fluency (0,5), flexibility (0,35), and originality (0,5). Especially in the experimental class, male students are more creative than female students, this can be seen from the result of indicator creative thinking that is male students; Fluency (0,5), flexibility (5,5), and originality (5,5). Female student; Fluency (0,5), flexibility (0,35), and originality (0,5).

Reference

Andrini, V. S. (2016). *The Effectiveness of Inquiry Learning Method to Enhance Students' Learning Outcome: A Theoritical and Empirical***.** ReviewJournal of Education and Practice. 7 (3), 38-42.

Anwar, M. N., *et al*. (2012). *Relationship of Creative Thinking with The Academic Achievements of Secondary School Students*. International Interdisciplinary Journal of Education. I (3), 44- 47.

Costa, A.L. (1985). Teacher Behaviors that Enable Student Thinking (in) Costa, A.L (Eds), *Developing Mind: A Resource book for teaching thinking.* Alexandria ASDC.

Longo, C.M. (2011). *Designing Inquiry-Oriented Science Lab Activities*", Middle School Journal. 43 (1), 6-15.

Michalopoulou, A. (2014). *Inquiry-Based Learning through the Creative Thinking and Expression in Early Years Education Creative Education*. 5, 377-385.

Munandar, U. (2012). *Kreativitas dan Keberbakatan: Strategi Mewujudkan Potensi Kreatif dan Bakat*. Jakarta: Penerbit PT. Gramedia Pustaka.

Nurhadi,. *et.al*,. (2016). *Implementation of Inquiry Based Learning to Improve Understanding the Concept of Electric Dynamic and Creative Thinking Skills (An empirical study in Class IX Junior High School Students State 4 Kendari).* International Journal of Science and Research (IJSR). 5 (3), 471-479.

Sanjaya, W. (2011). *Strategi Pembelajaran Berorientasi Standar Proses Pendidikan*. Jakarta: Penerbit kencana Prenadamedia Group.

Savinem, A & Scott, P. (2002). *The Force Concept: A Tool For Monitoring Student Learning*. Physics Education. 39 (1), 45-42.

Siddiqi, S. (2011). *A Comparative Study Of Creativity Among Boys And Girls Of Class VII*. Half-Yearly Journal Of Educational Research Indian Educational Review. 49 (2), 5-14.

Sugiyono. (2011). *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, dan R & D)*. Bandung: Alfabeta Bandung.

Yen, T.S., & Halili, S.H. (2015). *Effective Teaching Of Higher-Order Thinking (HOT) In Education*. The Online Journal of Distance Education and e-Learning. 3 (2), 41- 47.

Zaidi, Z.F. (2010). *Gender Differences in Human Brain: A Review***.** The Open Anatomy Journal**.** 2, 37-55.

Zanzibar, M. & Surtikanti, H.K. (2015). "Penerapan Model Pembelajaran Inkuiri Terbimbing Melalui Kegiatan Field Trip ke Bangka Botanical Garden(BBG) Untuk Meningkatkan Keterampilan Berpikir Kreatif Siswa". *Prosiding Simposium Nasional Inovasi dan Pembelajaran Sains 5 (SNIPS 2015) 8 dan 9 Juni 2015*. Bandung - Indonesia.

The Effectiveness of Group Counseling Service With Trait and Factor Approach to Reduce The Problems in Selecting Students' Career

Suhartiwi[1], Muhammad Rokyan[2]
Hamzanwadi University
tiwisuhartiwi@yahoo.co.id
rokyanmuhammad@gmail.com

Abstract

The aim of this research to find out the effectiveness of group counseling service with Trait and Factor approach to reduce the problems in selecting career of students of X IPA 1 SMA Negeri 1 Masbagik. This research was pre-experiment design with one group pre-testand post-test design. The population of this research was students of X IPA 1 SMA Negeri 1 Masbagik consisting 39 students. Whereas, sampling technique used purposive sampling which sample was students of X IPA 1 consisting 10 students. In collecting the data, the researchers used questionnaire scaled interval and it was valid and reliable result. Then, the data analyzed by using t-test to examine the hyphotesis. The findings explained that the group counseling service with Trait and Factor approach was effective in reducing the problems in selecting students' career. It approved by the result of t- test, $t_{observed} > t_{tabel}$*(3.426 >1.833), N= 10 and dk=9 with significance level 5%. By this research, the Counseling Guidance teacher hoped can use group counseling service with Trait and Factor approach in reducing the problems in selecting students' career.*
Keywords:problems in selecting students' career, group counseling service with Trait and Factor approach

A. Introduction

Education is one of the main needs from dynamic human and sophisticated development. By education someone can develop their potency, compose personality, increase brightness, and compose the skill. Based on UU No 20 Tahun 2003 *tentang Pendidikan Nasional mengatakan bahwa Pendidikan adalah usaha sadar dan terencana untuk mewujudkan suasana belajar dan proses pembelajaran agar peserta didik secara aktif mengembangkan potensi dirinya untuk memiliki kekuatan spiritual keagamaan, pengendalian diri, kepribadian, kecerdasan, akhlak mulia, serta keterampilan yang diperlukan dirinya, masyarakat, bangsa dan negara.* It means, national education said that education is conscious effort planned to create learning study and teaching process in order to make students active in developing their potency for having spiritual power, self-control, personality, brightness, good attitude, and skill to be needed for their selves, citizen, nation, and state. therefore, an education is able to facilitate the students to achieve many skill, knowledge, and expertise. By those skill, students are able to choose, decide, prepare their selves to come to the world of occupation based on the rules of life, feeling, the value of life.

The education is also a preparation through career or career development process of teenager. Teenager is transformation from child to maturity. The teenager hasmany development task guiding the needs and role as teenager. This step is one of teenager development to select and self-preparation to operate some the task and decide the career.

This process starts from senior high school, because this step is important for the students. The students who in senior high school are in 16-18 years. The development of their career have in tentative selection in which designed by spreading of their identification trough many problems in deciding selective career and certain position and task.

When students come in senior high school, the process starts by preparing students to select their major and career. The students should aware that major selected is prior process in getting their career. The major which selected must be on their skill and interest, in order they able to survive in facing the problems in study and more understand in developing their career effectively.

A research in US pointed out only 49% of students who have career aim in the future. Whereas, a research in Yunnan showed only 40% of students who have career aim in the future. Actually, in those states has been applied the career counseling intensively from elementary school (Argyropoulou,ect (2007) in Repository.maranatha.edu).

Infact the problems in selecting the career is the big problems that faced by students senior and equivalent with it. Based on the result of DCM and interview on students and guidance and counseling teacher done at training 3 on 28 November 2016 in SMAN 1 Masbagikgot 18 % students of X IPA complicated with their career, it approved from 63 % students don't know their talent and interest, 47,9 % students still confuse in selecting their career in the future, 24,7 % studentsdon't have any desires, and 23,3 % students have many desires being fickled, and the result of interview said that students influenced by their parent wishes, and still lack of counseling career service given to the students.

The phenomena above indicate there is a tendency in selecting students' career. Hence, it needs alternative solving problem. To make it happen early, the students in every school compose to have self-prepare in selected the career must be on their interest and talent. To talk about that motion, it needs counseling and guidance service consisting orientation service, information service, placement and distribution,content authority service, individual counseling service, group counseling service, mediation service, consultation service and lawyer service.

In carrying out of it, one of the services in counseling and guidance must have a basic theory. One of services used in reducing the problem in selecting the career is group counseling service with Trait and Factor approach. This approach aimed at giving Self-clarification, Self-understanding, Self-accelptance, Self-direction, and Self-actualization to the students, so they are able to select and take decision toward their career in the future. (Fauzan dalam *hilalanramadhan. wordpress. com*) .

According to Bahasa Indonesia Dictionary for learners (2011:410) *"memilih adalah menentukan (mengambil dsb) sesuatu sesuai dengan yang disukai*. It means

selecting is deciding something based on someone's like. meanwhile, career is development and advancement in the life, occupations, positions which make a hope to be progressed (Kamus Besar Bahasa Indonesia). Walgito (2010:201) *juga mengartikan karir adalah pekerjaaan, profesi. Jadi memilih karir adalah menentukan kemajuan didalam kehidupan berupa pekerjaan, jabatan, profesi yang memberikan sebuah harapan sesuai dengan apa yang disukai.* It means, Walgito defines career is occupation and profession. Hence, selecting career is deciding the progress in life such as, occupations, positions, profession which make a hope based someone' like.

In Kiat Sukses book said that career is not occupation, position, but it indicates someone's success in position, occupations, which decide in succeeding someone's career (Fatimah, 2010:12).

Related to problems in selecting the career, there are many problems indicate that students faced some problems from internal and external school environment. Frank Parsons indicates three steps must be done in selecting the career (Winkel and Hastuti, 2010 : 408) they are :

1. self-understanding about the brain skill, talent, interest, the excess and weaknesses, ect.
2. knowing about the whole of perquisites in getting job, and the opportunity to progress in all occupations.
3. thinking rationally about relationship between step 1 and 2.

B. Method

Research method used in this research was pre-experimental reseach with pre-testand post-testone group design.Pre-test used before the treatment (O_1) andpost-testafter treatment (O_2). Therefore, the findings was accurately to know by comparing the result before and after treatment. This research was one group design. The design figure out as follows:

Figure 1. Research Design Frame

Pre test *Treatment* *Post test*

Research population was students ofX IPA 1 SMANegeri1Masbagik consisting 39 stuudents. To get the sample used purposive sampling, so those taken 10 students as sample. In collecting the data, the researchers used questionnaire including of reclusive questionnaire consisting 24 items with 4 selections: *sangatsesuai (SS), sesuai (S), ragu (R), dan tidaksesuai (TS).* And there are 4 score in scoring students in each items such as 4 (*sangatsesuai*), 3 (*sesuai), dan2 (ragu), 1 (tidaksesuai*). Decidingmaksimalscore ideal (SMax Ideal) and minimal score ideal (SMin Ideal)

Smax ideal = 24 X 4 = 96

Smin ideal = 24 X 1 = 24

Then, decide the Mean ideal danstandardeviasi ideal.

Mean Ideal (Mi) = $\frac{1}{2}(\text{SMax Ideal} + \text{SMin Ideal})$

$= \frac{1}{2}(96 + 24)$

$= 60$

Standar deviation ideal (SDi) = $\frac{1}{6}(\text{SMax Ideal} - \text{SMin Ideal})$

$= \frac{1}{6}(96 - 24)$

$= 12$

MI = 60

SDi = 12

The data were collected describing by three categories, they are:

Mi + 1SDi → Mi + 3 SDi	High
Mi-1SDi s/d<Mi + 1SDi	Medium
Mi-3SDi s/d< Mi-1Sdi	Low

After the data are homogeneous, t-test with one group design used to examine the effectiveness, the formula as follows:

:

$$\frac{Md}{\sqrt{\frac{\sum X^2 d}{N(N-1)}}}$$

(Arikunto, 2010:349).

Note :

t : Value t

Md : Mean the result of*pre test* and*post test*

xd : deviation of each subject (d-Md)

$\sum X^2 d$: total quadrat deviation

N : total of students

d.b. : deciding by N-1

by determining as follows:

In significance level 5%, if $t_{observed} \leq t_{table}$ so Ho was accepted and Ha was rejected, and if $t_{observed} \geq t_{table}$ therefore Ha was accepted and Ho was rejected. (Sugiyono, 2010: 197).

C. Findings and Discussion

Referring to the aims and the result of the research, this research showed that the problems and comparing to differences in selecting career of student's X IPA 1 SMA Negeri 1 Masbagik before and after givinggroup counseling service with Trait and Factor approach.Selecting career of student's X IPA 1 SMA Negeri 1 Masbagik

before givinggroup counseling service with Trait and Factor approach is deciding the progress such as: jobs, positions, profession which give a hope based on what someone like. According to Fatimah (2010 : 12) *keberhasilan dalam setiap jabatan, pekerjaan atau okupasi seseorang akan menentukan keberhasilan seseorang dalam karirnya.* It means, the success in each positions, jobs, or professions will decide someone's success. Selecting career was two factors blended, internal and external. Internal factor include need, personality, genetic, and intellectual and external include family,friends, environment, social economy. That's why need selecting good career to achieve someone's success in getting good positions, jobs, and professions.

The keyword in selecting good career and decision is in information and understanding management. In other words, the only students who know the information and understanding fortheir selves to responsibly. There are the step in selecting the career according to Winkel and Hastuti, 2010 : 408 *yaitu : (1) Pemahaman diri yang jelas mengenai kemampuan otak, bakat, minat, berbagai kelebihan dan kelemahan, serta ciri-ciri yang lain. (2) Pengetahuan tentang keseluruhan persyaratan yang harus dipenuhi supaya dapat mencapai sukses dalam berbagi bidang pekerjaan, serta tentang balas jasa dan kesempatan untuk maju dalam semua bidang pekerjaan itu. (3) Berpikir secara rasional mengenai hubungan tahap I dan tahap II.* It means, (1) self-understanding about the brain skill, talent, interest, and the excess and weaknesses, ect. (2) knowing about the whole of perquisites in getting job, and the opportunity to progress in all occupations. (3) thinking rationally about relationship between step 1 and 2.

From explanation above, students are able to select the career well if they understand the those steps. On the contrary, if the students don't understand and cannot through those steps, it means students face problems in selecting the career. the students' problem in selecting career before giving the treatment is giving group counseling service with Trait and Factor approach (pre-test) known 4 students in category high, 3 students in category medium, and 3 students in category low (source: appendix 5). The result of pre-test before giving the treatment showed the score from 10 students is 626 by rate of the students 62.6. In detail, from 10 students consisting 4 students in high, 3 students in medium, and 3 students in low. It indicates that steps in selecting the student's' career include understanding the self, knowledge for future, and thinking rational in understanding self and knowledge for future as the indicator of skill in selecting the students career which is done, but still lack in comprehending it.

It shows from the tendency faced by students, the students who understand and know the future but they still feel doubt in their selection, students don't understand kinds of high level education, they don't understand the perquisite to join study in high level education, and they know their interest but still don't know to develop it.

Selecting career of students of X SMA Negeri 1 Masbagik after giving group counseling service with Trait and Factor approach, hence to reduce students' problem, the researcher gives the treatment by making group counseling service

with Trait and Factor approach. This approach aimed to know self-clarification, Self-understanding, self-accelptance, self-direction and self-actualization.

Implementation of group counseling service with Trait and Factor approach to reduce students' problem I selecting career done in 4 times. It done once in a week and given in 1x45 minutes. Group counseling service with Trait and Factor approach applies by data synthesis steps, diagnosis, prognosis done before treatment, process, follow up and evaluation done after threatment. After giving the treatment group counseling service with Trait and Factor approach, then students conducted the post-test to know the effectiveness in implementing the treatment and reducing the problem in selecting the career.

Based on the result of post-testshowed from 10 students got 709 with rate 70,9. It indicates there are changes, 7 students in high and 3 students in medium. It seemed in all activity done by students in pointing out the opinion, knowing their interest, and interesting in knowing information about the career by asking next study and jobs.

Differences in selecting the career of studentsX SMA Negeri 1 Masbagik before the treatment, pre-test, indicate in medium category (62.6). After giving the treatment by using group counseling service with Trait and Factor approach, post-test, get changes rate (70.9) still in medium category. This result indicates there is the different result in selecting the students' career before and afret the treatment by group counseling service with Trait and Factor approach. The selecting career after the treatment increases than before the treatment. In short, after giving the treatment the result of post-test pointed out that the students' problem in selecting the career was reduction. Prayitno (1995:40) membagitahapankonselingkelompokmenjadiempattahap pula yaitu (a) pembentukan, (b) peralihan, (c) kegiatandan (d) penutup. It means, prayitnodevided the group counseling step into 4 steps: formation, transfer, activity, and conclusion.

The result of descriptive analysis based on relevan study done by Pauzunwildan (2016) in his research "*efektifitaslayanankonselingkelompokterhadapperencanaankarir pada siswakelas X MA NW* KeruakTahunPelajaran *2015/2016"*, Pauzunwildanconcluded by giving group counseling service was very effective to increase students skill in selecting their career. The same research result done by Desak Era Puspita Santi, dkk (2014), entitled '*Penerapankonselingkarir trait and factor denganmenggunakanteknik modeling untukmengembangkanrencanapilihankarirsiswakelas X TPM 1 SMKN 3 Singaraja.*The finding pointed out that group counseling service with Trait and Factor approach by using modeling technique was able to develop selecting career plan. T-test used to examine the hypothesis in level significance 5%, Ha will be accepted if t-observed is higher than t table (tobserved> t table), it means Ho rejected. If tobserved is lower or equal to t table (t observed $\leq t_{tab}$) so the Ho accepted. Referring to t-test result, it can be concluded that there is significance difference between students' problem in selecting career before and after the treatment, in short, Ha was accepted. It can be concluded that givinggroup

counseling service with Trait and Factor approach was effective in reducing the problems in selecting career of students of X IPA 1 SMAN 1 Masbagik.

D. Conclusion

Based on explanation above, it can be concluded that giving group counseling service with Trait and Factor approach was effective in reducing the problems in selecting career of students. This approved by comparing the significance result before and after giving the service to the sample. Selecting students' career before treatment was group counseling service with Trait and Factor approach by giving pre-test. The result of pre-test showed from 10 students: 3 students got low category, 3 students got medium category, and 4 students got high category. While, post-test result showed from 10 students: 7 students are in high categoryand 3 students in medium category.

Result of t-test one group design showed that Ha was accepted and Ho was rejected, the conclusion of the research that giving group counseling service with Trait and Factor approach was effective in reducing the problems in selecting career of students.

References

Anonim. 2001. repository. maranatha. Edu /8375/3/0532001_Chapter1. pdf. Diunduhtanggal 27 Maret 2017.

Arikunto, Suharsimi. 2010. *Prosedur Penelitian Suatu Pendekatan Praktik.* Jakarta: RinekaCipta

Arikunto, Suharsimi. 2010. *ManajemenPenelitian*. Jakarta: RinekaCipta.

Fatimah, Enung. 2010. *PsikologiPerkembangan (Perkembangan Peserta Didik).* Bandung: CV PustakaSetia.

Pauzunwildan (2016) dalam penelitiannya "efektifitas layanan konseling kelompok terhadap perencanaan karir pada siswa kelas X MA NW Keruak Tahun Pelajaran 2015/2016. Skripsi STKIP HamzanwadiSelong

Prayitno. 1995. *Layanan Bimbingan dan Konseling Kelompok (Dasar dan Profil).* Jakarta :Graha Indonesia.

Santi Era DesakPuspita, dkk. 2014. *Penerapan Konseling Karir Trait and Factor dengan Menggunakan Teknik Modeling untuk Mengembangkan Rencana Pilihan Karir Siswa kelas X TPM SMK Negeri 3 Singaraja*. Jurnal Undiksa Online Jurusan Bimbingan Konseling Volume: Vol : 2 No : 1. Ejournal.undiksha.ac.id. Diunduh pada 15 Maret 2017.

Sugiyono. 2012. *Metode Penelitian Kombinasi*. Bandung :Alfabeta

Sugiyono.2012. *Penelitian Untuk Statistik.* Bandung :Alfabeta

UU No 20 Tahun 2003 tentang Pendidikan Nasional

Walgito, Bimo. 2010. *Bimbingan + Konseling (Studi & Karier).* Yogyakarta: CV. Andi Offset.

Wildan, Pauzun. 2016. *Efektifita Layanan Konseling Kelompok terhadap Perencanaan Karir pada Siswa Kelas X MA NW Keruak*. Pancor: Skripsi STKIP HamzanwadiSelong.

Winkel, WS dan Hastuti, Sri. 2010. *Bimbingan dan Konseling di Institusi Pendidikan*. Yogyakarta: Media Abadi.

The Implementation of Discovery Learning to Improve the Students' Critical Thinking Ability through Lesson Study in Quantum Physics Class

Sapiruddin[1], Tsamarul Hizbi[2]
Physics Education Study Program, Hamzanwadi University
Zafir.Addin@yahoo.com
tsamarulhizbi@gmail.com

Abstract

A research about The Implementation of Discovery Learning to Improve the Students' Critical Thinking Ability through Lesson Study in Quantum Physics Class was conducted. The purpose of this research is to find out the effect of discovery learning on the students' critical thinking ability. The subject is the fifth graders of the Physics Education Study Program ofHamzanwadi University which consisted of 39 students. This research is conducted in three cycles. Every cycle encompasses plan, do, and see. The result shows that there is improvement on the students' critical thinking ability in Quantum Physics Class. The percentages of the critical thinking ability are 44% in Cycle I, 52% in Cycle II, and 62% in Cycle III. Obviously, there is significant improvement in Cycle I through Cycle III. This shows that the implementation of discovery learning succeeded to improve the students' critical thinking ability in Quantum Physics class.

Keywords: *lesson study, quantum physics, discovery learning*

A. Introduction

Quantum Physics class is a skill subject obliged to all the fifth graders in 3 credits. Based on the experience in teaching Quantum Physics class, the main problem was that the students face difficulty in mastering the theoretical aspect as well as they do not master the real competence expected in the subject. The expected competence in this subject is students can master the theoretical aspect and can apply it in the computation and the logic of using mathematic formula. According to Supurwoko, et al (2013), Quantum Physics class is an abstract theoretical subject which demands higher order thinking. This means that this subject needs good critical thinking ability. Furthermore, according to Ennis (1996:XVII), critical thinking is a process aims at producing reasonable decisions about what is believed or done. Critical thinking needs skills including listening and reading carefully, finding and getting hidden assumption, and digesting the consequences of a statement (Moore and Parker, 1986:5).

Critical thinking ability is very important to students because low thinking ability affect the students' mastery of theoretical aspects in this subject. The indicator of students' low critical thinking ability can be seen in the low reasoning ability in solving problems. This is shown by that the students are not really able to

interpret meaning in various experience or material through questioning or answering. This demands lecturer to empower their self in knowing the students, strategies, model, and approach to teaching.

One of the learning model which can be applied to improve the students' critical thinking ability is discovery learning. Budiningsih (2005) defines discovery learning as the activity of comprehending, concept, meaning, and relation through intuitive process to arrive at a conclusion. Thus, discovery learning is good solution to improve the students' critical thinking ability. Noor Sya'afi (2013), in her research entitled Peningkatan Kemampuan Berpikir Kritis Siswa Melalui Model Pembelajaran Discovery Learning, concludes that the implementation of discovery learning can improve the students' critical mathematical thinking.

In the approach to the students' condition in the field, lecturers are demanded to cooperate with their partners to get feedback, so they can get more solutions to the problems in the instructional process. Dealing with this, collaborative instruction is needed, and the collaborative instruction is lesson study. Lesson study is a profession training model through collaborative and continuous investigation based on the collegiality and mutual learning to build learning community (Sumardi Y, 2008). Through lesson study, a teacher is demanded to help students' problem, so they can better master the learning material. The mastery can be observed when students can solve problems dealing with the material.

Based on the background, problems can be formulated which is "can discovery learning improve the students' critical thinking ability?". Additionally, the purpose of this research is to find out the implementation of discovery learning to improve the students' critical thinking ability.

B. Method

1. Research Subject

The subject of the research is the fifth graders of the Physics Education Study Program, Hamzanwadi University which consisted of 39 students.

2. Design of Lesson Study

This research is conducted in three cycles: Cycle I, Cycle II, and Cycle III. Every cycle encompasses plan, do, and see.

a. Plan

Collaboratively, lecturers plan the instructions centered to students based on problems in the class. In this research, plan was done on October to December 2014. Here, the topic discussed is:

1. The material to be open-lesson

In this phase, lesson-study group and the lecturer chose the material to be open lesson in each cycle. The material for the open lesson in Cycle I was Formulation of Schrodinger's Equation(time dependent), in Cycle II was Application of Schrodinger Equation on Simple Potential Wells, and in Cycle III was OsilatorHarmonis (Solving the Schrodinger Equation)

2. Teaching material

3. Components to be observed for observation (observation guide)

b. Do

In the implementation phase (do), lecturer does the previous plan, the lecturer does the instructions centered to students while other lecturers do observation dealing with the students' learning activities. The open-lesson was conducted on the 1st and 8th November and the 3rd December 2014. This activity was in the odd semester of the Physics Education Study Program.

c. See

In the collegiality, collaboratively the lecturers reflect on the effectiveness in the instructions. The see (reflection) phase is done after the implementation, and it was led by the group leader. The leader gave first chance to the lecturer-model to share the reflection including feeling, review toward the instructional process, and review toward the achievement of the learning objective. The other lecturer then state the result of the observation and the analysis (based on the facts, not opinion) for perfections in the learning plans set or for considerations to arrange the coming lecturing. In this research, the reflection was done at the end of every open lesson.

3. Technique and Instruments of Collecting Data

The data observed in this this research were qualitative data about the students' critical thinking ability. The qualitative data were collected using observation sheets in the instructional process. To find the empirical evidence dealing with the focus of this research, the sources of the data were lecturers and students in the lesson study. Those are Baiq Aryani Novianti, M.Pd, Tsamarul Hizbi, M.Pd, Laxmi Zahara, M.Pd.,Tarpin Juandi, M.Pd. Khaerussyahidi,M.Pd., Fartina, M.Pd.,and Badrul Wajdi., M.Pd, M.Si. The students were from the fifth grade learning Quantum Physics class.

4. Data Analysis

The indicators for critical thinking ability were analyzed descriptively based on the adequacy percentage using the formula

$$\text{Percentage of student's score} = \frac{student's score}{ideal score} x100\%$$

As the basis for making decision/conclusion of the data analysis, a classification is made based knArikunto's theory (2002) as shown in Table 1.

Table1. Percentage and Critical Thinking Ability Criteriariteria

No.	Percentage	Classification
1.	92% - 100%	Very good
2.	75% - 91%	Good
3.	50% - 74%	Average
4.	25% - 49%	Fairly good
5.	0% - 24%	Not good

Taken from Arikunto (2002)

C. Findings and Discussion

1. Cycle I

Open lesson in Cycle I was done on November 1, 2014. The material was "equation Schrodinger". In this matetial, students seeked for Schrodinger equation in general and Schrodinger timeless equation. This instruction was focused on the students' critical thinking ability during the instructional process. The activities observed were how the students set problems, state arguments, do deduction, do induction, do evaluation, decide and apply. The model lecturer was Sapiruddin, M.Pd.Si. Additionally, the observers were Baiq Aryani Novianti, M.Pd, Tsamarul Hizbi, M.Pd, Laxmi Zahara,M.Pd., Tarpin Juandi, M.Pd. Khaerussyahidi,M.Pd., Fartina, M.Pd., Badrul Wajdi., M.Pd, M.Si

Observation Result

The result of the observation in the instructional process in Cycle I can be seen in Table 2.

Table 2. The Result of Observation on the Students' Critical Thinking Ability in Cycle I

No	**Observed Activity**	**Number of Student**	**%**
1	Student formulating problems	19	49
2	Student stating argument	15	38
3	Student doing deduction	17	44
4	Student doing induction	15	38
5	Student doing evaluation	18	46
6	Student deciding and doing	20	51
Mean percentage			44

Based on the result of the observation, it can be seen that the students' critical thinking ability on Schrodinger equation was low because there only 17(44%) out of 39 students fulfilled the criteria of critical thinking. Based on the reflection result from the team, the students' low critical thinking on this material was because it was the first time for them doing an open class, so it was difficult for them to comprehend the complex material. It was difficult for them to use mathematic formula. Besides, they were shy to state their opinions for the presence of observers.

2. Cycle II

Open lesson in Cycle I was done onNovember08, 2014. The material was the application of Schrodinger equation dealing with 1Dimension box potency. Here, the students seek for the system and the energy form of the system of Schrodinger equation. The instructional process in this phase again

focused on the students' critical thinking during the process. The model lecturer was Sapiruddin, M.Pd.Si, and the observers were Baiq Aryani Novianti, M.Pd, Tsamarul Hizbi, M.Pd, Laxmi Zahara,M.Pd.,Tarpin Juandi, M.Pd. Khaerussyahidi,M.Pd., Fartina, M.Pd., Badrul Wajdi., M.Pd, M.Si

Observation Result

The result of the observation in the instructional process in Cycle II can be seen in Table 3.

Table 3. The Result of Observation on the Students' Critical Thinking Ability in Cycle II

No	**Observed Activity**	**Number of Student**	**%**
1	Student formulating problems	24	59
2	Student stating argument	19	49
3	Student doing deduction	19	49
4	Student doing induction	18	46
5	Student doing evaluation	21	54
6	Student deciding and doing	22	56
Mean percentage			52

Based on the result of the observation in Cycle II, there was improvement in the activity showing students' critical thinking ability; it was 8% from Cycle I. The improvement in Cycle II, based on the reflection from the team, was because the model lecturer suggested the students to learn more about the material for the coming meetings, so they can be more prepared joining the lesson. The model lecturer helped the students with a worksheet containing mathematic formula to help them easier to do the assignments. The model lecturer implemented discovery learning that helped students develop their critical thinking in the instructional process.

3. Cycle III

Open lesson in Cycle III was conducted on December 03, 2014. In this Cycle, the material was Osilasi Harmonic. Here, the students seek for the formula of Schrodinger formula in osilasi harmonic. The instructional process in Cycle III was the same as Cycle I and II which was focused on the students' critical thinking ability during the lesson. The model lecturer was Sapiruddin, M.Pd.Si, and the observers were Baiq Aryani Novianti, M.Pd, Tsamarul Hizbi, M.Pd, Laxmi Zahara,M.Pd.,Tarpin Juandi, M.Pd. Khaerussyahidi,M.Pd., Fartina, M.Pd., Badrul Wajdi., M.Pd, M.Si.

Observation Result

The result of the observation in the instructional process in Cycle III can be seen in Table 4.

Table 4. The Result of Observation on the Students' Critical Thinking Ability in Cycle II

No	**Observed Activity**	**Number of Student**	**%**
1	Student formulating problems	28	72
2	Student stating argument	24	62
3	Student doing deduction	20	51
4	Student doing induction	20	51
5	Student doing evaluation	25	64
6	Student deciding and doing	27	69
Mean percentage			62

Table 4 shows the activities dealing with the students' critical thinking ability, and it shows 10% improvement from Cycle II. This improvement was because the model lecturer suggested the students to learn more about the material for the coming meetings, so they can be more prepared joining the lesson. The model lecturer helped the students with a worksheet containing mathematic formula to help them easier to do the assignments. The model lecturer implemented discovery learning that helped students develop their critical thinking in the instructional process. The improvement was also caused by the students' learning experience in Cycle I and Cycle II. Besides, the students were not disturbed by the implemented activities. Additionally, the model lecturer did emendation on the previous open classes.

Discussion

From the result of the research, the improvement of the students' critical thinking is shown in Table 5.

Table 5. The improvement of the students' critical thinking

	Cycle I		**Cycle II**		**Cycle III**	
Observed Activity	**Number of Student**	**%**	**Number of Student**	**%**	**Number of Student**	**%**
1. Student formulating problems	19	49	24	59	28	72
2. Student stating argument	15	38	19	49	24	62
3. Student doing deduction	17	44	19	49	20	51
4. Student doing induction	15	38	18	46	20	51

5. Student doing evaluation	18	46	21	54	25	64
6. Student deciding and doing	20	51	22	56	27	69
Mean percentage (%)	44		52		62	

Table 5 shows the overall activities on the students' critical thinking ability in Quantum Physics class. There was significant improvement on the students' activities. The most visible on is that the students can formulate problems, state arguments, do evaluation, decide and apply. However, overall, Cycle I through Cycle III, there was improvement from 44% into 62%. This shows that the implementation ofdiscovery learning through Lesson study can improve the students' critical thinking ability.

D. Conclusions and Suggestions

Conclusion

The result of the research shows that discovery learning through Lesson study can improve the students' critical thinking ability. This can be seen from the activities dealing with the critical thinking ability which was 44% in Cycle I into 62% in Cycle III.

Suggestion

It is expected that lesson study can be applied in the instructional active

References

Arikunto,Suharsimi.(2002).*ProsedurPenelitianSuatuPendekatanPraktek*.Jakarta: PT RinekaCipta

AsriBudiningsih. 2005. *BelajardanPembelajaran*. Jakarta: PT RinekaCipta.

Ennis, R.H. 1996. *Critical Thinking.* University of Illinois

Moore, B. N., & Parker, R. (1986). *Critical thinking*. Los Angeles, CA: Mayfield

Noor Sya'afi. (2013). Peningkatan Kemampuan Berpikir Kritis Siswa Melalui Model Pembelajaran *Discovery Learning* (PTK Pembelajaran Matematika Di Kelas XI IPA-2 MAN 2 Boyolali Tahun Ajaran 2013/2014). Yogyakarta: Universitas Negri Yogyakarta

Supurwoko, Nonoh, S Aminah, D. Fitriana, Dewanto H, Pembelajaran Fisika Kuantum Melalui Lesson Study Menggunakan Diskusi Kelompok Di Program Studi Pendidikan Fisika FKIP UNS, Seminar Nasional Fisika dan pendidian Fisika, UNS Surakarta

SumardiYosaphat. (2008). Perangkat Pendukung dalam Pelaksanaan *Lesson Study*.Makalah Pelatihan bagi Dosen UNY.

The Application of Guided Exercise Methods through Lesson Study to Improve Early Childhood Teachers' Skills in Creating LKA Media

Muhammad Zamroni Uska[1], Rasyid Hardi Wirasasmita[2.]
Hamzanwadi University, Indonesia
zamroniuska@gmail.com, newrhws@yahoo.co.id

Abstract

The aim of this study is to improve the skills of childhood teachers in the district of East Lombok in making *LKA* media (Child Work-Sheet) through guided training method in Lesson Study using Photoshop and CorelDraw. The method used in this research is descriptive qualitative method. From the result of the research, the ability of teachers in making LKA media have improvement through guided training method that is on cycle I, teachers are able to make media as much as 10 person (33.3%); in the second cycle, it increased to 15 people (50%), and in the third cycle, it increased by 25 people (83.3%). Based on the success indicator, the percentage of childhood teacher's in-house skills in making LKA media using Photoshop and CorelDraw with guided training method through lesson study reaches ≥ 65%. Thus, from the results of this study, it can be concluded that the implementation of guided training methods through lesson study can improve the skills of individual early childhood teachers in making LKA media.

Keywords: *guided training methods, skills in creating LKA media*

A. Introduction

The aims of education not only to print students to be smart and smart, but must equip students with creativity and independence. It is hoped that through the skills to make a person's existence more creative in the community. In order to achieve the maximum educational goals, keep in mind also important aspects in the learning process. One important aspect in the learning process is learning media. Hamalik (in Arsyad, 2007: 4) suggests that the use of teaching media in teaching and learning can generate new desires and interests, generate motivation and stimulation of learning activities, and even bring psychological influences on students. With the learning media, is expected to achieve the goal of learning maximally.

The role of the media in learning, especially in early childhood education is increasing important considering the development of children at that time was in a period of concrete thinking. Therefore, one of the principles of education for early childhood should be based on reality means that children are expected to learn something real. Thus in education for early childhood must wear something that allows children to learn concrete.

The principle suggests the use of media as a channel for delivery of educational messages for early childhood. A teacher at the time of presenting information to early childhood should use the media so that the information can be received or absorbed by the child well and eventually expected to happen behavioral changes in the form of skills in terms of knowledge, attitude, and skills. In order for the information to be absorbed by the child, the need for a skill or ability of a teacher in using and even create learning media. Suprapto (2009: 135) argues that skill is the ability to use reason, thoughts and ideas and creativity in working, changing or making things more meaningful resulting in a value from the work. There is also another notion that defines skill as an ability to translate knowledge into practice so as to achieve desired work outcomes. Meanwhile, according to Gibson (1994: 104) skills or abilities show potential people to carry out tasks or jobs. The ability may be used or may not be. Ability is closely related to the physical and mental abilities that people have to carry out the work and not what they want to do.

Based on the above explanation, it can be concluded that the skills are activities that use reason, ideas and thoughts that are closely related to the physical and mental ability in doing a job in accordance with what has been planned. Therefore, the skills of an educator in using the media is very important in the learning process, so that the goal of learning can be achieved with the maximum.

In addition to using learning media, an educator must also have the skills or abilities in making learning media. Learning media that is always used is LKS media (Student Worksheet). In early childhood education, LKS is better known as LKA (Child Work Sheet). LKA is a learning media that helps children in the learning process, so that children will be more active and independent.

Based on interviews with some educators / teachers at early childhood education in East Lombok, they stated that in the learning process, the average use of LKA media. However, some LKAs used in the learning process do not match the material presented. In addition, they lack the skill in making LKA, because most of the contents of LKA consist of several objects / images relating to the material that was presented. Therefore, to solve these problems, training needs to be done by applying guided training methods through lesson study with the help of adobe Photoshop and CorelDraw software to improve the skills of educators/early childhood teachers in making LKA media in East Lombok.

Djamarah (2010: 95) explains that a training method called training method is a good way of teaching to instill certain habits, but it can also be used to obtain a dexterity, accuracy, opportunity, and skill. Lesson Study is a model of improving the quality of learning through collaborative and continuous learning based on the principles of collectivity and mutual learning, to build learning community (Lewis, 2002). Lesson Study is one learning model that means "learning from learning". Lesson Study is a model of professional education through collaborative and sustainable learning of learning based on the principles of collegiality and mutual

learning to build learning communities. Lesson Study is carried out through three stages: Plan, Do, and See (Reflection).

The aims of this study is to improve the skills of early childhood teachers in crating LKA media using Photoshop and CorelDraw with guided training methods through lesson study.

B. Method

The research was conducted in Selong city, East Lombok regency which was held on January 12, 2017. The subjects of this research were childhood teachers who participated in training of LKA media making using Photoshop and CorelDraw totaling 30 people.

The type of this research is descriptive in the form of Classroom Action Research conducted through lesson study activities. Called descriptive research because it is a research on certain phenomena to explain aspects relevant to the phenomenon or existing problems. In general, descriptive research does not use hypothesis (non hypothesis) so that the research does not need to formulate hypothesis (Arikunto, 2002: 245).

Data collection techniques used in this study is the method of observation, interview and documentation. This method of observation takes data on improving the skills of early childhood teachers in making LKA media using Photoshop and CorelDraw in accordance with the observations in the field. While documentation is used to retrieve data about the results of moneving-related methods used in research in the process of learning or training in lesson study activities.

Data analysis technique used in this qualitative descriptive research is data analysis model miles and Huberman namely: data reductions, display data, and conclusion drawing / verification which can be seen in Figure 1 below.

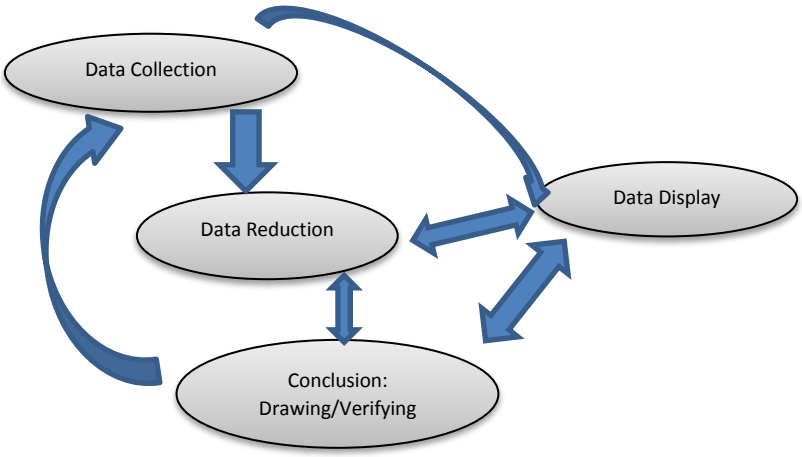


Figure 1. Components in Data Analysis (Arikunto, 1997: 67).

While the success indicator is seen if the percentage of childhood teacher's skill in making LKA media using Photoshop and CorelDraw with guided training method through individual lesson study reach ≥ 65%.

C. Findings and Discussion

This research applies training method through lesson study to improve childhood teacher's skill in making LKA media 3 cycles with step plan, do, and see / reflection. The first stage is the plan. At this stage the LS group determines the tutor / teacher model and the material to be submitted to do. The material presented was to make LKA media using Photoshop on cycle I, using CorelDraw in cycle II, and combination of Photoshop and CorelDraw on cycles III.

In the second stage is the do, the implementation of learning / training in the classroom. The model teacher implements the plan that has been prepared in classroom learning. While other LS members as observer.

After the implementation of the do, the LS group did see as feedback to improve the next plan. Each observer is given the opportunity to provide feedback/ constructs for further improvement of the plan in turn. While the model teacher gave his response. Always discussing for achievement of active learning, creative fun and learning objectives achieved maximally for better education. In Figure 2 below is an illustration of the process of lesson study activity.

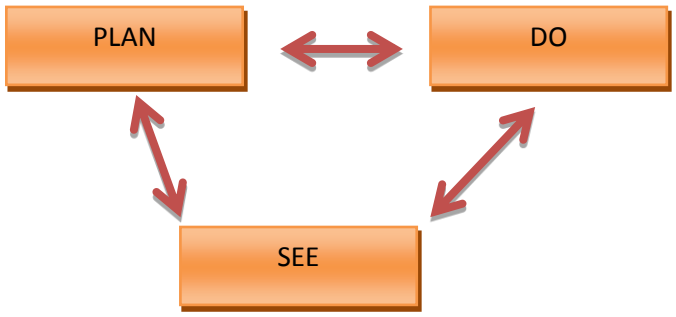


Figure 2. Lesson Study Activities Process.

In the first cycle of the implementation of the do, each participant is given a module / diktat learning Photoshop to make LKA. After that, the model teacher explains the functions of the tools that exist in Photoshop that will be used to create LKA media as well as the question and answer session. Furthermore, the model teacher guides them to practice their ability to work on the tasks that are in the module to completion. After the learning / training is over.

Furthermore the model teacher assigns the task to make LKA as shown via LCD within 2 hours as activity of evaluation activity. Based on observation / reflection on this cycle I was 10 out of 30 participants (33.3%), have been able to

make LKA according to what have been shown in LCD, while others have not been able to adjust LKA media that have been made. This is due to the lack of sharpness of the recall of the participants / subjects in using some of the tools and menu functions that exist in Photoshop, resulting in LKA mismatch that has been made. Therefore, based on the results of cycle I, it is necessary to make improvements in the implementation of training / learning so that the existing shortcomings in cycle I are not repeated through discussions with LS members.

In cycle II, the deficiencies that occur in cycle I have been overcome. Implementation of do in cycle II is the participants are given module / diktat learning CorelDraw to make LKA as well as has done in the previous cycle. The researcher / teacher model explains some of the functions of the tool and menus that exist on CorelDraw, as well as the difference with Photoshop. After that, the researcher directly guides the participants to work on the exercises that exist in the CorelDraw learning module conductively. After giving guidance in doing all the exercises in the module, the next researcher conducted a question and answer session about the material that has been delivered. Furthermore, the reflection / see in evaluation form to determine the ability of participants in making LKA using CorelDraw by giving task to participants to make LKA as shown through LCD within 1 hour.

The result of reflection shows that, 15 (50%) of 30 participants have been able to make LKA as assigned. This result shows an increase compared to cycle I. In this cycle, participants have been able to understand the functions of some tools and menus that exist in CorelDraw and have been able to absorb the material that has been submitted by the model teacher. This is because when the learning process instructed guided exercises done maximally as an effort to increase or hone the memory of participants in understanding the usefulness or function of tools on CorelDraw. Nevertheless, there are still some participants who have not been able to adjust the results of LKA that have been made. This is because that their level of understanding is different. Some of them are still dominant using Photoshop rather than using CorelDraw to create LKA media that have been done in cycle I. Therefore, the need for improvement or revision in the implementation of learning.

In cycle III, improvements have been made to cover or overcome the shortcomings of cycle II through discussions with LS members. The model teacher along with the LS members, made a mature plan in the third cycle, so as not to occur the problems that existed in the previous cycle. In the implementation stage, the model teacher instructed participants to open the Photoshop and CorelDraw modules that had been given in the previous cycle. The model teacher explains the material objectives conveyed about the creation of LKA media with a combination of Photoshop and CorelDraw. Model teachers explain the differences and similarities of Photoshop and CorelDraw. After that, the model teacher gives an example of LKA made with a combination of Photoshop and CorelDraw. Furthermore, model teachers guide participants to train their skills in making LKA

media using Photoshop and CorelDraw. After the completion of the learning, participants are given the task of making LKA with Photoshop and CorelDraw as a form of evaluation of learning.

The result of observation in cycle III is 25 (83.3%) from 30 people have been able to make LKA with combination of Photoshop and CorelDraw in accordance with the desired task. These results increase compared to the previous cycle, because at the time of learning implementation, the researcher continuously gives more training compared to the previous learning cycle, so most of the participants have understood the difference and the equation, and the function of some tools and menu that exist in Photoshop and CorelDraw. Overall, participants have been able to absorb the learning materials that have been given through guided training methods in making LKA media.

In addition, guided instruction method has a very important function in learning to make LKA media. Through this process the participants are given targeted assistance from the teacher in order to improve the ability to make LKA media. Guidance Activities is not an accidental, incidental, incidental, accidental or derivative activity, but an activity which is carried out systematically, intentionally, planned, continuous and directed to the objectives.

D. Conclusion

Based on the results of this study it can be concluded that through guided training methods can improve the skills of childhood teachers in making LKA media using Photoshop and CorelDraw. The results showed that in cycle I, 10 (33.3%) people have been able to absorb the learning materials that have been submitted, so they have made LKA media using Photoshop.

In cycle II, already 15 (50.5%) people have been able to absorb the learning material that has been delivered, so that they have been able to make LKA media using CorelDraw. While in cycle III, 25 (83.3%) people have been able to absorb learning material, so they have skill to make LKA with combination of Photoshop and CorelDraw.

Based on the results of the above research can be concluded that the guided training method can be used as an alternative method of learning can improve the skills of individual teachers in making LKA media using Photoshop and CorelDraw.

References

Arikunto ,Suharsimi. (2002). *Prosedur Penelitian: Suatu pendekatan Praktek.* Jakarta : Rineka Cipta.

Arsyad,A. (2007). *Media Pembelajaran.* Jakarta: Raja Grafindo Persada.

Djamarah, Syaiful Bahri. (2010). *Strategi Belajar Mengajar*. Jakarta: PT Rineka Cipta.

Gibson et al,. (1994). *Organisasi dan Manajemen. Perilaku, Struktur, Proses.* Edisi Keempat. Jakarta: Erlangga.

Lewis, Catherine C,. (2002). *Lesson Study: A Handbook of Teacher-Led Instructional Change*. Philadelphia, PA: Research for Better Schools,Inc.

Suprapto, Tommy. (2009). *Pengantar Teori dan Manajemen Komunikasi*. Yogyakarta: MedPress.

The Implementation of Problem Based Learning in Science of Nutrition Subject to Increase Critical Thinking Capability Through Lesson Study

Nunung Ariandani
Hamzanwadi University
nunung5411@gmail.com

Abstract

This research aims to increase learning quality through *Lesson Study*, that is increasing the capability of critical thinking by using Problem Based Learning model. The implementation of *Lesson Study* is held in two cycles, each cycles comprises from three phases, such as Plan, Do, and See. The datas obtained are *Lesson Study* implementation data and students' critical thinking capability data. *Lesson Study* implementation data is analyzed by descriptive qualitative approach. Based on the research result, students' critical thiking capability data shows the ability to formulate problem is increasing for 6%, the ability to deliver argument is increasing for 8%, the ability to conduct deduction is increasing for 5%, to decide and execute is also increasing for 9%.

Keywords: *Lesson Study*, critical thinking capability, Problem Based Learning

A. Introduction

In conducting teaching process, lecturers are encouraged to master various of approaches, strategies, and learning model. In deciding the learning model, it is important to know what factors that affect the learning process, such as 1) the characteristics of students. In this study, the researcher analyzes VII A semester of Biology education students in Hamzanwadi University, since the characteristic of the students are quite smart yet in the science of nutrition subject, they still have to cope with several problems in the learning process, like the students are less capable to analyze cases within the society, the students are less encouraged to participate in the learning process, hesitate to ask and stating their opinion, the students are individualistic to one another, and the students have less interest in carrying out tasks given by the lecturer. If a disucssion is conducted, the students do not really understand what other groups are presenting, they tend to stick only on what their groups are working, and they are lacking of focus. 2) The support from the institution. Biology education study program in Hamzanwadi University already owned several facilities to support learning process, such as biology laboratory, computer laboratory equipped with an internet access, clean class rooms, and media in the form of images and visuals. 3) the environment of Biology education program study is strategically reachable and comfortable for learning.

Based on the students' characeristic, the capacity of Biology education program study to support, and its environmental condition, hence the proper learning model for those factors is *Problem Based Learning* strategy. It is a learning strategy that utilizes problems or cases in the real life as a context for students to learn about how to think critically and how to be able to solve the problems, and to gain knowledge as well as essential concept from lecturing materials. According to the newest curriculum, the students are encouraged to be creative and to develop critical thinking ability in coping the lecturing subjects and also problems that occured nowadays. Critical thinking ability is necessary in the learning process to seek new knowledge that invoke students' participation (student oriented) and the lecturers as the facilitator.

Thinking is a part of learning process. La Costa (2006) has classified thinking into three forms, namely Teaching of thinking; Teaching for thinking; and Teaching about thinking. Critical thinking capability can boost students' participation in constructing knowledge, making sense, seeking for clarity, and justifying something. Thinking capability is expected to be able to develop conceptual understanding amd students' innovation for their future sake. It is also expected that the students are not only memorizing facts yet understand the whole of it. Students can sense the facts or problems emerged in the society that previously stated by the lecturers. Students are expected to be apart from irrational and fanatical prejudice, narrow-minded, have scientific thinking and becoming future-oriented students.

Science of nutrition is an optional subject in Biology education study program. Through this lecture, students are expected to have knowledge on the relations of food and health, body's necessity for energy and nutrition, additive substances, and the needs for education about nutrition. This lecture provides students with a preparation to understand the function of food, food categorization and its nutrition, food processing and its impacts towards heatlh, nutrition metabolism, the effects of additive substances towards health, calculating energy necessity, and train the students to plan a balanced menu.

Food is human's basic needs to prop up their growth and life. Therefore, food that consumed by human has to be hygienic, safe, and able to fulfil the needed nutritions. Hence, food quality has to be guaranted anytime, so that the society as the consumer of the food products can be spared from diseases due to food (Indonesian Health Department, 1990). The more the development of knowledge and food technology, the more human will intervene in groceries processing that encourage other materials to be added to the food. Those added materials can be originated from purified natural sources or chemically processed materials. The intentions of the food materials addition are to preserve, to coloring, to drying, and to be the artificial sweeteners (Sinaga, 1993).

Learning model that can increase the learning quality is necessary to solve the problems emerged in the society. One of the learning models that can increase the learning quality is a *Problem Based Learning* that implemented in the pattern of *Lesson Study*. *Lesson study* is one of the efforts to develop students to enhance learning process done by teachers or lecturer in a collaborative and continous way, in terms of planning, conducting, observing and reporting the learning activities reflection result.

Based on the students' characteristics and institution's capacity to support, hence the Problem Based Learning model can be applied in Biology education program study in Hamzanwadi University. By applying this model, students are expected to be able to think critically in solving problems in the society which related to the science of nutrition that needs critical thinking to analyze the ongoing problems and to assist them to become independent students.

B. Method

This qualitative research aims to analyze natural objects, in which the researcher acts as a key instrument. The sample collection is conducted purposively, its gathering technic is collective, and the research result is stressing on the purpose rather than generalization (Sugiyono, 2012). For this case, *Lesson Study* is conducted which comprises from three phases, such as Plan; Do; and See. Study review is also held with the intention to increase students' critical thinking capability through Problem Based Learning. *Lesson Study* is held on the odd semester in 2016/2017 academic year. The subject being researched is biology students who take a course in nutrition science, which are the seventh semester (A) students with the total of 33 persons.

The instruments used in this research are observation and test sheet. Observation sheet is used to know how active the students during the learning process, while test is used to discover how much the critical thinking capability is increasing that developed through *Lesson Study.* Data analysis is conducted by using descriptive statistic technique. This techniqueaims to describe the collected data from each research variables. To assess the indicator of critical thinking capability, it is conducted through individual evaluation by evaluating the critical thinking capability through *Problem Based Learning.*

C. Findings and Analysis

Lesson Study in the subject of nutrition science is conducted by a team that comprises of 11 persons: Nunung Ariandani, M.Pd (as a model lecturer); Dra. Hj. Hartini Haritani, M.Pd; Indra Himayatul Asri, M.Pd; Nurul Fajri, M.Pd; Sarwati, M.Pd; Dr. Marhamah, M.Pd; Dr. Bq. Fatmawati; Husnayati Hartini, M.Si; Wawan

Muliawan, M.Pd; Padlurrahman, M.Pd; and Nur'aini, M.Pd. This activity is divided into two cycles and each cycle has Plan, Do, and See phases.

1. Plan

There are several things done in this phase, such as reviewing the syllabus, Units of Lectures, student worksheet, project task, and learning assessment instrument. The chosen material in the first open class is additive substance (rhodamin B and cyclamate) and in the second open class is other additive substance (borax and formaline). During the first open class, there is still a lot of things that should be improved, particularly the learning plan and materials related to nutrition science. Some teams gave an advice to present a video in apperception activity, while the model lecturer explained the image that showed as an analogy of additive substance based on the materials taught. Other teams adviced the students to be given a project in order to attain the learning objectives. In the second open class, one of the teams suggested on student worksheet writing that still notwell-referred to Indonesia National Qualification Framework (*Kerangka Kualifikasi Nasional Indonesia*). Other team suggested on *Problem Based Learning* syntax that is still not proper as in the organizing phase. Moreover, the indicator has to be adjusted with the study taught. This learning component should be revised and complemented by *Lesson Study* team in order to perfecting the instrument that used during the open class.

2. Do

The implementation schedule for open class that has been conducted in Hamzanwadi University in science nutrition subject is as follows.

Table 1. Open Class Implementation Schedule

No.	Day/Date	*Open Class*	Place
1.	Wednesday, 21 December 2016	First	Biology Laboratory
2.	Wednesday, 28 December 2016	Second	Biology Laboratory

a. Open Class I

As what have been stated in the Units of Lectures that arranged previously, the learning model used was Problem Based Learning with experimental method. The activity began by asking three students to come to the front of the class to do an organoleptic test towards sauce 1 and sauce 2.

According to the learning objectives, students were expected to be able to analyze the coloring substance (rhodamin B) and sweetener (cyclamate) in the food and to differentiate sauce 1 and sauce 2 from its texture, aroma, and colour. Some of the students argued that sauce with soft texture and leaves colour on the hand tends to use artificial coloring. Otherwise, sauce with rough texture, smell like chilli and does not leave colour on hand tends to use natural colouring and is safe to be consumed. From that argument, it is then explained the synthetic and natural colouring as well as synthetic and natural sweetener.

The next phase was to order the students to test the substance of rhodamin B and cyclamate in the sauce and young coconut ice. Chromatography paper is used in this rhodamin B test as the indicator in deciding whether sauce sample that being tested by each groups contains synthetic colouring (rhodamin B) or not. Whereas, ink and sauce prepared previously in the laboraty are the control variable. Sample that indicates positive result on rhodamin B showed similar colour with ink on the chromatography paper. Whereas, the negative sample would not move and follow the eluen movement like the sauce prepared in the laboratory. Generally, all of the samples tested by each groups are positive containing rhodamin B, this can be seen through the colour or the colour movement that in accordance with the eluen moved on the chromatography paper.

As for the cyclamate test, it indicated positive result if there is a white precipitation in the boiled sample liquid. Meanwhile, the negative result was indicated through the existence of brown precipitation from boiled sugar. In this test, tea solution with natural sweetener is the control variable. In general, all groups who conduct the test find out the result to be positive, which can be proven from brown precipitation emerged in the boiled solution.

The next phase was to present the test result that has been conducted towards several food samples brought by the students. Sauce sample is positive containing rhodamin B and young coconut ice sample was also positive containing cyclamate.

The conclusion that can be taken through this is when the sauce moves in line with the like the ink that acts as control variable in the colouring test, that briefly indicates the sample contains rhodamin B. Meanwhile, young coconut ice that contains cyclamate was indicated through the emergence of white precipitation after it is being boiled. Afterwards, lecturer assignedthe students several tasks to analyze colouring and sweetener substance in the packaged food, which one is harmful and safe. The other task is to create a mini poster as a project from that activity that should be submitted a week after the

learning process. It aims to see how far the attainment of learning objectives during the first open class.

Lesson Study activity in the phase of implementation was attended by 7 observers which comprises from several lecturers of Biology education study program in Hamzanwadi University. The observers are located inside the class, on the side and behind the students.

b. Open Class II

The activity was began by asking group's representative to undergo an organoleptic test towards tofu 1 and tofu 2. From this organoleptic test, students wereexpected to be able to differentiate the tofu from its texture, aroma, and colour. Most of the students argued that from its appearance, both of the tofu are already different and also in terms of its texture and aroma.

Based on these things through student practicum activities, students are expected to be able to analyze the content of borax and formalin in food, in accordance with the learning objectives. During the activity, students analyze the content of borax and formalin in tofu, meatballs and noodles obtained randomly in the society. For the borax test, the first step wasto pound the sample and then boil it with porcelain cup until blackened. Subsequently, dripping ethanol on the sample then burned. If the flame is blue or greenish, then the sample waspositive containing borax. Meanwhile, the first step of formalin test is to pound the sample until smooth then dissolve it in 10 ml of aquades and filter the mixture. Afterwards, mix5 ml of sample filtrate with KMnO4 solution and then observed the colour changes. If the pink color fades or turns into brown, then the sample contains formalin.

After testing the content of borax and formalin on meatballs, tofu and noodles, the students are to presenttheir group test results. Generally,all of the samples tested by students, be it the meatballs, tofu and noodles are positive containing formalin and negatives in terms of borax substance. However, the color changes that occur in the formalin test in each group take different time, so it can be concluded that the content of formalin in the samples that have been tested differed in quantity although tested qualitatively, where the sample of meatballs takes up to 30 minutes until it can change color, while the noodle sample only takes 80 seconds to change the color from pink to brown. This indicates that the content of formalin found in noodles is higher than the content of formalin in meatballs. As for the borax test on each sample shows the same flame color as the usual burning, so this indicates that the tofu, meatballs and noodles are negative containing borax. After the groups presented their task, the last phase of this learning activity is to enhance their

knowledge on formalin and borax metabolism process in body and its impact towards health.

The *lesson study* at the implementation phase was attended by 5 observers consisting of lecturers of Biology Education Department of Hamzanwadi University. The position of the observers in the classroom wasspread out on the sidelines and behind the students.

Observers conducted observations in the classroom based on the observation sheets of *Lesson Study*activities. Observation is mainly aimed at the interaction among students in groups, interaction among students in the class discussion, interaction between model lecturer and student during the learning process, student activity in learning, when students start to study, when students start to look bored of learning, and when students finished studying. In addition, the observations during the practicum activity wereaiming to measure the concentration, teamwork, and the responsibility of each group, as well as the techniques in utilizing the tools and materials.The observers did not intervene in the activities of the students, nor the lecturers of the model. Therefore, the students are not interferred by the presence of the observers.

3. See

a. Reflection I

The results of reflection activities on learning activities that have been implemented is that the students at the beginning of the learning activities,they are so enthusiastic to follow the learning process because students wereeager to know more about the harmful content contained in the usual food they consume daily. However, in the core activities when the practicum process wasimplemented, students werereluctant and even afraid to use the tools provided. It is because the students are not accustomed in using the laboratory equipment as a whole. Likewise with the laboratory techniques they still need to be improved in order to increase the experience and skills, so that students can find out how to use laboratory equipment according to its function. From this activity, model lecturer learnedto cleanse the equipments before the practicum due to the lack of laboratory equipments. This is an important thing to do for a test, in order to keep a sample incontaminated from the other sample that previously being tested, since there is a group which show white precipitation both in the tested sample and control variable prepared in the laboratory. This occurs because there is only one funnel used in the filtration process and causes the precipitation color in the tea solution becomes white and partly brown.

After conveying impressions about learning activities, the observers alternately convey their responses and impressions to the learning they have witnessed. From the reflection activities, observers stated that the learning process wasdone very well, yet students' laboratory techniques are still need to be improved again, so the mistakes in using the toll can be minimized in the future, especially when boiling the solution on the test tube directly on the bunsen burner. There is only one group that uses the equipment appropriately and resulting white precipitation whichis not scattered on the reaction tube wall as expected. The response from other observers was very impressed with the reinforcement given by the model lecturer in regards to the dangers of cyclamate and rhodamin B to the body. What the observers have stated werevery valuable inputs for model lecturer in order to increase the learning quality

b. Reflection II

The result of reflection about learning activity which has been implemented is at the beginning, the students werevery enthusiastic to follow the learning process since students wereeager to know more about harmful content contained in the food they consume daily. However, there wereseveral students who are still using practicum tools in a wrong way which used in analyzing the content of borax and formalin, one of which is the use of measuring glass. Therefore, it is necessary to give a more intensive in order to make the students able to use it properly. In terms of students' liveliness since the first open class until the last open class, the increasing of student activeness in solving the given problems can already be seen.

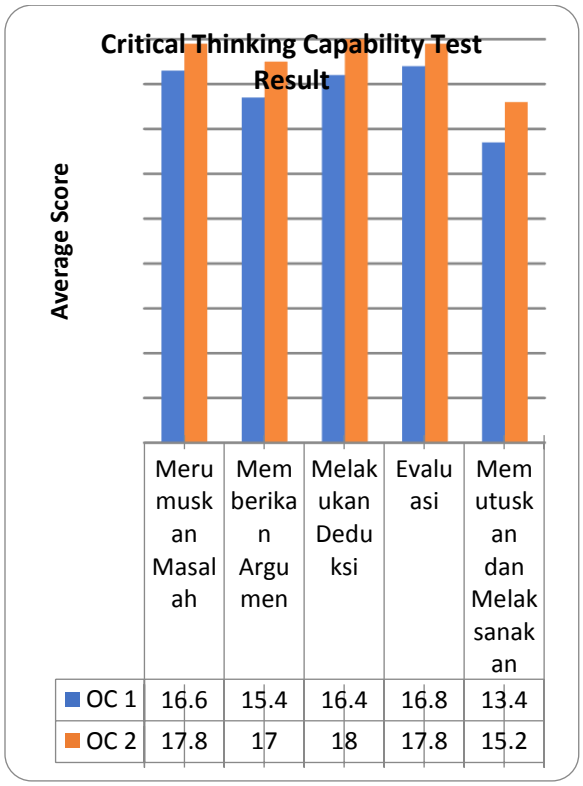
After conveying impressions about the learning activities, the observers alternately conveyedtheir responses and impressions to the learning they have witnessed. Some observers showed their enthusiasm upon the learning activities in this second open class. Beside it was contextual, it also can give information for the observers about a variety of foods containing borax and formalin which are harm to health. In addition, the observers also provide input for the report of this practicum activity to be reviewed by the health office or POM body, so it can inform the general society about meatballs, tofu, and noodles which contains borax and formalin as well.

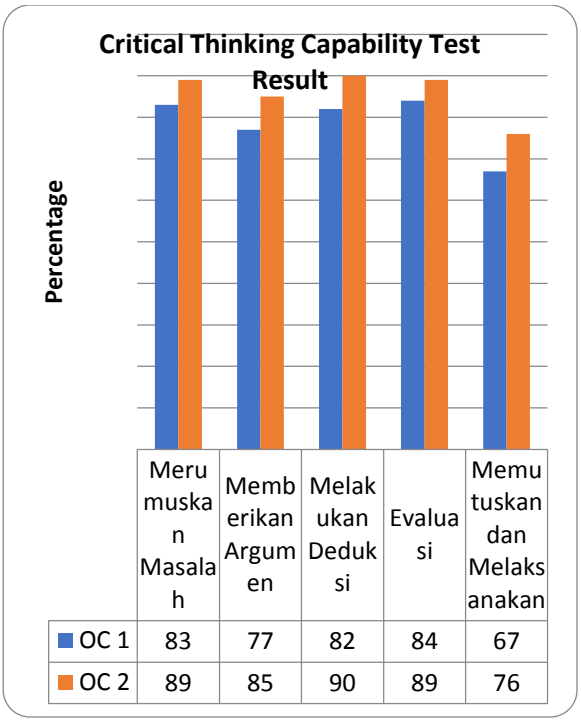
Through the implementation of Lesson study that has been implemented, a collaboration among teams werecreated. Furthermore, from observations that have been done during learning, lecturers who become observers can learn from the observed learning process. This is in line with Lewis's (2002) assertion that the ideas proposed in the lesson study are actually short and simple, that is when a teacher wants to improve learning, one of the most

obvious means is to collaborate with other teachers to design, observe, and reflect on learning that being conducted.

4. Outcomes of Critical Thinking Capability

In order toknow the success of the Problem Based Learning model in improving students' critical thinking capability, individual tests wereconducted to find out how far students could understand the problems or cases taken from the latest news through Problem BasedLearning. Below are graphs of students' critical thinking capability test by using a Problem Based Learning model.





Based on the graphs above, it can be discovered that starting from OC I to OC II, it indicates the increase of students' critical thinking capability which is obtained from the increase of mean value from each indicator. As in the formulation of the problem indicator increased from the average value of 16.6 (83%) in open class 1 increased to 17.8 (89%) in open class 2, this shows an increase of 6%. Indicators provide arguments increased by 8%, the indicator of deductions increased by 8%, the indicator performs the evaluation increased by 5%, and the deciding and executing indicators increased by 9%. This means that Problem BasedLearning model can improve students' critical thinking capability marked by students who have been able to analyze cases as well as understand lecturing materials.

Based on the results of nutritionscience learning analysis using Problem BasedLearning model, it can be seen that there is asatisfactory improvement of critical thinking capability, in which the implementation of Problem BasedLearning model can improve critical thinking capability in the course of nutrition science of Biology educationstudy programin Hamzanwadi University.

D. Conclusion

The implementation of Problem BasedLearning model in nutritionscience subject can be summed up that there is a satisfactory improvement of the critical thinking capability. This can be seen from the increase in every open class activity.

Results of data analysis after the implementation of Problem BasedLearning model shows that the ability of critical thinking of students in the subject of nutrition sciences Biology educationstudy programin Hamzanwadi University is increasing. As in the formulation of the problem indicator increased from the average value of 16.6 (83%) in open class 1 and increased to 17.8 (89%) in open class 2, this shows an increase of 6%. Indicators provide arguments increased by 8%, the indicator of deductions increased by 8%, the indicator performs the evaluation increased by 5%, and the deciding and executing indicators increased by 9%.

References

Davis, K. S. (2003). "*Change is hard": What science are telling us about reform dan teacher learning of innovative practises. Science and Education*, 87(1), 3-30.

Mellado, V. (1998).*The classroom practise of preservice teacher and their conception of teaching and learning. Science education*, 82, 197-214

Sanjaya, Wina. 2006. *Strategi Pembelajaran: Berorientasi Standar Proses Pendidikan*. Jakarta :Kencana Prenada Media

Stigler, J. W., & Hibert, J. (1999).*The Teaching Gap : Best Ideas from The World's Teachers for Improving Education in the Classroom*. New York: the free Press

Sugiyono, 2012. ***Metode Penelitian Kuantitatif, Kualitatif dan R & D***. Bandung: Penerbit Alfabeta.

Syamsuri & Ibrohim, 2008. ***Lesson Study (Studi Pembelajaran)***. Malang: Penerbit Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Negeri Malang.

Trianto, 2010. *Model Pembelajaran Terpadu: Konsep, Strategi, dan Implementasinya dalam KTSP*. Jakarta: Bumi Aksara.

The Influence of Group Investigation (GI) Model Towards Analyzing Capability Through Lesson Study on Grade X Students of MA Mu'allimat NW Pancor in 2016/2017 Academic Year

Sarwati
Hamzanwadi University
sarwati774@gmail.com

Abstract

This research aims to know Group Investigation (GI) model influence towards students' analyzing capability through Lesson Study on grade X students of MA Mu'allimat NW Pancor in 2016/2017 academic year. This experimental research used Quasy Experimental Design through Post-test only control group design form. This research was conducted through Lesson Study on environment contamination material which emphasized the analyzing capability through Group Investigation model. In *Plan* stage, model teacher planned a topic to be taught, while the implementation of learning based on what have been planned done in *Do* stage, while reflection of planning and implementation process conducted in *See* stage. Thisresearch's subject was grade X students of MA Mu'allimat NW Pancor. It was conducted in three meetings. There were116 second semester students from 4 classes as the research population, whereas the research samples were X-IPA 1 as the experimental class and X-IPA 3 as the control class. The instrument used in this research was analyzing capability essay test, consist of 8 questions approved by the validator.

Based on the data analysis result, obtained the average value of experimental class Post-test as 72,517 and 64,086 for control class. Meanwhile, 3,323 of T_{count} was discovered through hypothese test by using statistic analysis with T-test formula on 5% of reliance level. Since T_{count} (3,323) > T_{table} (2,000),itresulted on the existence of the influence of Group Investigation model towards students' analyzing capability through Lesson Study on grade X students of MA Mu'allimat NW Pancor in 2016/2017 academic year.

Keywords: Group Investigation, Analyzing Capability, Lesson Study

A. Introduction

At the macro level, national education has the objectives to construct autonomous education organization to be able to innovate in education for an ethical institution, always utilize logical reasoning, has positive social communication capability, and has healthy and resilient human resources (Mulyasa, 2006: 19). This argument is in line with (Hamalik, 2008: 82) in his book which stated the objective of national education is to enrich nations' life and to improve all of Indonesian people, which are the faithful, obedience, and virtuous people, have knwoledge and skills, physical and spiritual

health, firm and independent personality, and sense of responsibility towards society and nation.

According to the Law of the National Education System Number 20 Year 2003 Chapter I Article 1, education is a conscious and planned effort to create a learning atmosphere and learning process so that learners actively develop their potential to have spiritual spirit, self-control, personality, intelligence, noble, as well as the skills needed by them, society, nation and a better country. As stated in Article 5 of the Constitution, every person has the same right to get quality education.

Based on the results of observations and interviews obtained from MA Mu'allimat NW Pancor on Monday, February 6, 2017, the teachers were still applying methods that are less various which still utilize conventional learning methods such as lectures, assignments and occasional practicum when delivering lesson materials. These methods tendto construct one-way and passive information since the learning process is teacher-centered in which the role of teachers is more on the process of teaching and learning only, so that students' participation in analyzing problems is still lackingand students' activity in learning are rigid and passive. This affects the behavior of students who are less confident in asking questions, conveying ideas or in the process of analyzing a problem, which resulted the students are having difficulty to solve problems and provide solutions to problems that emerge in the environment. It caused by the students are not accustomed to be trained in solving problems that occur on the environment. This leads the students to be less interested, easy to get bored, less motivated and passive in following the learning activities that also impacted on the low score of learning outcomes. It can be seen from the average value of students is only 65% in which this value is still below the Minimum Completion Criteria (*Kriteria Ketuntasan Minimal*) established that is80%.

Analyzing capability can be trained through Group Investigation cooperative learning. Theoretically, the Group Investigation learning model has a rationale (Dewey in Slavin, 2010: 214) concerning class cooperation as a condition to addresscomplex life issues in a democratic society. Classroom is a place of cooperative creativity where teachers and students build a complementary learning process from their different experiences, capacities and needs. The learners are active participants in all aspects of school life, make decisions that set goals for what they do. In this process, groups are served as social tools.

Lesson Study is an education movement by teachers to implement "teaching on students" (Syamsuri&Ibrohim, 2011: 1). By applying the Group Investigation learning model through Lesson Study activities, it can contribute to the students' analyzing capability and answers seeking or problem solving to the questions or problems stated. This also makes the students more active in learning process. The implementation of this model and pattern intends to alter learning condition from passive to active, able to analyze and alter the teacher-centered to student-centered learning type.

The purpose of this research is to know the influence of Group Investigation model towards capability of analysis through Lesson Study activity. Thus, in order to reach the purpose of this research, an effort to lessen the low analyzing capability was conducted. One of the models of cooperative learning that used to sharpen the analytical thinking capability is Group Investigation through Lesson Study activities. It is because of the reason that in the implementation of Group Investigation model, students' mindset is more integrated and their thinking ability is higher. It is in line with the expert's opinion that "cooperative study with Group Investigation technique fits well with the field of study requiring integrated study activities". (Rusman, 2010: 221 in Yuli, 2016: 2) stated that "integrated project learning directs to the activity of analysis attainment and synthesize information in attempt to solve a problem."

B. Method

Quasi Experimental design is used in this research, it is a design that has a control group but cannot function fully to control the external variables that affect the experimental execution (Sugiyono, 2013: 114). Post-testOnly Control Design as the form of Quasi Experimental was used in this research which in this design there were two groups selected randomly, then given a post-test to know the final state, whether the effect of treatment between the experimental group and the control group exist or not (Sugiyono, 2014: 76).

The population in this research were all students from 4 classes of X-IPA class of MA Mu'allimat NW Pancorin 2016/2017 academic year, which has the total of 116 persons. Based on the existing population, there were several samples. The sample is part of the number and characteristics possessed by the population (Sugiyono, 2013: 118). Simple Random Sampling technique was used as the method in determining the sampling in this research. This technique istaking sample members from the population that done randomly without considering the strata in the population (Sugiyono, 2014: 82). The first step in sampling should be homogeneous, afterwards the random sampling is done through lottery to determine the control and experimental class. From this draw, X-IPA1 was chosen as experimental class and X-IPA3 as the control class.

The instrument used in this research was an essay test in the form of a test of capability to analyze. The problem indicators are including analyzing problems, gathering information, identifying risks or effects, determining alternative options of problem solving and re-examining or concluding on environment contamination materials. The essay contains about attempt to findalternative solutions to solve the problems. Data analysis technique used in this research by using parametric inferential statistics. Since the resulteddata is in the form of interval/ratio data, the analytical technique using parametric inferential statistics with the T-test formula (T-test) is used.

C. Findings and Discussion

The results of the Lesson Study activities applied to the biology subject followed by the students of X-IPA 1 MA Mu'allimat NW Pancor also proved that all the Lesson Study stages from Plan, Do and See, can improve the quality of learning that may occur since many model teachers get feedback suggestions for better implementation of classlearning from teams. Based on the observations made by the Lesson Study team in the experimental and control class, there were several things found: 1) the students' seat management is still lacking, so the observer is not easy to observe, 2) the students are less-skilled in conducting the discussion, 3) misconceptions on students, and 4) there were still students who are not focused when the learning process took place.

The problems encountered in the learning process becomes the responsibility of the model teacher and the Lesson Study team to find the solution. Improvements were continued to be made at each stage of the Lesson Study, bothto the learning devices used and the undertaken learning process. In addition, the Lesson Study team can learn from the preparation of the lesson plans during the Plan's activities until the observed learning process, so that it can be applied to the subjects taught during each research. Thus, this Lesson Study could be a learning tool for students and their involvement within it improvesthe quality of learning.

Based on the results of data analysis, it showed that there is an influence of Group Investigation (GI) model on students' analyzing capability through Lesson Study between the experimental class and the control class, in which the experimental class is the students learned by using Group Investigation (GI) learning model through lesson study and class control is a student who did not use Group Investigation (GI) learning model, yet only using lecture method through lesson study. This can be seen from the final test result given to the students. The experimental class has a higher average value (72,517) than the control class average value (64,086). This can happen due to many factors such as the condition of the school where at that time it was developing its infrastructure, which made the concentration of students was divided by the sound of cutting machine, the sound of spikes hammered and so on. The students were less focused on listening to their friends who were presenting and researchers must speak in high volume to correct students' incorrect understanding.

The result of the analysis shows that the indicator which has the highest valuecompared with other indicators is the indicator to analyze the problem. The average value of experimental class in analyzing the problem was 84.366 while the control class was 75.758. The lowest indicator value was gathering information compared to other indicators, that is in the control class the average value of the information gathering indicator was 56,965 while the experimental class was 63,833. This could happen because of many factors, such as students'environmental factors and the level of students' intelligence. Students' living environment can support students' ability to recognize problems and explore problems so as to analyze problems, students could do it easily and well. The level of student intelligence is also very influential in

solving problems that exist within the environment. As for the factors that make the value of gathering information indicator become low was that the activity was constrained by the density of existing extracurricular activities and other school activities, according to the students. This resulted the students could not be maximum in gathering information, since they have to do other school tasks and during the time of investigation, researchers also cannot guide directly because the activity of the investigation was conducted outside the school-hours and in different locations.

NeilnaYuli (2015) stated that, students' analytical thinking capability is higher with Group Investigation learning model, since the learning process was stressed on the students that makes the students could dig their own knowledge and seek answers to what they investigate. Based on the result of T-test analysis through post-test, the value $T_{count}$was 3.323, whereas the T_{table}value with dk = N-1 = 30-1 and N-1 = 29-1 and 5% of reliance level was 2,000. Thus, it is found that $T_{count}>T_{table}$ (3.323> 2,000). So, Ha is acceptable since the result of hypothese testing was significant. Besides the environmental and intelligence factors, the indicators that exist in students' analyzing capability is in accordance with the stages conducted in the learning process with Group Investigation (GI) model through Lesson Study activities. Therefore, the ability to analyze can be better with Group Investigation learning model.Researcheris aware of the cause of the less high results of this research where at the time of the investigation process, researchers did not guide maximally because the places of investigation of each group were different.

The weaknesses of Group Investigation learning model in the learning process during the research were: 1) the learning model stages cannot be applied in one meeting, 2) the investigation is done outside the lesson with different location so the researcher did not participate maximally, and 3) the students were less participative and tend to be not able to follow the stages of this learning model. These weaknesses are not disruptive as long as the students can apply their analyzing capanbility in everyday life.

D. Conclussions and Suggestions

Conclusions

Based on the results of data analysis and discussion that have been described in the previous section, it can be proposed a conclusion that there is a significant influence of learning by Group Investigation (GI) modeltowards students' analyzing capability through Lesson Study on environment contamination material. It is seen from the average value of the experimental class which is 72,517, while the average value of the control class is 64,086. It is also seen in the result of hypothese test calculation which showed that T_{count} (3,323)>T_{table} (2,000), in which the$T_{table}$of 2,000 was calculated with 5% ofreliance level. Therefore, the result of hypothese testing is significant, then Ho is rejected and Ha is accepted. From this result, it can be concluded that the application

of Group Investigation (GI) model has an influence towards students' analyzing capability through Lesson Study activities.

Suggestions

1. Selection of less appropriate learning model for a competence can affect students' biology performance. Therefore, it is necessary to put more attention to the advantages and disadvantages of approaches to learning methods so as to choose the appropriate method for a particular competency.
2. Teachers can use the Group Investigation learning model through Lesson Study in improving students' analytical skills, so the assessment of analyzing capability aspects does not emphasize the conceptual aspectonly and the model used is not limited only to lectures.
3. To other researchers, it is suggested to undertake further research with wider discussion and study as well as to try to improve and disclose other issues that have not been discovered in this research.
4. In the learning activities, especially on environment contamination materials, the teachers should provide more concepts which are directly related to students' everyday real life.

References

Abdul, 2011. *Pencemaran Air* . https://www.tes.com, diakses tanggal 21 Maret 2017

Agus, Suprijono. 2012. *Cooperative Learning. TeoridanAplikasiPaikem.* Yogyakarta: PustakaPelajar.

Arikunto, Suharsimi. 2010. *ProsedurPenelitianSuatuPendekatanPraktik.* Jakarta: PT RinekaCipta.

Baharuddin, danWahyuniEsaNur. 2015. *TeoriBelajardanPembelajaran*. Yogyakarta: Ar-Ruzz Media.

Hamalik, Oemar. 2007. *Dasar-dasar Pengembangan Kurikulum.* Bandung : Remaja Rosdakarya

Hamruni. 2009. *Strategi Dan Model-Model PembelajaranAktifMenyenangkan.* Yogyakarta: FakultasTarbiyah UIN SunanKalijaga.

Hamruni. 2009. *Strategi dan Model-Model Pembelajaran Aktif Menyenangkan*. Yogyakarta: FakultasTarbiah UIN Tunas Kalijaga.

Hanafiah, Nanang dan Cucu Suhana. 2012. *Konsep Strategi Pembelajaran.*Rafika: Aditama.

Harianto, dan Suyono. 2011. *Belajar dan Pembelajaran. Teori dan Konsep Dasar*. Surabaya: Rosde.

Hosnan. 2014. *Pendekatan Saintifik dan Kontekstual Dalam Pembelajaran Abad 21*. Bogor: Ghalia Indonesia.

Huda, Miftahul. 2013. *Model-Model Pengajaran dan Pembelajaran*. Yogyakarta: Pustaka Pelajar.

Kurniasih, Imas & Sani Berlin. 2015. *Ragam Pengembangan Model Pembelajaran untuk Peningkatan Profesionalitas Guru*. Yogyakarta : Kata Pena.

Marhamah. 2014. Meningkatkan Kemampuan Berpikir Kritis Pada Mata Kuliyah Pengetahuan Lingkungan bagi Mahasiswa Biologi STKIP Hamzanwadi Selong Melalui Tahapan Kegiatan Lesson Study. *Jurnal Pendidikan Biologi :* 675

Mulyasa. 2009. *Menjadi Guru Professional*. Bandung: PT RemajaRosdakarya.

Mulyasana, Dedy. 2011. *Pendidikan Bermutu Dan Berdaya Saing.* Bandung: PT Remaja Rosdakarya.

Nasativa, 2009. *Pencemaran Tanah. http://www.ebiologi.com, http://artikel ipa.blogspot. co.id* diakses pada tanggal 21 Maret 2017

Novita, 2012. Pencemaran Udara. *http://www.softilmu.com*, diakses pada tanggal 21 Maret 2017

Nurlaeli, 2013. Pengaruh Model Pembelajaran Kooperatif Tipe *Group Investigtion* Berbasis *Lesson Study* Untuk Meningkatkan Hasil Belajar Kognitif Pada Materi Teorema Pythagoras SiswaKelas VIII SMPN 1 Gunungsari. *Jurnal Media Pendidikan Matematika.*(Online), 2 (1): 284. (*http://ejournal.unsri.ac.id*), diakses pada tanggal 23 Februari 2017

Purwanto. 2008. *Metodologi penelitian Kuantitatif untuk Psikologi dan Pendidikan.* Yogyakarta: Pustaka Belajar

Riandari, Henny. 2012. *BiologiUntuk SMA/MA Kelas X*. Solo: PT Tiga Serangkai Pustaka Mandiri.

Riyanto, Yatim. 2010. *Metodologi Penelitian Pendidikan*. Surabaya: SIC.

Rusman. 2012. *Belajar dan Pembelajaran Berbasis Komputer Mengembangkan Profesionalisme adab 21*. Bandung : Alfabeta

Saparwadi. 2015. Pengaruh Cooperative Learning Tipe GI (Group Investigation) Dengan Pendekatan Sintifik Melalui Kegiatan Lesson Study Terhadap Kalkulus

Integral Mahasiswa Program Studi Pendidikan Matematika. *Jurnal Pendidikan* :108-109

Slavin, Robert. 2010. *Cooperative Learning Teori Riset dan Praktik.* Bandung : Nusa media.

Sugiyono. 2012. *Metode Penelitian Kuantitatif Kualitatif Dan R & D.* Bandung: Alfabeta.

Sugiyono. 2013. *Metode Penelitian Pendidikan. Pendekatan Kuantitatif Kualitatif R & D.* Bandung: Alfabeta.

Sugiyono. 2014. *Metode Penelitian Kuantitatif Kualitatif Dan R & D.* Bandung: Alfabeta.

Sulistiyawati, Endah.,dkk. 2013. *BiologiUntuk SMA/MA Kelas X*. Klaten: IntanPariwara.

Susilo, Herawati. dkk. 2009. *Lesson Study Berbasis Sekolah. Guru Konservatif Menuju Guru Inovatif.* Malang: Bayumedia.

Syamsuri, Istamar.,dan Ibrahim. 2008. *Lesson Study (StudiPembelajaran)*. Malang: FMIPA UNM.

Syamsuri, Istamar.,dan Ibrahim. 2011. *Lesson Study (Studi Pembelajaran)*. Malang: FMIPA UNM.

UUD 1994 (Tap. MPR NO. 1V/MPR/1973). Sistem Pendidikan Nasional

Wahyu, Wijayanti. 2013. Pengaruh Model Pembelajaran*Group Investigation* (GI) Terhadap Kemampuan Berpikir Kritis SiswaKelas X SMANegeri 1 Mejayan Kabupaten Madiun. (*http://jurnal.fkip.uns.ac.id*). (Online), diakses tanggal 23 februari 2017.

Yuli, Neilna. 2015. Model Pembelajaran Group Investigation (GI) Terhadap Kemampuan Berpikir Anaisis. *Jurnal Pendidikan Biologi*,,(Online), 7 (2): 102 (https://www.google.co.id), diakses tanggal 23 februari 2017.

Implementation of Learning Realistic Mathematic Education (RME) Through Lesson Study Activity to Increase Student Critical Thinking Ability

(Case Study of the eight grade of SMP Lab. Hamzanwadi Pancor Academic Year 2014/2015)

Muhammad Halqi[1], Aprilia Andriana[2]
MIPA Department. Mathematics Education Program
mhalqisambada@gmail.com and apriliaandriana212@gmail.com

Abstract

This study aims to find out the improvement of students' critical thinking ability with realistic mathematic education (RME) through lesson study activity on the subject of the flat-side room of grade VIII students of SMP Lab Hamzanwadi Pancor year of learning 2014/2015. This research is a classroom action research (PTK) which is carried out for 4 cycles Each cycle consists of 3 stages: plan, do and reflection The data source is obtained by using observation sheet and the test is then analyzed with 26 research subjects The results showed that in the first and second cycle students 'learning activities in the criterion were quite active, the teacher activity on the good criteria and the criteria of group discussion activity was quite active with the students' classical completeness result of 46.15% and 61.54% In cycle III and IV , student learning activity criteria is active and very active, gu activity ru on very good criteria and criteria of group discussion activity is good and very good with classical completeness of student learning result equal to 80.77% and 88.46% .. Based on data analysis result, it can be concluded that by applying approach of learning RME through lesson study activity can improve thinking ability critical in learning mathematics students of class VIII SMP Lab. Hamzanwadi Pancor year of learning 2014/2015.

Keywords: RME , Lesson Study, Critical Thinking Skill

A. Introduction

In Law Number 20 Year 2003 on National Education System explained that national education is education based on Pancasila and the Constitution of the Republic of Indonesia Year 1945 which is rooted in the values of religion, national culture of Indonesia and responsive to the demands of the changing times. National education system function to develop capability and form the character and change of dignified nation in order to educate the life of the nation, aims to develop the potential of learners in order to become a man who believes and cautious to God Almighty, noble, healthy,

knowledgeable, capable, creative, innovative, independent and become a democratic and responsible citizen.

So far our education is still dominated by the view that knowledge as a set of facts must be memorized. Students who only memorize the concept and are less able to use the concept if they encounter real-life problems related to their concepts are often less able to relate what they learn to how the knowledge will be utilized or applied to new situations (Trianto, 2009: 7) . In addition, the class still focuses on the teacher as the main source of learning, then the lecture becomes the main choice of learning strategy. For that, it takes a new learning strategy that further empowers students. A learning strategy that does not require students to memorize facts, but a strategy that encourages knowledge in their own mind.

One of the subjects taught in SMP Lab. Hamzanwadi Pancor in Mathematics is Building a Flat Space. In order for the concept of Bangun Ruang Sisi Datar can be understood well, then a teacher must be good at choosing a learning approach in accordance with the condition of students and materials taught, because by using methods or inappropriate approach will create an atmosphere that is not conducive so that many students bored and not happy to learn math. With such an atmosphere of learning will certainly hamper the process of teaching and learning so that it can impact on the results on the subjects of mathematics students to be low.

From the interview with one of the teachers in the field of study of mathematics class VII SMP Lab. Hamzanwadi Pancor, obtained information that many factors that cause the lack of understanding of students about the concept of subject matter that has been taught by the teacher. Among others, during the learning process took place, many found that lazy children, not happy to learn, sleep, when students are asked there are only reasons that they put forward to avoid the question, such as: Math is difficult, can not answer, afraid to instruct the teacher forward and others etc.

Lesson study activity is a model of teacher professional development through learning learning (collaborative learning) in a collaborative system with a cycle and sustainable based on the principles of kolegalitas to build learning community. In lesson study activities, teachers can choose what strategy or method is appropriate to use in learning, one of them can use mathematic realist approach. Based on the problems and the results of the above research, the writer tries to conduct research with the title "Implementation of realistic mathematic education approach through lesson study activity, in improving students' critical thinking skills. Basic Matter Building Space Flat Panel SMP Lab. Hamzanwadi Pancor Year Learning 2014/2015 ".

B. Method

This research is a classroom action research using RME learning approach through lesson study activity. With the subject of research is the students of class VIII SMP

Lab. Hamzanwadi Pancor 2014/2015 learning year amounted to 26 people. This research was conducted for 4 cycles followed by 8 people who were members of lesson study team, where 7 people became observer and 1 person as teacher model that is researcher self done through 3 stages that is stage of planning (plan), stage of implementation (do), stage reflection (see).

The instruments used in this study are teacher activity observation sheets, student activity sheets, student activity observation sheets, group discussion sheets, lesson study activity sheets, student response questionnaire, and evaluation evaluation tests. By scoring for teacher activities, student activities, group discussion appraisals, and student responses based on five (5, 4, 3, 2, 1) score conversion scores with the ideal maximum score of 5, and the ideal minimum score is 1.

Criteria of student activity, the ability of teachers to manage classes, and student responses can be seen in table 1 as follows:

Table. Five Tiered Conversion Score

Interval	Score	Criteria
N ≥ MI + 1,5 SDI	N ≥ 4,00	Very Active/ Very Good
MI + 0,5 SDI ≤ N < MI + 1,5 SDI	3,33 ≤ N < 4,00	Active /Good
MI – 0,5 SDI≤ N < MI+0,5 SDI	2,67 ≤ N < 3,33	Simply on/Fair
MI – 1,5 SDI ≤ N < MI – 0,5 SDI	2,00 ≤ N < 2,67	Less Active/ Less God
N < MI – 1,5 SDI	N < 2,00	Very Less Active/ Very Poor Good

C. Findings and Discussion

The research by applying Realistic Mathematic Education (RME) approach through this lesson study activity has been conducted for ± 1 month from February 26, 2015 - April 9, 2015, and the results are as follows:

Cycle Implementation Results I

1) Plan (Planning)

In the Plan (planning) stages carried out on Wednesday, February 25, 2015, things done by the researchers as the model teacher is to make and submit the scenario offer the implementation of the first cycle of learning that is: on the subject of Bangun Ruang Sisi Datar at the first meeting (attached) , where the research instrument used is: Observation Sheet of Student Activity (attached),

Observation Sheet of Teacher Activity (attached), Student Activity Sheet Cycle I (attached), Student Discussion Activity Sheet (attached), and Evaluation Test Student Cycle I (attached) along with alternative answers (attached)

2) Do (Implementation)

The next activity of the researcher is Do (implementation) conducted on Sunday, 05 March 2015. In this activity, the researcher as the model teacher is to apply the learning cycle scenario I in the learning process. 7 members of the lesson study team act as observers to observe and assess the implementation of the learning process and student activities in the learning process. The Observer is guided by Master's Activity Observation Sheet, Student Activity Observation Sheet, and Student Discussion Sheet.

Based on the results of observations and tests of learning evaluation in cycle I obtaineddata as follows:

Table. Results of Student Activity Observations Cycle I

No	Indicator	Mean	Category
1.	Readiness of students in receiving lessons	3.14	Fairly active
2.	Student activity in group discussion activities	2.85	Fairly active
3.	Student activity in discussion with group	4.28	Very active
4.	Student activity in problem solving	3.00	Fairly active
5.	Activity of student in doing practice question	2.00	Less active
6.	Student participation in drawing conclusions / closing learning activities	2.85	Fairly active
	Total Score	**133**	
	Mean	**3,02**	
	Criteria	**Fairly Active**	

From the above data, it can be seen that the student activity on the first cycle is quite Active with an average of 3.02. This is because students are not familiar with the learning approach applied by teachers.

Table. Observation Results of Teacher Activity Cycle I

No	Indicator	Score
1.	Giving motivation and apersepsi to students through contextual problem	4
2.	Mastery of material by describing contextual problems	3
3.	Guiding student involvement in learning	4
4.	Implementation of assessment of learning outcomes	4
5.	Drawing conclusions / closing learning activities	4
6.	Ability to manage classes	3
	Total Score	**22**
	Mean	**3.67**
	Criteria	**Good**

Based on the above data, obtained the average teacher activity score of 3.67 and belonging to the catagory Good.

Table. Results of Cycle Group Discussion Assessment I

Mean	3.27
The highest score	5
The lowest value	0
Many students are present	24
Many students are not present	2
Total Score	85
Categori	**Good**

Based on the above data, obtained the average score of the discussion group discussion is 3.27 and belonging to the cathecory Good.

Table. Results of the Evaluation of Cycle Learning Evaluation I

Mean	59.19

The highest score	100
The lowest value	0
Many students are present	24
Many students are not present	2
Many students are finished	12
Many students not finished	12
Percentage of classical completeness (%)	46.15

From the table above shows that the average student score is 59.19 with the percentage of classical completeness of 46.15%. There are 12 unfinished students and 12 complete students and 2 absent students. It indicates that the student has not mastered the material elements in the building of the flat side room completely.

1) See (Reflection)

After the implementation of the stage of Do (implementation), the researchers conducted is See (reflection) which is held on the same day with the stage of Do that is on Sunday, 05 March 2015. At this stage, the researchers as the model teacher along with the observer do reflection of learning activities that has been done.

As for the results of the reflection, found some shortcomings of the learning process such as:

a) Distribution of groups that are not too evenly distributed. There are some groups that are not heterogeneous, this resulted in some groups who can not solve the problem on the LKS.
b) The number of problems in the LKS is too much, resulting in the students need a lot of time to finish it. This resulted in learning time is mostly only used to work on the problem of LKS alone.
c) Too many students ask the model teacher during the discussion process, resulting in the model teacher not being able to answer all student questions and resulting in noisy and uncontrolled classes.
d) Implementation of learning that is not in accordance with the specified time allocation. This has resulted in most groups not having the opportunity to present their answers.

e) There are some students in some groups who seem passive, and not very active in the discussion process.

But behind the shortcomings in Do Cycle I, student enthusiasm in cycle I is very high. Most students are actively discussing with their peers.

Cycle Implementation Results II

1) Plan (Planning)

For the second stage of the Plan (planning) cycle, held on Saturday, March 7, 2015, the researcher as the model teacher convey the proposed implementation of the learning that has been made for cycle II with the subject Creating a net on the rise of flat side space included in the third meeting (attached), where the research instrument used is the same as cycle I.

2) Do (Implementation)

For the stage of Do (implementation) cycle II was held on Sunday, March 08, 2015.

Based on the results of observation and evaluation of learning tests on cycle II obtained data as follows:

Table. Observation result of cycles II

No	Indicator	means	catagory
1.	Student's readiness to receive to the lesson	3.00	Very active
2.	Student's activity in group discussion	3.33	Very active
3.	Student's activity in group discussion	3.50	Fairly Active
4.	Student's activity in solving problem	3.50	Fairly Active
5.	Student's activity in doing test	2.33	Less active
6.	Student's particifpantion in concluding and closing the learning process.	2.67	Less active
	Total of Score	**110**	
	Means	**3,05**	

	Creteria	**Very active**

From the above data, it can be seen that the student activity in cycle II is quite Active with an average of 3.05 This indicates there is a slight increase from the previous cycle.

Table . Observation result of Teacher activity cycle II

No	**indicator**	**score**
1.	Motivating and encouring student through contextual problem	5
2.	Content mastery in describing the contentual problem	5
3.	Guidenace to involve the student in learning activity	4
4.	Assesment of learning achivment	4
5.	Teaccher's ability to conclude and close the learning process	3
6.	Abiltiy to organize the class	3
	Total of score	**24**
	mean	**4.00**
	Creteria	**Good**

Based on the above data, obtained the average teacher activity score is 4.00 and belong to the catagory of "Good". This indicates that students are getting used to the method of teaching applied by the model teacher.

Table. The result of group discussion cycle II

Means	3.31
The highest score	5
The lowest score	0
Number of students attended	24

Number of students unattended	2
Total of score	86
Category	**Good**

Based on the above data, the average score of the group discussion scores is 3.31 and classified as the "Good" catechet.

Tabel . Result of learning evaluation cycle II

Means	74.04
The highest score	100
The lowest score	0
Number of students attended	24
Number of students unattended	2
Number of completed student	16
Number of incompleted student	8
Percentage (%)	61.54%

In the data above shows that the average student score is 74.04 with the percentage of classical completeness of 61.54%.

3) See (Reflection)

For phase See (reflection) cycle II is held on the same day with the stage of Do that is on Sunday, March 08, 2015. As for the results of cycle II reflection, found some shortcomings, though not as much as in the cycle I,

a) There are students who are still passive in the group. This resulted in a less than optimal process of discussion within the group.

b) There are some students who are late to the class due to still breakfast dikantin. This resulted in a lack of discussion members of the group.

Cycle Implementation Results III

1) Plan (Planning)

Phase Plan (planning) for cycle III, held on Wednesday, March 18, 2015.

2) Do (Implementation)

Phase Do (implementation) of the third cycle is held one day after the Plan that is on Thursday, March 19, 2015. In this activity, the researcher as a model teacher trying to fix the existing deficiencies in cycle II, that is by applying the learning scenario that has been plotted in cycle III on learning process. Based on the results of observation and learning evaluation test in cycle III obtained data as follows:

Table. Result of activity observation cycle III

No	Indicator	Mean	catagory
1.	Student's readiness to learn	4.50	Very active
2.	Student's activities in group discussion .	4.33	Very active
3.	Student's activities in group discussion	4.33	Very active
4.	Student's activities in solving learning problem	3.67	Aktif
5.	Student's activity in doing test	3.83	Aktif
6.	Student's particpation in concluding and losing learning process	3.33	Fairly active
Total of score		**144**	
mean		**3.99**	
Creteria		**active**	

From the data above, it can be seen that the student activity in cycle III classified Active with an average of 3.99 There is an increase from cycle II.

Tabel 11. Result of teacher's group work discussion cycle III

No	Indicator	score
1.	Giving motivation and apersepsi to students through contextual problem	5
2.	Mastery of material by describing contextual problems	4

3.	Guiding student involvement in learning	5
4.	Implementation of assessment of learning outcomes	5
5.	Drawing conclusions / closing learning activities	3
6.	Ability to manage classes	5
	Total of score	**27**
	mean	**4.50**
	Cretiriea	

Based on the above data, the average score of teacher activity score is 4.50 and belong to the catagory of "Very Good".

Table. Result of group work evaluation cycle III

Means	3.35
The highest score	5
The lowest score	0
Number of students attended	22
Number of students unattended	4
Total of score	87
Category	**Good**

Based on the above data, obtained the average score of the group discussion is 3.35 and classified as the "Good" catechet.

Table. Result of learning evaluation cycle III

Means	74.04
The highest score	100
The lowest score	0

Number of students attended	22
Number of students unattended	4
Number of completed student	21
Number of incompleted student	1
Percentage (%)	80.77%

In the table above shows that the average student score is 74.04 with the percentage of classical completeness of 80.77%. This indicates an increase from the previous cycle. But there is still one student who has not completed.

3) See (Reflection)

In phase See (reflection) cycle III, held on the same day with the stage of Do that is on Thursday, March 19, 2015. As for the results of the reflection cycle III, found some shortcomings of the learning process such as:

a) Students late to follow the learning, so that the learning process seemed done hastily, so that the students' time to discuss a little.
b) There are some students who have not been too active to learn because they do not really understand the learning materials.

Cycle Implementation Results IV

1) Plan (Planning)

In the Plan stage (planning) cycle IV, held on Saturday, March 28, 2015. As for things done by researchers as a model teacher is to make and submit the design offer implementation of learning cycle IV on the subject Calculate the surface area and volume of Limas and Prism at meeting VI (attached), where the research instrument used the same as the previous cycle.

2) Do (Implementation)

For the stage of Do (execution) in cycle IV which was held on Sunday, March 29, 2015.

Based on the results of observation and evaluation test of learning in cycle IV obtained data described as follows:

No	Indicator	Mean	Catagory
1.	Student's readiness to learn	4.67	Very active
2.	Student's activities in group discussion .	4.83	Very active
3.	Student's activities in group discussion	4.67	Very active

4.	Student's activities in solving learning problem	4.83	Very active
5.	Student's activity in doing test	4.16	Very active
6.	Student's particpation in concluding and losing learning process	4	Aktive
Total of score		**163**	
mean		**4.52**	
Cretirea		**Very active**	

From the above data, it can be seen that the activity of students in the IV cycle has reached the category Highly Active as expected, with an average of 4.52.

Tabel. Result of teacher's observation activity cycle III

No	Indicator	Score
1.	Giving motivation and apersepsi to students through contextual problem	5
2.	Mastery of material by describing contextual problems	5
3.	Guiding student involvement in learning	5
4.	Implementation of assessment of learning outcomes	5
5.	Drawing conclusions / closing learning activities	5
6.	Ability to manage classes	5
	Total of score	**30**
	mean	**5**
	Cretiria	**Very good**

Based on the above data, obtained the average score of teacher activity is 5 and belong to catekagori "Very Good".

Table. Result of group discussion evaluation cycle IV

Means	3.88
The highest score	5
The lowest score	0
Number of students attended	23
Number of students unattended	3
Total of score	101
Category	**Good**

Table. Result of evaluation test of Leaning cycle IV

Means	82.69
The highest score	100
The lowest score	0
Number of students attended	23
Number of students unattended	3
Number of completed student	23
Number of incompleted student	0
Percentage (%)	88.46%

In the table above shows that the average student score is 82.69 with the percentage of classical completeness equal to 88.46%.

Tabel. Student's response of learning process

Means	4.37
The highest score	110
The lowest score	90
Number of students attended	23
Number of students unattended	3
Total of score	1205

Category	**Very good**

Based on the above data, obtained the average response of students to learning that is 4.37 or belong to the category of "Very Good". This indicates that students are familiar and happy with the learning process that has been done. However, there were 3 students who did not fill out the student response questionnaire because they did not attend school.

3) See (Reflection)

For phase See (reflection) cycle IV is held on the same day with the stage of Do that is on Sunday, March 29, 2015. As for the results of the reflection cycle IV, the learning process can be said to run very well. This is shown by almost all students are very enthusiastic in the learning process. Students conduct the discussion process very well and actively. It's just that there are still shortcomings of the learning process is that learning is carried out in excess of the planned time allocation.

D. Conclutions

Based on the results of research and analysis of the discussion in the previous chapter, it can be concluded that by applying the Realistic Mathematic Education (RME) learning approach through lesson study activities, can improve the critical thinking skills of students in SMP Lab class. Hamzanwadi Pancor Year Learning 2014/2015. This is supported by the results showed that in the first and second cycle students' learning activity in the criteria fairly active, the activity of teachers at both criteria and the criteria of the group discussions was quite active with classical completeness of student learning outcomes by 46.15% and 61.54%. In cycle III and IV, the criteria of student activity is active and very active, teacher activity in the criteria very well and criteria of the group discussions was excellent and very good with classical completeness of student learning outcomes by 80.77% and 88.46% .. Based on the analysis of data , it can be concluded that by applying the learning approach of RME through lesson study activity can improve critical thinking ability in learning mathematics of student of class VIII SMP Lab. Hamzanwadi Pancor year of learning 2014/2015.

References

Erman Suherman, dkk. 2003. *Pembelajaran Matematika Kontemporer*. Semarang: JICA

Irzani. (2009). *Strategi Belajar Mengajar Matematika*. Yogyakarta : Media Grafindo

Iqbal Hasan, M. (2002). *Metodologi Penelitian*. Jakarta : PT Ghalia Indonesia.

Moh. Asikin, (2010). *Realistic Mathematics Education (RME): Paradigma Baru Pembelajaran Matematika. Http: / WWW. Edukasi. Online, Info / Index* :

Oemar Hamalik. (1994). *Kurikulum Dan Pembelajaran*. Bandung : Bumi Aksara

Suharsimi Arikunto. (2002). *Prosedur Penelitian Suatu Pendekatan Praktek*. Jakarta: Rineka Cipta.

Suharsimi Arikunto. (2008). *Penelitian tindakan kelas*. Jakarta: PT Bumi Aksara

Suhardjono. (2008). *Penelitian tindakan kelas*. Jakarta: PT Bumi Aksara

Slameto. (2003). *Belajar Dan Faktor-Faktor Yang Mempengaruhinya*. Jakarta : Rineka Cipta.

Sugiyono. (2009). *Metode Penelitian Pendidikan*. Bandung: Alfabeta.

Tim Penyusun . (2014). *Pedoman Skripsi*. STKIP Hamzanwadi Selong.

Wayan Nurkencana dan Sunarta. (1990). *Evaluasi Pendidikan*. Surabaya: Usaha Nasional.

The Contribution of Exposure Frequency to English to Speaking and Writing Performance of EFL Learners at Junior High School in Indonesia

Hajriana Arfah[1], Ahmad Zamzam[2]

Hamzanwadi Univeristy, The University of Mataram

hajriana80@gmail.com, zamunram@gmail.com

Abstract

This study was aimed at describing the contribution of exposure frequency to English (EFE) to speaking and writing English as a foreign language (EFL) learners in bilingual class setting of a state junior high school in East Lombok, which has been implementing bilingual principles (English-Indonesia) of Mathematics and Natural Science. This research is ex-post facto with correlation design. The samples were systematically selected by choosing even number of the student lists, which involved forty-six of ninety-three students of eight grade in academic year 2011/2012. Data were analyzed with regression. The calculation was done at 5% significant level.

This research discovered that (1) there is a significant correlation between exposure frequency to English language and speaking performance of the students in bilingual classes by R value of .555 with probability of .00; (2) there is significant correlation between exposure frequency to English and writing performance by R value of .78 with probability of .00; (3) the EFE significantly contribute to writing performance with R Square value of .609 (60.9%); and (4) it also contribute.309 (30.9%) the students' speaking performance.

***Keywords**: exposure frequency to english, speaking, and writing*

Introduction

To improve education quality and competitiveness power in education outcomes, government tried to design an international standard school for all education levels. The inspiration was stated in education policy (*UUSPN 20/2003, article 50 item 3*). Ever since, a growing number of schools are involved in a pilot project that aims at establishing high quality international standard schools (Artini, 2010).

The formulation of international standard school as stated in education development plan is *SNP+X*. *SNP* which stands for national standard of education while X means that the international standard school should have outcome standard for the well competitiveness in one of nation associations, *Organization for Economic Co-operation and Development or OECD* (Asy'ari, 2011). Because the people in the

countries and all over the world use English as a communication medium, the language is required and inserted into the curriculum of all school levels. Up to the present, the subject matters that are piloted to be taught in English in international-standard school are Mathematics and Science. According to Hudson (in Artini, 2010) key areas to gain the well competitiveness are Mathematics and Science mastery because they have been considered as the *world knowledge*. As the world knowledge, considerable number of references is written in global language (i.e.' English). So, the subject classes, the classroom management and delivering lesson materials are executed through English language.

The use of English as an instructional medium in some subject matters can be expected to increase students' compe-tence in the language. The students get more exposure frequency to the language through listening to the teachers' talk or reading the science and mathematics learning materials as the meaningful language inputs in the learning process in the classroom. The use of English as a communication medium in some subject matters is also a kind of Communicative Language Teaching (CLT) principles execution in the non-English class. According to Brown (2001) and Harmer (2001) that CLT can be implemented through two path ways, namely task-based and content-based instructions. In task-based, the focus is on the language mastery while in content-based, the focus is on content mastery. Task-based provides the students with the linguistic material, managed in tasks. So the concentration is on the linguistic forms. However, content-based is constructed for any subject matters, such as history, chemistry, geography, etc. The focus is not on the form of language used by participants but on the content of subject matters in order to encourage them to participate in the classroom activities, of course, by using English as a target language. In this case, teachers' strategy play important role to design learning experiences for the students and also requires good English proficiency. In the teaching of Biology, for example, the teacher should use English but less concentration on the linguistic forms, but its functions, as a primary medium in classroom management or delivering the instructional objectives.

The use of English in the teaching of some subject matters in international standard classes provides the students more with comprehensible exposure to the language than the regular classes. In the classes, the exposure to English is about four to five lesson hours each week overall grades in junior and senior high schools. In reality, most students cannot use the language well. Sadtono and Handayani (Jazadi, 2008) found in their surveys that the students' proficiency in the four macro-skills in English is still low. They held the survey in sixteen junior high schools in four provinces in Indonesia. Less than fifteen per cent of them can be considered as highly proficient in the foreign language and their greatest weakness were predictably in the two productive skills,

namely speaking and writing. And, the most proficient students in the classroom usually acquire more exposure to English outside.

In international standard, most instructional activities of some subject matters, such as mathematics or science class, are delivered in English although syllabus or lesson plan are written in Bahasa Indonesia. It means that in international standard school, there is a bilingual class, which serves the instructional activities in two languages, English and Bahasa Indonesia. It is different with non-bilingual or regular classes, in which the exposure to English is only in English class. It indicates that the exposure frequency to English is higher in bilingual classes than regular classes. The students in the regular classroom setting may not acquire English in other subject matters (except in English class).

According to Krashen (1999) there are two goals of bilingual education. The first is the development of academic English and school success, and the second is the development of the heritage language or first language. Good bilingual education programs achieve both goals. It means that the importance of English use in bilingual classes setting is because of, at least, two reasons. First, it is an implementation of basic theory of CLT. Second, English is a means of communication. It is used by people in the world as a means of communication in the global era. Most people in the world speak by using English. It is why the ability of communication is very important for the students.

As stated above that the implementation of content-based instruction in bilingual class of international standard school is inspired by Communicative Language Teaching, which aims to help the students' progress in English proficiency as well as their academic achievement development. Good bilingual education programs achieve both goals. So, this research aimed at examining the exposure frequency to English language and its contribution on oral and writing skills of the students in bilingual classes at international standard school of State Junior High School (SJHS) *X Selong*, East Lombok, West Nusa Tenggara.

A. Method

The examination on the contribution of exposure frequency to English on oral and writing skills was undertaken without direct intervention because they had already occurred before conducting this research. It is the basic reason why the research design is ex-post facto as stated by Wiersma (1986) and Dantes (2007) that it is systematic and empirical inquiry in which the independent variables had already occurred and were inherently not manipulated by the present researcher.

This research study was carried out at *SMPN X Selong*, East Lombok, West Nusa Tenggara in academic year 2011/2012. The sample of this research was based on Dantes' opinion (2007) that the samples were chosen by using stratified sampling because of some considerations such as eight grades of *SMPN X Selong* are representative of the population. Seven grades are the first year so they lack exposure frequency to English and the third grade is of course had got higher exposure frequency to the language than the second grade because they had longer time to learn in bilingual class.

After determining the grade, the sample was chosen through simple random sampling by taking even number of the student lists of the four classes. The total number of the samples was 43% or 46 of 93 students.

There are three types of data in this research. They are exposure frequency to English language, speaking skill, and writing skill. The primary data of exposure frequency to English dealt with teachers utterances of some subject matters in bilingual classes such Mathematics, Biology, Physics, and English. They also dealt with the students' languages in responding their teachers' or classmates' greetings, questions, and instructions in the learning process. They were collected by using a set of questionnaire, which was designed by using five scales adopted from Likert's theory. The secondary data of exposure frequency to English obtained through observation related to the dimension of exposure frequency to the language in bilingual classes.

Speaking skill data are original utterances of the students recorded while they were orally producing English through speaking test. Here, picture-cued story telling through a series of picture was used as instrument to collect the data as stated by Brown (2004). In other side, writing skill data are the students' ability in exploring their idea, taught, and feeling in the form written languages. Here, the data are students' writing achievement of picture-cued task through a series of picture.

In this research, instrument validation was done by fulfilling some required evidences as stated by Hughes (2003) and Brown (2004). To prove content validation, the test-takers were asked to describe orally the prepared picture-cued task in the form of a series of picture and it aimed to elicit their speaking skills. The directions of the oral test were delivered orally in the classroom. The topic of the event in the series of picture leaded the students to produce narrative and recount texts And, the content of writing skill test is written text in narrative and recount. The clear direction of writing test was written in the top of the series of picture.

Another way to prove that the instruments of oral and writing skills fulfill the construct validity is to review both theoretical aspects. The construct of speaking skill is adopted from Oller's theory (Nurgiyantoro, 2001 and Brown, 2004), which consist

of some criteria and procedures (constructs). They are accent, grammar, vocabulary, fluency, and comprehension. And, the construct of writing test is emphasis on content, organization, vocabulary, syntax (grammar), and mechanics.

Furthermore, the content of questionnaire was consulted to the expert judgment at postgraduate program of Education University of Ganesha, Bali. The contents which covered for dimensions above were broken down from Dulay' (1982), Ellis (1986), and Ajileye (2009) theories of exposure to the target language.

The reliability of a test was examined through two approaches, namely quantitative and qualitative approach. Here, the present researcher applied qualitative approach, in the form of students-related reliability, rater reliability, and test administration reliability such suggested by Brown (2004). The procedures were ensuring that all students were well condition, using standard oral and writing rubrics offered in Nurgiyantoro (2001), Brown (2004), and Hughes (2003), and ensuring that each student had the same time and clear photocopying variations to complete the tasks and the data of speaking skill and writing skill were administered twice by using different topics. And, all instruments were consulted to the expert judgments before using them to collect the data.

The central tendency (mean) and dispersion (standard deviation) of three variables in this research was processed by using SPSS 16. Then, the score of each group of data was categorized with Norm Reference Classification. Then, the result of classification was pictured in the form of histogram. The Norm Reference Classification is presented in table 01.

Table 1 Norm Reference Classification

Interval	Category
X≥M+1.8SD	Very good
M+1.8SD >X≥ M+0.6SD	Good
M+0.6SD >X≥ M-0.6SD	Average
M-0.6SD > M-1.8SD	Low
X< M-1.8SD	Very low

There were four prerequisite tests that should be conducted before testing the hypothesis. They were: (1) normality test which was done by using Kolmogorov-Smirnov formula, (2) Linearity and the meaningfulness of regression line test, (3)

autocorrelation test, and (4) heteroscedasticity test. All the calculation was done by using SPSS 16 for Windows.

The hypothesis was tested by using simple regression to know the correlation and contribution of exposure frequency to oral and written competency. The hypothesis testing was done by using computer program SPSS 16. The calculation was done 5% significant level.

B. Research Finding

Data description has function to describe the group of data in term of the calculation of central tendency and dispersion. Here, there were three types of data, namely: data of exposure frequency, data of speaking skill, and data of writing skill. Here, the calculation was done to find mean and standard deviation.

Based on descriptive analysis, it was known that the mean of students' speaking skill=139.76 and the standard deviation=7.36. Then, the classification was presented in table 02.

Table 2 Category of Students' Speaking skills in Bilingual Class

Interval	Frequency	Category
X≥141.7	3	Very good
141.7>X≥122.51	10	Good
122.51>X≥103.29	22	Average
103.29>X≥84.1	11	Low
X<84.1	0	Very low

Based on the table, it was known that mostly students' speaking skill fell at average category with 22 frequencies. It was then followed by Low category with 11 frequencies. Next was Good category with 10 frequencies. After that, it was very good category with 3 frequencies. Here, there was no students' speaking skill categorized into very low.

Table 3 Category of Students' Speaking skills in Bilingual Class

Interval	Frequency	Category

X≥152.95	2	Very good
152.95>X≥144.12	12	Good
144.12>X≥135.28	17	Average
135.28>X≥126.45	15	Low
X<126.45	0	Very low

Based on descriptive analysis, it was known that the mean of students' writing skill=201.69 and the standard deviation=16.07. Then, the classification was showed in table 3.

In the table, it was known that mostly students' writing skill fell at average category with 17 frequencies. It was then followed by Low category with 15 frequencies. Next was Good category with 12 frequencies. After that, it was very good category with 2 frequencies. Here, there was no students' writing skill categorized into very low.

Based on descriptive analysis, it was known that the mean of exposure frequency to English is 112.9 and the standard deviation is 12.69. Then, the classification was presented in the table 4.

Table 4 Category of Exposure Frequency to English in Bilingual Class

Interval	Frequency	Category
X≥224.53	2	Very Frequent
224.53>X≥209.3	11	Frequent
209.3>X≥194.85	18	Average
194.04>X≥178.85	15	Seldom
X<178.85	0	Very Seldom

Based on the table, it was known that mostly exposure frequency fell at average category with 18 frequencies. It was then followed by seldom category with 15

frequencies. Next was frequent category with 11 frequencies. After that, it was very frequent category with 2 frequencies. Here, there was no frequency categorized into very seldom.

Then, before hypothesis testing was conducted, there were four prerequisite tests that should be conducted. The tests were normality test, linearity and the meaningfulness of regression line test, autocorrelation test, and heteroscedasticity test.

Normality test in this researched was administered by using Kolmogorov-Smirnov test. This test was done to three groups of data, namely: speaking skill group, writing skill group, and exposure group. The calculation was done by using SPSS 16 for Windows and the result can be presented in table 5.

Table 5 Computation of Normality Test by Kolmogorov-Smirnov test

Variable	Probability Coefficient	Decision
Exposure	.976	Normal
Speaking skill	.774	Normal
Writing skill	.716	Normal

The group of data was considered to be normal if the probability coefficient was higher than 0.05. From the table 5, it was known that all groups of data have probability coefficient which was higher than 0.05. It means that all groups of data were normal in distribution.

Furthermore, the linearity and the meaningfulness of regression line were tested to know whether or not the independent variable is linear to dependent variables. The calculation was done by F test by using SPSS 16 for Windows. The result of the calculation can be presented in the table 06.

Table 6 The Calculation of Linearity Test and the Meaningfulness of Regression Line

Variable		*F Linear*		*F Dev from Linearity*		*Note*
		F	P	F	P	
X	Y1	46.088	.00	.552	.911	Linear
	Y2	17.177	.001	.828	.680	Linear

Note:

X = Score of Exposure Frequency to English

Y1 = Score of Speaking skill

Y2 = Score of Writing skill

The result of linearity test was shown by *Dev. From Linierity*, meanwhile the result of the meaningfulness of regression line was shown by *linierity*. Independent variable was linear to dependent variable if its probability value were higher than 0.05. Meanwhile, regression line is said meaningful in detecting regression direction if its probability value were lower than 0.05. From the result of linearity and the meaningfulness of regression line on table 6, the value of F *linearity* with p<0.05 and for F *Dev. From Linearity* with p>0.05. It means that the relationship of exposure, speaking skill, and writing skill was linear and meaningful.

Then, autocorrelation test was administered by using Durbin-Watson test. The calculation was done by using SPSS 16 for Windows and the result was presented in the table 7.

Table 7. The Result of Autocorrelation Test

Variable		Durbin-Watson	Note
X	Y1	1.966	Free from Autocorrelation
X	Y2	1.648	Free from Autocorrelation

Variable was considered to be free from autocorrelation if the value of Durbin-Watson (D-W) were higher than Du (D-W>Du). From the table 4.20, it was know that the value of D-W for speaking skill were 1.966 and for writing skill were 1.648. From the table, it was acquired that the value of Du was 1.57 for N= 64 (interpolation to 45). It means Du is lower than D-W. So, it is concluded that the variable was free from autocorrelation.

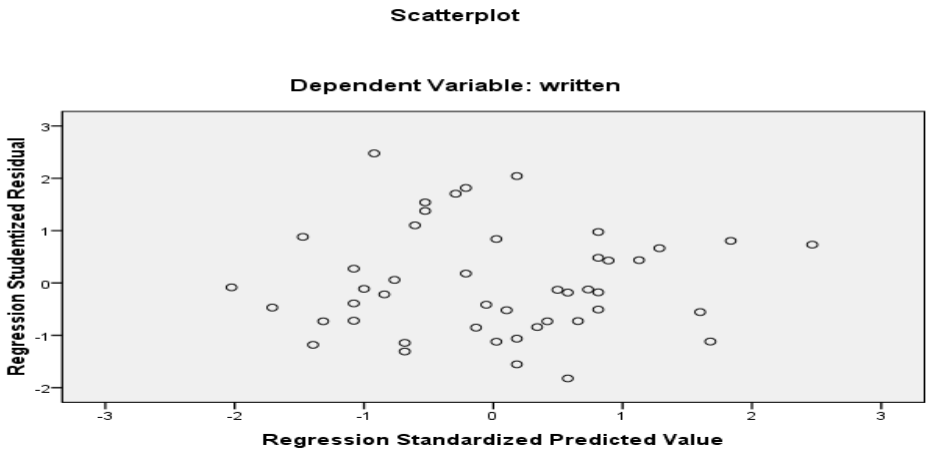


Figure 1. Scatter Plot of Exposure to Writing skill

Heteroscedasticity test was done by observing scedastic point in the scatter plot. The scatter plot was made by using SPSS. The result is presented in figure 1 and 2.

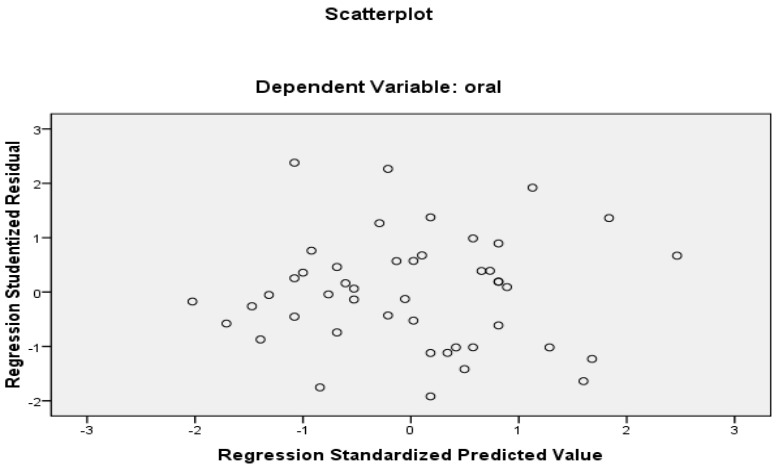


Figure 2. Scatter Plot of Exposure to Speaking skill

From both scatterplots, it was known that the scedastic points were separated well and they did not build certain form. It means that there was no heteroscedasticity was detected.

Then, hypothesis testing in this research was done by using Simple Regression formula. This formula was chosen because there was only one independent variable. The calculation was done by using SPSS 16 for Windows and the result can be presented in the table 8.

Table 08 Result of Hypothesis Testing

Variable Relationship	*Regression Line Equation*	*Correlation Coefficient*	*Determination*	*Contribution*
X to Y1	$\hat{Y} = 74.83 + 0{,}322X_1$	.555	.309	30.9%

X to Y2	$\hat{Y}$ = -85.56 + 0,984X_2	.78	.609	60.9%

C. Discussion

This part deals with the elaboration about exposure frequency and quality to English language and its relationship with speaking skill and writing skill of the students in bilingual classes of pilot project of international standard school in East Lombok.

Exposure frequency to English deals with the frequency of the language use orally or in written form by the school participants in the bilingual classes in the target school. Exposure frequency also relates to how often the students listen to the language and read any English documents. As stated by Ellis (1986) that people with more exposure to the target language are expected to acquire greater familiarity with the target language. The target language in bilingual class is English because it is as a primary communication medium for some subject matters such Mathematics, Biology, and Physics. It is hoped that the academic achievement development of the subject matters as well as their language increase because the exposure to the language is claimed as language input and oral and writing skills are claimed as the product.

According to Dulay (1982) that with no exposure at all, no learning can take place. It indicated that the success in learning English in this country depend on how often the language is exposed to the language learners. It was proved in this research that there is a significant contribution of exposure frequency to the language to writing skills of the students.

The correlation between exposure frequency to English (EFE) and speaking skill of the students in bilingual classes, which provided the students with equal exposure to English and Bahasa Indonesia in the teaching and learning process inside the classroom, is also significant. It was proved with the coefficient correlation value 0.555 in significant level 5%. And, the contribution of EFE in the speaking skill, which was analyzed by using SPSS 16 with simple regression, found that the R-square value is 0.309. It was then transferred into percentage became 30.9%. It means that EFE contributed 30.9% on speaking skill of the students. And, there are 69.1% because of other variables, which are not investigated in this study.

The data showed that the contribution amount of exposure frequency to English to speaking skill is different with writing skill of the students in pilot project of international-standard school. It indicated that the writing activities in the bilingual

classes are lower than students or teachers oral activities. The execution of their linguistic competences is higher in oral than in written. It can be proved based on the students' perceptions of exposure frequency to English through oral instructional activities and written instructional activities.

The data showed that in Mathematics class, the most students who were exposed through speaking/oral instructional activities (4.31) are higher than in written (the average 3.46). In Biology class, the average of exposure frequency through oral instructional activities 4.60 while through written activities such as whether the students wrote their teacher or classmate explanation in the learning process, the average is 3.58, which indicated that oral instructional activities are higher than written in Biology class. These phenomena also happened in Physics and English classes. The average of overall classes also proved that the average of oral instructional activities 4.61, which is categorized into very high exposure, is higher than written instructional activities 3.84, which is categorized into high. These are proof that English proficiency is also influenced by the type of exposure given to the language learners.

In the language learning process, to become succesful language leaners, getting high exposure to the target language is most important to get the high language input (Hoffmann, 1991). When the language input is higher in oral, of course, the output is also and because of internal processing mechanism, which is known by *execution* (Clark & Clark, 1977) influence the output quality. The quality of their performance in the execution process, of course, is determined by the quality of exposure and internal processing mechanism. In language learning process, it is known as a mental gymnastic (Stern, 1983) or a mental exercise (Brown, 2000) in which language learners execute their competence become their performance.

D. Conclusion

Based on the data analysis results, the conclusion can be formulated as follows.

1. There is a significant correlation between exposure frequency to English language and speaking skill of the students in bilingual classes of junior high school. It was proven by R value of .555 with probability of .00 at 5% significant level.
2. There is significant correlation between exposure frequency to English and writing skill of the students in bilingual classes of junior high school. It was proven by R value of .78 with probability of .00 at 5% significant level.
3. There is a significant contribution of exposure frequency to English on speaking skill of the students in bilingual classes. It was shown by R Square value of .309 and probability of .00. The value of R Square was then transfer into percentage

to be 30.9%. It means that exposure frequency to English contribute 30.9% on students' speaking skill.

4. There is a significant contribution of exposure frequency to English on writing skill of the students in bilingual classes. It was shown by R Square value of .609 and probability of .01. The value of R Square was then transfer into percentage to be 60.9%. It means that exposure frequency to English contribute 60.9% on students' writing skill.

E. Bibliography

Ajileye, S. S.. 2009. *The Effect of Exposure to English Language Activities Outside the classroom on written English: A Study of Selected Secondary Schools in Ilorin*. Downloaded on 25th Oct. 2009 from http://pdfdatabase.com/download_file_i.php?file=14097613&desc=Language+Acquisition+in+Different+Situations+.pdf

Artini, Putu, Luh. 2010. *Teaching Mathematics and Science Using English as a Medium of Instruction: From Theory to Practice*. Singaraja: The paper was presented in a one day-Seminar and Workshop for Mathematics and Science Lecturers.

Arikunto, Suharsimi. 1992. *Manajemen Penelitian*. Yogyakarta: Rineka Cipta.

Asy'ari, Mutho, Kharis. 2012. *Analisis Berstandar Internasional*. Downloaded on 5th Nopember 2012 from http://www.docstoc.com/docs/64977167/Analisis-Sekolah-Berstandar-Internasional

Anwar, Zainul. 2000. *Interactional Features as Implemented in Teaching English at Madrasah Aliyah Negeri 4 Jakarta*. Thesis. Bandung. Unpublished.

Allyn & Bacon. 1998. *Bilingual Education*. Boston.

Brown, H.D. 2000. *Principles of Language Learning and Teaching*. 4th ed. Addison Wesley Longman: A Pearson Education Company.

_____. 2001. Teaching by Principles: *An Interactive Approach to Language Pedagogy*. 2nd ed. Addison Wesley Longman: A Pearson Education Company.

_____. 2004. *Language Assessment: Principles and Classroom Practices*. White Plain: Pearson Education.

Bruning, James, L. 1997. *Computational Handbook of Statistics*. United States of America: Foreman and Company.

Bungin, Burhan. 2005. *Metodologi Penelitian Kuantitatif*. Jakarta: Kencana Prenada Media Group.

Buck, G. 2001. *Assessing Listening*. New York: Cambridge University Press.

Clark, H. Herbert & Clark, V. Eve. 1977. *Psychology and Language: An Introduction to Psycholinguistics*. United States of American: Harcourt Brace Jovanovich.

Dantes. 2007. *Metodologi Penelitian untuk Ilmu-Ilmu Sosial dan Humaniora*. Singaraja. Universitas Pendidikan Ganesha. Unpublished.

Dawes, Lyn. 2008. *The Essential Speaking and Listening*. New York: Routledge

Dulay, H., Burt, M., & Krashen, S. 1982. *Language Two*. Oxford: Oxford University Press.

Ellis, R. 1986. *Understanding Second Language Acquisition*. Oxford: Oxford University Press.

Genesee, Fred. 1999. *Program Alternatives for Linguistically Diverse Students*. Online Journal downloaded in September 2012 from http://people.ucsc.edu/~ktellez/epr1.html.

Hadley, A.O. 2001. *Teaching Language in Context*. 3rd ed. London: Thomson Learning.

Harmer, J., 2001. *The Practice of English Language Teaching*. 3rd ed. Harlow: Pearson Education Limited.

Hoffmann, Charlotte. 1991. *An Introduction to Bilingualism*. England: Longman Group

Hughes, A. 2003. *Testing for Languages Teachers.* Cambridge: The Press Syndicate of the University of Cambridge.

Jazadi, Iwan. (2008). *The Politics of Curriculum: An Interpretive Study of English Language Teaching and Learning at High Schools in Indonesia.* Sumbawa Besar: Paracendekia NW Press.

Joyce, B. & Weil, M. 2000. *Model of Teaching*. Needham Heights: A Person Education Company.

Krashen, S. 2010. *Why Bilingual Education.* Downloaded, April 25th, 2010 from http://www.ericdigests.org/1997-3/bilingual.html

_____. 2010. *Krashen's Comprehension Hypothesis Model of L2 Learning.* Downloaded, April 25th, 2010 from http://www.sk.com.br/sk-krash.html

_____. 1999. *Principle and Practice in Second Language Acquisition*. Oxford: Pergamon.

_____. 1982. *How Language is Learned*. Oxford: Pergamon.

Klinger, K.J., Vaughn, S., & Boardma, A. 2007. *Teaching Reading Comprehension to Students with Learning Difficulties*. New York: Guilford Press.

Koyan, Wayan, I. 2007. *Statistika Terapan: Teknik Analisis Data Kuantitatif*. Singraja: Unpublished.

Littlewood, W. 1981. *Communicative Language Teaching; An introduction.* USA: Cambridge University Press.

Nunan, D., 1988. *Learner-Centered Curriculum*. Cambridge: Cambridge university press.

Mauranen, Ann. 2006. *Spoken Discourse, Academic and Global English: A Carpus Perspective* in Spoken English, TESOL, and Applied Linguistics: Challenges for the Theory and Practice. New York: Palgrave Macmillan.

Muijs, Daniel. 2004. *Doing Quantitative Research in Education*. 1st Edition. London: SAGE Publications Ltd

Paradis, Johnane. 2012. *Bilingual Children's Acquisition of English Verb Morphology: Effects of LanguageExposure, Structure Complexity, and Task Type*. Online Journal of Research in Language Studies. Downloaded in October 2012 from onlinelibrary.wiley.com › ... › Language Learning › Vol 60 Issue

Purnajaya, I Nyoman. 2008. *Program Implementation Evaluation of SMA Negeri 1 Denpasar Quality Improvement Program to International Level School*. Thesis: Program Study of Research and Education Evaluation, Magister Program, Pendidikan Ganesha University Singaraja. Unpublished.

Richards, J.C. & Renandya, willy A. 2002. *Methodology of Language Teaching: An Anthology of Current Practice*. United Kingdom: The Press Syndicate of the University of Cambridge.

Stern, H.H., 1983. *Fundamental Concepts of Language Teaching*. Oxford: Oxford University Press .

Tuckman, W.B. 1988. *Conducting Educational Research*. United States of America: Harcourt Brace Jovanovich.

Wiersma, W. 1986. *Research method in education: an introduction*. 4th edition. United States of America: Allyn and Bacon.

Williams, M., 1999. Learning Teaching: a Social Constructivist Approach-Theory and Practice or Theory with Practice? page 11-20 in *Theory in Language Teacher Education* by Lomax, H.T., & McGrath, I., Harlow: Pearson education

Cooperative Strategy in Developing Sharia Products (Case Study on Cooperation Sharia in Lombok Timur)

Muhamad Juaini
Hamzanwadi University
m_juaini@gmail.com

Abstract

This research is included in qualitative descriptive research. And in the process of collecting data, using methods of observation, interview and documentation. As for the analysis, the authors used descriptive qualitative analysis, namely in the form of data written or oral person and behavior observed so that in this case the researcher attempted to conduct research that is describe thoroughly about the actual situation. In addition, to support the description of the actual situation in the field.

Based on the results of this study, it can be concluded that a cooperative in progress sufficiently healthy progress. The performance of the business unit also experienced significant progress. This can be seen from the financial performance of two products, namely Savings Products and financing products that received much attention from the public. Looking at the strategy, the strategies used in developing their business tend to be the kind of intensive growth strategy.

Keywords:*strategy, cooperative products*

A. Introduction

The development of cooperatives in various worlds tend to vary. The development of cooperatives in European countries has entered a very advanced stage of development. Regardless of the diversity of the level of development of the cooperative, one thing to realize that the development of cooperatives can not be separated from a set of noble values called the foundation of the cooperative.

Cooperative is a business entity in the Indonesian economy, which is a joint venture formed from, by and for members. The cooperative is made up of people who share the same interests. As a form of business entity, the cooperative struggles to meet the economic needs of its members efficiently. As a group of people, cooperatives have social character (social oriented). This is what distinguishes cooperative business entities with other business entities.

Sticking to Law no. 25 of 1992 which states that the purpose of the Indonesian state cooperative is "to promote the general welfare, to realize social justice for all Indonesian people". The explanation of the above verse is the production which is done by all, for all under ownership or leadership. Preferred prosperity of society, not person.

The cooperative movement has constitutional power which must be maintained by continuing its existence. Because the cooperative has the main purpose to improve the welfare of members in particular and society in general. This is in accordance with

article 3 of Law no. 25/1992, in the article stated that the purpose of the Indonesian cooperative is to promote the welfare of members in particular and society in general, and also to build the national economic order in order to realize a just and prosperous society based on Pancasila and the 1945 Constitution.

To achieve these goals, the cooperative must be managed properly and properly. And in the management of the cooperative must have a certain strategy to realize what has become from the establishment of the cooperative. In determining a strategy, the cooperative should carefully consider the following matters: (1) internal strengths of the cooperative; (2) internal weaknesses of cooperatives; (3) opportunities or business opportunities available for use in order to achieve cooperative objectives; and (4) obstacles or business constraints that are expected to interfere with the achievement of cooperative objectives.

Strategic planning as the process of selecting organizational goals, determining the policies and programs needed to achieve certain goals in order to achieve the objectives and the determination of the methods used to ensure that strategic policies and programs can be implemented.

This comprehensive definition can be solidified into a formal, long-term planning process for determining and achieving organizational goals. Another term often used to replace the term strategic planning is comprehensive planning and long-term planning.

The strategic planning process involves: determining mission and objectives, developing company profiles, analyzing the company's external environment, analyzing the internal environment, identifying opportunities and strategic threats, making strategic decisions, developing corporate strategies, implementing corporate strategies, reviewing and evaluating.

It is a decision-making process to choose between the parent strategy alternatives or the parent strategy variations that are considered in order to be used and determined to be the company's goal. The choice of strategy should be tailored to the following criteria: (a) The strategy should be responsive to the external environment, (b) The strategy involves competitive advantage, (c) The strategy aligns with other strategies within the organization, (d) The strategy provides the right flexibility to business and organization, (e) Strategy must be in accordance with the organization's mission and long-term corporate objectives, and (f) Organizational strategy is deemed feasible.

Implementation strategy is to describe the types of major plans needed to execute the strategy and to understand the implementation process of the policy and to show how executives handle the implementation of leadership. Another definition says that strategy implementation is the management of various organizational and management tools that direct and control the utilization of corporate resources through a strategy chosen by management.

Implementation of the strategy rests on the allocation and organizing of human resources that is expressed through the establishment of organizational structure, leadership mechanism that runs following the organizational culture. More broadly, this activity involves the distribution of work between individuals and working groups by taking into account management levels, job types, grouping of parts of the work and working to get them integrated into a team so they can work effectively and efficiently. The team referred to is TEAM (Together Everyone Achieve More), a team whose members all get together. A solid team to oversee the organization to stay in shape if in order to achieve the vision, mission and goals that have been set.

The ultimate goal of strategy management is strategy evaluation. This is done to see how far the results of the utilization of the stages that have been passed in the process of management strategy as a feedback. Strategy evaluation is the final stage of the strategy management process, in which top management tries to ensure that the strategy they choose is done appropriately and achieves the company's goals.

The definition of cooperatives as conveyed by our Cooperative Mr. Moh. Hatta: Cooperatives are a joint effort to improve the livelihood of the economy based on help. The spirit of help is motivated by the desire to give services to friends based on "one for all and all for one".

While the definition of Cooperative Indonesia according to Law no. 25/1992 on cooperatives is as follows: Cooperative is a business entity consisting of a person or a cooperative business entity, based on its activities based on the principle of cooperatives as well as the people's economic movement, which is based on the principle of kinship. Another definition says that a cooperative is a society of people, usually of limited economic capacity, through a form of democratically controlled corporate organization, each contributing equally to the required capital, and willing to assume the risk and receive reward with the effort that they do it.

The values that exist in the Shari'ah of Islam should have become the basis and part of the life of most of Indonesia's population. Likewise with the cooperatives that serve as a tool democratization of the economy and as a pillar of the national economy. Because in the Islamic Shari'ah there are elements that are closely related to the business of cooperatives.

As has been mentioned in the sense of cooperatives above, the main purpose of establishing a cooperative is to improve the economic welfare of its members. However, since in the struggle for the welfare of its members, cooperatives adhere to certain principles and principles, cooperative activities are expected to help improve the economic welfare of society as a whole.

B. Method

This research uses a qualitative approach with descriptive research type and case study, which describes the state of the object and the problem is not intended to take or draw a generally accepted conclusion (Arikunto, 1998: 80). This study aims to describe what is currently applicable. In it there are efforts to describe, record, analyze and interpret the conditions that are currently happening (Mardalis, 2003: 26). According to Max Field, in Nazir (1999: 66), case studies or case studies are research on the subject of research relating to a specific, phase or focus of the whole personality. The type of research used is case study research in which the researcher focuses only on one case in accordance with the title under study. This approach requires a deeper and more flexible way of exploring data, especially as it relates to constructivist approaches. Therefore, this research uses a qualitative, phenomenological and descriptive approach.

This research method using descriptive qualitative approach because of qualitative research according to Bogdan and Taylor, is as a research procedure that produce descriptive data in the form of words written or oral from the people or behavior that can be observed. It is called descriptive because the researcher conducting the research is not intended to be a certain hypothesis but only describes "as is" about a variable, a symptom and also a state.

This study uses descriptive data analysis techniques obtained through qualitative approaches, where the data have been generated from research and study, both theoretically and empirically depicted through words or sentences correctly and clearly.

Analysis

Performance of Each Business Unit

Through various tests and forging is one of the pioneers of the establishment of Shari'ah cooperatives in East Lombok regency. Over the last few years, of course, cooperatives have experienced various improvements and even setbacks. Both in terms of consumers and in terms of management own cooperatives. Therefore, researchers try to explain how the performance of each business unit run by the cooperative. Here is the performance / workings of each business unit:

a. Mudharabah Daily Savings

This product as a tomorrow's deposit withdrawal can be at any time if the customer need it. With a ratio of 30:70 (30% for customers and 70% for cooperatives) from the allocation of profits earned for 1 month. This deposit is the right step to invest or deposit according to syari'ah, by way of work: (a) using Mudharabah principle, (b) profit sharing is received every month, (c) minimum Rp. 500,000, and (d) can be renewed automatically.

b. Time Deposits

Deposits qurban, ie deposits made by nasaba h with intention berqurban. In this case the deposit money should not be taken in accordance with the time plan that has reached Rp. 500.000, -. Nisbah 55:45 (55% for customers and 45% for cooperatives). This deposit is designed for customers who want to berqurban Eid al-Adha, with the work system as follows: (a) Using the principle Mudharabah Mutlaqah, (b) Share received every month, (c) first deposit Rp.50.000, - then at least Rp. 5,000, and (d) Can be paid to or directly to the place of business / home customers.

Deposits of education to prepare the cost requirements during education. With aqad minimum balance of Rp. 500.000, - funds should not be taken before maturity 3, 6 or 12 months. Nisbah 50:50 (50% for customer and 50% for cooperative). Deposits are designed to assist the design of future child education, with the system working as follows: (a) The period can be adjusted to the plan, (b) The amount of savings can also be adjusted to the needs, (c) Using the principle Mudharabah Mutlaqah, d) Profit sharing is received every month, and (e) Can be paid directly or visited to the place of business / home customers.

c. Mudharabah Deposit

Deposits from customers in the form of time deposits and should not be taken before maturity. With a minimum deposit of Rp. 500.000, -. The ratio between customer and co-operative is given based on the length of the deposit. Duration of 3 months by 50%: 50%, 6 months by 40%: 60%, 12 months at 65%: 35%. Here are the ways Account opening for customers who use the deposit service as described above. 1) fill out the membership form, 2) fill out the Account opening form, 3) submit a copy of ID (KTP / SIM / Family Card), and 4) submit the initial deposit in accordance with the desired deposit.

As for financing products that are run are as follows, namely:

a. Murabahah Financing

Financing by the principle of buying and selling of goods at the original price with an additional agreed profit is called profit or profit margin. With the cooperative as the seller and the customer as the buyer. Payments can be made in installments in accordance with mutual agreement. The installment system is the principal installment plus profit margin adjusted to the term of payment.

b. Mudharabah Financing

Financing by profit sharing principle in accordance with the agreed ratio between institution and customer. The profit sharing is given monthly by the customer to the cooperative. The system of return on capital at once with a period of 4 months.

c. Musyarakah Financing

Financing with the principle of profit sharing which portion is adjusted to the portion of equity participation. The payback system is the principal installment

plus the profit share. The revenue share decreases according to the principal paid. Duration of 12 or 24 months.

Executed Strategies in Developing Business Units

Implementation strategy is the management of various organizational and management equipment that direct and control the utilization of company power suber through strategy chosen by management. The choice of strategy should be tailored to the following criteria: (a) The strategy should be responsive to the external environment, (b) The strategy involves the advantages of a competitive coop, (c) The strategy aligns with other strategies within the organization, (d) The strategy provides the right flexibility to business and organization, (e) Strategy must be in accordance with the organization's mission and long-term corporate objectives, and (f) Organizational strategy is deemed feasible. Looking at the strategies that the cooperative execute the strategies employed in developing their business tend to be the kind of intensive growth strategy.

C. Conclusion

Cooperative business unit in its performance enough to affect the income of cooperatives. Because the performance continues to increase from year to year. This can be seen in the comparison of the number of customers between 2016 and 2017. In addition, in terms of financial also experienced a significant increase. Strategies in developing a business unit of strategies run cooperatives, strategies used in developing a business tend to type of intensive growth strategy. In this strategy cooperative management must first assess whether there is an opportunity to improve the performance of existing business.

D. References

Arifin Sitio, Halomoan Tamba, 2000, *Koperasi: Teori dan Praktik* , Erlangga, Jakarta.

Handoko T. Hani, 1998, *Manajemen (Edisi Kedua),* BPFE-Yogyaarta, Yogyakarta.

Hitt, Michail A. Ireland, R Duane dan Horkisson Robert E, 1997, *Manajemen Strategi Menyongsong Era Persaingan dan Globalisasi,* Erlangga, Jakarta.

Jauch, Lawrence R. Glueck William F, 1990, *Manajemen Strategis dan KebijakanPerusahaan,(Edisi Ketiga),* Erlangga, Jakarta.

Kotler Philip, 1997, *Manajemen Pemasaran (Analisis Perencanaan, Implementasi dan Kontrol).* PT. Prenhallindo, Jakarta.

Kusnadi, Agustina Hanafi, 1999, *Pengantar Manajemen Strategi*, UniversitasBrawijaya, Malang.

Moleong, Lexy, 2002. *Metode Penelitian Kualitatif*. Remaja Rosda Karya.Bandung.

Matthew B Miller, dkk. 1992, *Analisis Data Kualitatif.* UI Press. Jakarta.

Moedjiono Imam, 2002, *Kepemimpinan dan Keorganisasian,* UII Press,Yogyakarta.

Rangkuty, Fredy, 1997, *Analisis SWOT Teknik Membedah Kasus Bisnis*, Gramedia, Jakarta.

Revrisond Baswir, 2002, *Koperasi Indonesia* **,** BPFE-Yogyakarta, Yogyakarta.

Siagian P. Sondang, 2001, *Manajemen Strategik*, PT. Bumi Aksara, Jakarta.

Sugiono, 2004, *Metodologi Penelitian Bisnis*, Alfabeta, Bandung.

Suharsimi, Arikunto, 2002. *Prosedur Penelitian (Edisi Revisi)***.** Rineka Cipta. Jakarta.

Saladin, Djaslim, 1990, *Strategi dan Kebijakan Perusahaan*, Ganeca, Bandung.

Yusanto, M.I. dan M.K. Widjajakusuma, 2002, *Pengantar Manajemen Syari'at,* Khairul Bayaan, Jakarta.

The Effect of Probing-Prompting Methods on Student Learning Achievement in Economy Subjectyear X Senior High School (Sman) 01 Sakra Timur in East Lombok Regency School Year 2016/2017

Muhamad Ali
Hamzanwadi University
aliejoangs@gmail.com

Abstract

Teachers have a strategic role in learning, not only as a role modelbut also required to have a competence and ability in managing the learning so they can improve the learning outcomes as predetermined criteria. To achieve this, it requires a good learning method that actively engage the students in the learning process. One method that can be used to increase the student activity in learning is probing-promting method. In this study, researchers conducted research on the Effect of Probing-Promting Method on student achievement on the economic subjects year X at SMAN 01 Sakra Timur school year 2016/2017.

The purpose of this research is to know the Influence of Probing-Promting Method on student learning outcomes on the economic subjects year X at SMAN 01 Sakra Timur academic year 2016/2017 on cognitive aspect. This research is an experimental research. The design used in this research is post-test design with rendomized control group posttest design. Instruments used are standardized instruments through validity and reliability test, problem difficulty level and different problem power.

Based on the hypothesis test result conducted by using t test at significance level α = 5%, it is obtained that there is influence of the use of probing-prompting method toward student learning outcomes on the economic subjects year X at SMAN 01 Sakra Timur. This can be seen from $t_{counting} > t_{table}$ *that is equal to 6,136> 2.00 at significance level α = 5%. The average difference is 16.7 points*

Keywords*: learning outcomes, probing-promting method, economics*

A. Introduction

According to the Law Number 20 Year 2003 on the national education system, the definition of education is a conscious and planned effort to promote a learning atmosphere and the process of implementation of learning so that the learners are actively developing their potential to have spiritual power, religious, self-control , characters, intelligence, attitude, and skills needed, society, state and nation. Furthermore, in article 3 it is explained that one of the objectives of education is to

develop the potential of learners to become human who believe and pious to God the Almighty, noble, healthy, knowledgeable, creative, independent, and become democratic citizens and responsible to enrich the life of a nation.

To achieve the educational goals, the role of teachers as the spearhead of education in the field is very strategic in determining the success of education. Where in the learning process teachers not only as a role model for their students, but also responsible as a manager of learning (*manager of learning*) (Sanjaya, 2007). Especially, economic subject teachers must have a scientific competence in the field of economics, masteringa various methods and techniques of economic learning. Teachers should be able to create a good atmosphere of learning that can foster student learning interest by creating a comfortable and enjoyable learning environment so that the learning runs properly and effectively.

The ability of teachers in designing and implementing various strategies will affect the development of students in creating, growing self-reliance, responsibility and ability to solve the problems. Among the subjects taught so far, based on the observations results and interviews of teachers and students at Senior High School (SMAN) 01 Sakra Timur, it is obtained the information that economic subjects is considered as less attractive by students. In the learning process students tend to be passive, so the learning process looks less effective, consequently not all students could understand the material.

One effort to overcome the problems mentioedwas by applyinga various learning methods of probing-promting. Probing-Promting method is a learning method that is promoted by asking a series of questions to the students to guide the students based on their existing knowledge for depeloving a new knowledge (Sudarti, 2008).

In Probing-Promting method, the question and answer process is conducted by appointing students randomly to answer the questions raised, this will encourage students to prepare and engage more actively in the learning process where the value is not only seen based on the correct answer but also based on students participation in answering questions. Although at the beginning it will feel a bit stressful because it is new for the students, but it will also familiarize the students to become actively involved in every learning and discussion both inside and outside the classroom.

Compared to some other methods, some advantages of probing-promting method are; probing-promotping method teaches students to engage more actively and enthusiastically in the learning process, encourages students to think, improves student engagement, stimulates students to be more active in asking questions, diagnosing students' weaknesses, focusing more on one issue, and train students to speak well in expressing opinions in the classroom.

Based on the description, the researchers interested to examine the "Effect of probing-promting method on student learning outcomes on economic subjects at class X students in SMAN 01 East Sakra East Lombok Regency School Year 2016/2017"

a. Statement of the Problem

Whether the use of probing-promping method has a significant effect on the students' learning outcomes on economic subjects at class X in SMAN 01 Sakra Timur, East Lombok regency academic year 2016/2017 especially in the cognitive aspect"

b. Research Purposes

To know the influence of probing-promping method to the students learning outcomes on economic subjects in class X SMAN 01 Sakra Timur, East Lombok regency academic year 2016/207 on cognitive aspects.

c. Research Hyphothesis

The implementation of probing-promting method gives a significant effect on student learning outcomes on economic subjects in class X SMAN 01 East Sakra, East Lombok regency academic year 2016/2017 on cognitive aspects.

B. Review of The Literature

Probing-PromtingMethod in Learning

According Mulyana (2001), probing-promting is a learning technique promoted by asking a series of questions to guide (promting) students using existing knowledge to build new knowledge.

Key Elements in Probing-Promting Method

According to Lie (2007), a learning method can be called as a probing-promting method only if it has elements or tools in the form of means or actions to trigger the students' knowledge, observation activities, and question series elements to guide students in understanding the concept taught.

Learning Steps Using Probing-Promting Method

According to Sulaeman (2004), learning using probing-promting method contains the following steps: (1) expose students to new situations, for example by showing pictures, learning tools, objects, symptoms that can generate puzzles. (2) giving a time between (3-5 seconds) or depending on the needs so that students can make observations. (3) Asking questions according to the indicators or competencies that students want to achieve. (4) Provide a time around (2-4 seconds) to give students the opportunity to formulate the answer. (5) Asking a student to answer questions that have been asked. (6) If the answer given is correct or relevant to the question, proceed to another student. (7) Questions posed at stage 6 (six) should be submitted or

interrogated also to the other students so that all students could be involved in probing-promting activities. (8) Asking the final question to the student to confirm that the predefined basic competence has been achieved.

Learning Outcomes

According to Djaali and Muljono (2008), learning outcome is change appeared as a result of learning process including cognitive, sensory-mootoric, and dynamic-effective abilities. This is in line with what is delivered by Purwanto, (2008) Learning results refers to the two words that make up the "results" and "learning". Results are defined as products that show acquisition as a result of an activity or process in functional input changes, in which learning activities are undertaken to attempt to change behavior on the learning individual. And the change of behavior is viewed as the result of the learning process in accordance with the purpose of teaching. The purpose of teaching becomes the potential learning outcomes that will be attained at the end of learning activities

Meanwhile, Bloom as quoted by Anonymous (2007) learning outcomes can be divided into three domains, namely cognitive, affective and psychomotor.

C. Methodology

Research Plan

This research was experimental research, that is *true experimental*. The design used was the *control group posttest design*.

Population and Sample

The population in this study was the all students of year X in SMAN 01 Sakra Timur East Lombok which wasregistered in the even semester of academic year 2016/2017 with 215 students. Sampling technique in this research was using cluster random sampling technique. The process of determining the sample to determine the experimental class was done by drawing the existing classes, and in this study selected class X2 as the experimental class and the class X4 as the control class.

Research Variable

1. Independent variables in this study is learning by using the probing-promting method;
2. The dependent variable is students learning outcomes in each class of population after treatment is given.

Research Procedure

a. Research plan consisting of (a) preparing the research schedule, (b) determining the class sample, (c) creating the learning scenario in the form of the Lesson Plans (RPP) prepared with guidance on the curriculum for the economic subjects class

X at SMAN 01 Sakra East of East Lombok Regency, (d) Preparing the questions, (e) preparing the observation sheets, and (f) conducting test questions;

b. Implementation stage, the researcher teaches the experimental class by using probing-promting method, while the control class was not given any treatment and they were taught using conventional method but both class were using the same subject and material;
c. The final stage, at the end of learning process, the researcher conducted a post-test on the experimental class and control class using the same problem.

Research Instrument

The instrument used in this study consists of work sheets to assess the student learning outcomes on cognitive aspects.

Jenis data dan Teknik Pengumpulan Data

The data in this research is quantitative data. Technique of data collection wasconducted by post-test filled by the economic subject teacher of SMAN 01 Sakra Timur

Data Analysis Technique

To analyze the cognitive aspect in this research,the research was conducted by using objective test or multiple choice test. Furthermore, the data were analyzed using t-test and hypothesis test was preceded by normality test and homogeneity test.

D. Research Finding and Discussion

Validity and Test Result and Instrument Reliability

The instrument used in this research was multiple choice with five alternative answers consisting of 50 items. Based on validity test result , it was obtained 40 items of valid question, while 10 items categorised into invalid question category that was item number 5, 6,12, 16, 21, 23, 28, 31, 35, and 41. While the test result of reliability which was conducted by using Kurder and Ricardson-20 (KR-20) formula, it was obtained the value of $r_{counting}$was 0.754, while the value of r_{table} with 5% significance level was 0.355. Thus the instrument can be categorised as a reliable instrument.

Research Result

The average of students' learning outcomes on economic subjects in grade X SMAN 01 Sakra Timur in the experimental class was 70.5, while in the control class was only 53.8. These results indicate that the students' learning outcomes in the experimental class was higher than the student learning outcomes in the control class of 16.7 points.

Student learning outcomes on economic subjects at SMAN 01 Sakra Timur in the control class obtained an average value of 48.5% into the low category. This means that as many as 48.5% of SMAN 01 Sakra Timur students after attending learning

activities in the control class were students with low learning outcomes. While the results of student learning on economic subjects in the experimental class obtained an average value of 87.5% in the High category. This means that 87.5% of SMAN 01 Sakra Timur students who participated in experimental class learning activities get high scores on economic subjects.

Homogenity Test Result

The result of calculation is that the value of $F_{counting}$was 1.172. While the value of F_{table} of as 1.84. This means that F count <of F table (Population under investigation is homogeneous).

Data Normality Test Result

The normality test data results obtained X^2_h value, amounted to 3.46 smaller than X^2_t value at the confidence level of 5% (3.46 <7,815). This means that the measurement data result of the students' learning outcomes in economic subjects in the control class is normalized. The X^2h value, at 1.49 is smaller than X^2t at 5% confidence level of 7.82 (1.49 <7.82). This means that the data results of calculations in student learning outcomes on economic subjects of experimental class to normal distribution.

Hyphothesis Test Result

Based on the data analysis result obtained by t_{table} value ($\alpha = 5\%$) <$t_{counting}$ (2,00 <8,464). Thus, an alternative hypothesis (Ha) was accepted, or there is significant influence of probing-promting method to student learning outcomes in economic subjects at SMAN 01 Sakra Timur academic year 2016/2017 on cognitive aspect, it can be seen from the average learning result between experimental class using probing-promting method was 87.5% higher than the average learning result in the control class without probing-promting method that was 48.5%.

E. Conclusion

Based on the results of data analysis and discussion it is found that there is influence on the use of probing-promting method to the students' learning outcomes on economic subjects in SMAN 01 Sakra Timur Kabupaten Lombok Timur Lesson 2016/2017

F. References

Djaali dan Puji Muljono, 2008, *Pengukuran dalam Bidang Pendidikan.* Jakarta:Grasindo.

Lie, A., 2007, *Coorporate Learning: Mempraktekkan di Ruang-ruang Kelas*. Jakarta : Grafindo.

Mulyana, A.Z., 2001, *Rahasia Menjadi Guru Hebat.*Jakarta: Grasindo.

Mustaqim. (2008). Strategi *Belajar Mengajar*. Surakarta: Universitas Muhammadiyah Surakarta.

Sudarti, T. (*2008*). Perbandingan kemampuan penalaran adatif siswa smp anatarayang memperoleh pembelajaran matematika melalui teknik probingdengan metode ekspositori. *Tidak diterbitkan*. Bandung: JurusanPendidikan Matematika UPI.

Sanjaya. (2007). *Laporan Hasil Pembelajaran.* Jakarta: Rineka Cipta.

Purwanto.(2008). *Pisikologi Belajar.* Jakarta: Raja Gravindo Persada.

The Effects of Instructional Strategies and Science Process Skill on Biology Toward Students Achievementin

MTs Mu'Allimat NW Pancor

Nuraini
Hamzanwadi University
ainiur_1976@yaho.com

Abstract

This study was aiming at knowing the effects of Project Based Learning Strategy and Process Skill of Science on students' learning outcomes of the seventh graders of Mts Mu'allimat NW Pancor. Research method used in this study was quasi experiment with treatment by level 2x2. The population was the students of Madrasah Tsanawiyah, while the targeted population was all students of seventh grade in year 2016/2017 which consists of 6 classes. Four classes were selected randomly and each class consists of 30 students, which were administrated by Project Based Learning and Direct Learning. The data was analyzed using two ways ANOVA with a treatment by level 2 x 2. Result of this study showed that: (1) Biology learning outcomes of the students who were treated using Project Based Learning strategy was higher than those who were treated using Direct Learning Strategy; (2) there was an interaction effect between learning strategies and science process skill on the students' learning outcomes of science; (3) For students who have high process skill on science, when they were treated using Project Based Learning the outcome was higher than those who were treated using Direct learning Strategy; (4)Biology Learning Outcomesof the students whoweretreatedwith Project Based Learning strategywas not lowerthanthosewhoweretreated by usingDirect Learning strategy for students whohavelowscience process skill.

Keywords:*students' achievement, instructional strategies, scienceprocess skill*

A. Introduction

Learning biology is still dominated by a behavioristic paradigm that considers knowledge as memorized facts and teachers as the main source of knowledge. In this paradigm, teacher does not attract the students to engage in the whole process of learning, studying collaboratively, group inquiry, not involving students in the planning of learning, not assessing the project, and not presenting the results of class discussions. Students' understanding towards a subject will be achieved, if the students themselves are actively engage during learning process. To change such situation, the change of paradigm especially the school paradigm is needed to shift the learning. A new paradigm of learning that needs to be developed by an educator in the field of science

is an educational learning that puts emphasis on the importance aspect of learning process.

When the students taught using memorizing technique, students might have less opportunity to learn the material directly in a meaningful learning through process skills and scientific attitudes. An engaged learning with a meaningful task is still perceived as a complex problem for teachers today although the learning activities can be conducted individually, competitively or cooperatively. Ausubel says:

> *Distinguised two types of learning, 1) rote Learnin, in which " learned materrials are discrete and relatively isolated entities which are only relatable to cognitive structure in an arbitrary, verbatim fashion not permitting the establishment of [sinificant] relationships" and 2) meaningful learning, which "takes place if the learning task can be related in a nonarbitrary, substantive fashion to what the learner already knows, and if the learner adopts a corresponding learning set to do so*".(Reigeluth, 1999: 53)

Learning bymemorizing techniques does not help students to acquire knowledge. While, learning can build an understanding of cognitive structure, learning process also must be meaningful for students to solve life problems. (Vygostsky in Yau Tung, 2015: 246) says that teachers should develop opportunities for pupils to interact with teachers, fellow students, and the environment to construct knowledge. This means that teachers have a big role in building students' understanding by putting more emphasis on student activeness and providing a meaningful learning.

The observation result shows that the development of science process skill both in learning process and evaluation of learning result is rarely promoted, consequently the students become unable to develop their skill in finding and connecting concept, especially on environmental pollution material. The observation results also show that most students encounter unpleasant experiences during biology learning, resulting a low student achievement index. This is caused by many factors such as students who are good in concept, the teacher does not involve students in the real life learning such as conducting experiments, not fully taught the students with appropriate strategies or approaches and varied, and the school environment or facilities and infrastructure are still inadequate, as well as low school discipline.

Biology learning is generally not easy for students to understand a complex concept and abstract, but if they are providedwith the real situations and conditions they will understand the material easily. The learning process is expected to give real life situations so it can provide a more meaningful learning experience

Based on the facts and conditions, one alternative to increase the student involvement in learning is by applying project-based learning. This emphasizes the interrelationship between concepts with daily life experience of students so they can relate the concept they already have with the new knowledge they will learn.

Based on the background of the problem the researcher formulated research problems as follows: (1) Are there any differences in in terms of learning outcomebetween students who are taught withProject based Learning Strategy to students who are taught using Direct learning strategy? (2) Is there any influence of interaction between learning strategy and (3) Are there differences in biology learning outcomes between students who are taught with a project-based learning strategy with students who are taught direct learning strategies, for students who have high science process skills, (4) Are there differences in biological learning outcomes between students who are taught by a project-based learning strategy with students who are taught by Direct learning strategies, for students who have low science process skills.

To achieve the goal in each activity, it always followed by measurement and assessment. Similarly, in learning process each activity needs to be measured to know the results, how far the learning objectives set has been achieved. To know whether the learning outcomes achieved, it can be known through an evaluation. Referring toSunal in Susanto which states that evaluation is the process of using information to make consideration of how effectively a program has met the needs of students (AkhmadSusanto, 2013; 5). Thus it can be interpreted that the evaluation is a tool used to determine the extent of the influence of the learning process that has been implemented to meet the students needs. Popham in Schunk says Assessment involves 'a formal effort to determine students' status with respect to educational variables of interest. (Schunk, 2012: 14) This means that assessment involves the process of gathering information related to important variables in decision making by a teacher to improve the learning outcomes side. Bloom's cognitive domains of learning: cognitive domains, affective domains, and psychomotor domain (Gagne, 2005: that is, Bloom classifies learning outcomes into three domains, ie cognitive, affective and psychomotor domains.) (Reigeluth, 2013: 15)

> *Intructional outcomes are the various effects that provide a measure of the velue of alternative methods under different condition. Outcome may be actual or desired. Actual outcomes are the3 real-life results for using specific methods under specific condition, Whereas desired outcome are goals, Which often Influence what methodes should be selected*

This means that learning outcomes is the effect of a learning strategy during a learning process. Thus, the more appropriate method or learning strategy used, the

better learning outcomes will be achieved. Learning outcomes can also interpret as the students' ability to obtain informationafter learning activities (Susanto, 2013: 60). It means that learning outcomes are skills and attitudes that students get after receiving the treatment given by teachers using various learning strategies to construct knowledge in everyday life. The development of science is not only characterized by a collection of facts, but also marked by the existence of "*scientific methods*" manifested through a series of "*scientific work*"(*scientific attitudes*), values and scientific attitudes". The nature of IPA (science) includes four element:

> (1) *product*: facts, principles, theory and law: (2) *process*: problem solving procedure through scientific method including observation, hypothesis preparation, experimental design, experiment, hypothesis testing through experiment; evaluation, measurement and conclusion; (3) *application*: application of scientific method or work and concept of IPA(sciences) in the daily life; (4) *attitude*: curiosity towards objects, natural phenomena, humans, and causality relationships that create new problems and could be solved through correct procedures; science is open ended. (Depdiknas, 2007: 8)

Gagne viewed learning as "a set of events embedded in purposeful activities that facilitate learning. (Gagne, 2005: 1) This means that learning is a series of activities that are intentionally created to promotea learning process. Project-Based Learning is a learning model that provides an opportunity for teachers to manage learning within the class through a project work. (Wena, 2009: 144) it means that learning process is regulated to invite students doing complex tasks that are challenging questions or problems taken from the topic discussed. Project Based learning give students more opportunity than the educators, wherestudents are brought closer to or introduced to the real working atmosphere that they actually encounter around their real environment. Meanwhile, according to Larmer*"Project-based learning is an instructional strategy that can enable you and your students to go beyond the content coverage and develop the deep understandings and success skills needed to thrive in today's complex world". (Larmer, 2015: 22-23).* Project-based learning is a learning approach that enable teachers and students to improve understanding and develop skills required to cope with the current knowledge. (Capraro, 2013: 50) says:

> *Project-Based Learning (PBL) is defined as a model for classroom activity that shifts away from the classroom practices of short, isolated teacher-centered lessons and instead emphasizes learning activities that are long-term, interdisciplinary, student-centered, and integrated with real-world issues and practices*

Project-based learning is defined as a change from teacher-centered learning to student-centered learning that can be integrated into a real life. Project-based learning has the greatest potential to make learning more engaging, meaningful to learners and encourage students to construct their personal knowledge and skills. According to (Howe and Jones,: 1000 argues that "*Direct instruction is the use of traditional method of lecture, demonstration, seat work, recitation, and feedback*." Similarly, (Arends, 2007: 99) stated that teachers could demonstrate and give examples towards some skills taught and give students time to practice those skills and receive feedback. It means that in direct learning the teacher should deliver the material or knowledge to the students, by providing models or examples, give the students to practice applying what they have already studied and provided feedback. (Joyce and Weil, 2009: 369) states:

> *the term of direct intructionhas been used by researchers to refer to a pattern of teaching that consists of the teacher's explaining a new concept or skill to students, having them test their understanding by practicing under theacher direction (that is, controlled practice), and encouraging them to continue to practice under teacher guidance (guided practice).*

Direct learning is learning begins with a teacher's explanation towards concepts or skills. Next the teacher is demanded to make learning design so that learning objectives can be achieved through learning experiences. It shows that the direct learning environment as a place where learning becomes the main focus and students engage in academic tasks that can increase student participation in learning during the activities to achieve the optimal learning outcomes. Direct learning demands and helps students to improve their learning outcomes.

The rapid development of science today produces many concepts that must be learned by studetnsthrough learning, while teachers are no longer possible to teach many concepts to students. Scientific process skills should be developed in students as a meaningful experience because in science learning, scientific skills and scientific attitude have an important role in finding the concept of science. Students can build new ideas when they are experiencing a real symptom. Building a new idea is not only depending on the characteristics of the object, but also on how the student understands an object or processes the imformation.

(Ango, 2002: 26-27) stated "*Process skills of science are basic and critical components of the process of conducting study of science under the guidance of a teacher"*. Means that the skill process of science is a basic and important component of the learning under the guidance of teachers during the learning process. (Howe and Jones, 1993: 130) suggests the basic science components process:

(1) *Observing. Using one or more of the five senses to notice characteristics*

of objects or events, (2) Communicating.Conveying information through language, pictures or other means of representation, (3) Classifying. Putting things into categories according to certain charactristics, (4) Measuring. Making quantitative observations by comparing things to one another or to a unit of measure, (5) Relating objects in space and time. Using the relationships of space and time in describing and comparing shapes, locations, motions, and patterns.

Meanwhile, (Dimiyati, 2009: 139) stated thatthe interaction between development process skills with facts, concepts, and science principles will eventually develop the attitude and value of scientists in students.

According to (Rustaman, 2007: 19-22) The types of science process skills are:

(1) Observation skill(2) skill to observe (interpretation), (3) classification skills, (4) predicting skills, (5) communication skills, (6) skills to formulate hypotheses , 7) skill of planning experiment, 8) applying concept skill, 9) skill of formulating question,

Scientific process skills are an intellectual skill used to understand any phenomenon, where these skills are required to acquire, develop and apply concepts, law principles and science theories science

B. Method

The research method used in this research is quasi experimental method. Both groups are treated differently from project-based learning strategy as exsperimen group while direct learning strategy as control group. Variable in this research is learning strategy that is; Project-based learning and direct learning as independent variables, Process skills as attribute variables and biological learning outcomes as a dependent variable. The research design used in this study is design treatment by level 2 x 2. Target population in this study is all students MtsMu'allimat NW Pancor with the number of 560 people, while the affordable population in this study are all students of class VII which amounted to 170 people. The sampling technique was done by random sampling. By selecting four classes of six classes of students of class VII, to specify the individual to be given the first treatment and the second treatment (control); Of the four classes of 120 students, two classes of 60 students were selected as experimental groups and treated with a project-based learning strategy and two classes of 60 people as control groups and treated with direct learning strategies.

All students from the experimental group and the control group were given a test instrument to identify students with high science process skills and low science process skills. Furthermore, it is determined that the group of students who have high science process skills and students who have low science skills. Determination of the

group of students is done by taking 33% or 1/3 upper limit score of 60 students to determine the group of students with high science process skills and 33% or 1/3 lower limit score of 60 students to determine the group of students with the skills of the process of science low.

Data analysis used in this research include descriptive analysis and differential analysis. Descriptive analysis is proposed to get a clear picture of the data that has been collected in the study. Descriptive analysis presented includes average, standard deviation, and variance. To illustrate the data that has been collected, the data are presented in the frequency distribution and histogram lists for the two data sets. Prior to hypothesis testing, it is necessary to test the requirements of data analysis include data normality test and test of data homogeneity. Normality test is used to determine whether the study sample is taken from normal population or not. Normality test is done by using Lilliefors Test for all sample groups with significance level of 5% (Kadir, 2010: 107) Conclusion determined by criterion if $L_0 > L_{able}$, H_0 is rejected and if $L_0 < L_{able}$, $H_0$is accepted for significance 5% .. Homogeneity test done by using Bartlett Test with Testing criteria is H_0accepted if count <tabelpada 5% significance level. To test the hypothesis in this research, it is used Two Ways Anava test (Gall, 2007; 318) with treatment design by level 2 x 2 and tested further by using t-*Dunne* test (Kadir, 2010: 221)

C. Finding and Discussion

In accordance to the research design used in this study *treatment by level* 2 x 2, there are eight groups of data that will be described as follows. In accordance with the design in this study is the design *treatment by level* 2 x 2, then the hypothesis that has been formulated in this study is tested by using two ways Anava.

The results of calculations with anava presented as in the table below.

Tabel 1Summary of two ways Anava

Learning Outcomes of Biology Students

Source ofvarians	JK	db	RJK	$F_{counting}$	F_{table}
					α=0.05
Between A	189,11	1	189,11	19,379	3,97
Between B	214,51	1	214,51	21,982	3,97
InteractionAxB	391,61	1	391,61	40,130	3,97
Inside	741,65	76	9,76		
Total	1536,89	79			

Berdasarkanhasilanalisispadatabeldiatas,dapatdisimpulkansebagaiberikut based on the analysis result, it can be concluded as followed:

1. **The differences outcomes in teaching Biology using Project Based Learning strategies and Direct Learning Strategies**

Based on the calculation of two ways anova obtained $F_{counting}$ = 19.379 and F_t (0.05; 1/76) = 3.97. Because $F_{counting} > F_{table}$ then H_0 is rejected. So it can be concluded that the results of learning Biology of students who are taught using Project-Based learning is higher than the results of learning Biology with Direct learning strategy.

2. **The influence of interaction between learning strategy and science process skill to the result of Biology learning.**

Based on calculation result of two waysanava obtained $F_{counting}$ = 40,130 and Ft (0,05; 1/76) = 3,97. Because $F_{counting} > F_{table}$then H0 is rejected. So it can be concluded that there is influence of interaction between learning strategy and science process skill result inlearning Biology. Based on testing on the second hypothesis, there is an interaction between learning strategy and science process skill to Biology learning result hence need to do further test by using t-Dunnet test. Here is presented summary of calculation for further test.

Table2.
Summary Result of Further Test Using t-*Dunnet*

GROUP	$t_{counting}$	t_{table}	H1	Decision
A1B1 - A2B1	7,591	1,725	A1B1 > A2B1	Ho is rejected
A1B2 - A2B2	-1,64	-1,725	A1B2 < A2B2	Ho is accepted

Based on the test result, it can be concluded that :

3. **The differences in learning outcomes towards Biology students who are taught by using Project Based Learning Strategy and students who are taught with Direct learning strategies for the students who have high science process skills.**

Based on the results of further test calculation as in the table 4.14 obtained t counting = 7,591 and t (0.05; 20) = 1.725. Because $t_{counting}$ = 7,591> t_{table} = 1.725 then H_0 is rejected. So it can be concluded that the Biology learning outcomes that follow the Project Based Learning Strategy is higher than the Biology learning result following the Direct Learning Strategy, for students who have high science process skills. Based on table 2, for students who have high scientific process skills, the average of Biology

learning outcomes that are taught with Project Based Learning Strategy is 33.55 and which is taught by Direct Learning Strategy of 26.05. Thus, the learning outcomes of Biology that are taught by Project Based learning is higher than that of Biology learning which is spent by Direct Learning for students with high science process skills.

4. **Thedifferences of learning outcomes in students Biology who are taught by Project Based Learning Strategy and students who are taught with Direct Learning strategy for students who have low science process skills.**

Results of analysis as shown in Table 4:14 obtained $t_{counting} = -1.64$ and t (0.05; 20) = -1.725. Because $t_{counting} > t_{table}$ then $H_o$is accepted. Thus it can be concluded that the learning outcomes of Biology that are taught using Project Based learning is not lower than the result which is taught using Direct Learning for students who have low science process skills.

Based on the data obtained, the average outcomes in leaning Biology with Project Based was obtained 25.85 while, Direct Learning Strategy was 27.20, for students with low science process skills. Although the results with Project-Based learning are smaller than Direct learning strategy for students with low science process skills, the differences are not statistically significant.

Based on the analysis results the researcher will discuss the results of hypothesis testing based on theory and / or relevant research results to describe whether the research results obtained to support the theory or not to a relevant research.

Firstly, the first hypothesis testing shows that the learning outcomes of students who are taught usingProject Based learning is higher than the those who is taught using Direct learning strategy. (Gaer in Wena, 2014: 145) explains that Project-Based Learning is potentially large enough to make learning experience more interesting and meaningful. It means that in the project-based learning strategy students are given the opportunity to utilize their surrounding environment as a learning experience to facilitate their understanding and learning becomes more interesting and meaningful. (Capraro, 2013: 50) said that project-based learning is defined as a change from teacher-centered learning to a student-centered learning that can be integrated into a real life situation. Based on the above theory, a form learning that enables the students to be more actively collaborative in learning activities is Based on Project-Based Learning because students are given the opportunity to gain an integrated learning experience practicallytherefore; learning process becomes the students centered learning.

(Arends, 2007: 99) argue that direct learning requires teachers to demonstrate and model examples of the skills taught and give students time to practice the skills and receive feedback. It can be interpreted that in the direct learning the role of teachers is

more dominant therfore a teacher is required to be more attractive for students. So, the result of biology study with Project Based learning is higher than Direct learning.

Secondly, the result of the second hypothesis testing shows that there is an interaction effect between learning strategy and science process skill to Biology learning result. Scientific process skills should be developed as a meaningful experience for the students. Because in scientific learning, scientific skills and scientific attitude have an important role in finding the concept of science. Students can build new ideas when they are experiencing a symptom. Building a new idea is not only depending on the characteristics of the object, but also on how the student understands an object or processes the imformation. Scientific process skills can be developed through scientific inquiry activities that can provide an opportunity for a person to practice their intellectual skills and stimulate his curiosity in obtaining and processing the information to encourage students' become more productive. Teachers also have an important role in helping students to develop science processing skills through the implementation of strategies, learning that helps students to learn more actively.

Learning is an activity undertaken by students to make behavior change through experience. Learning can also regarded as a process of assimilating and connecting the actual knowledge they already have with the new knowledge they are learning so that they have the opportunity to construct their own knowledge and understanding through that experience. In developing these thoughts students need the skills so they can easily find new knowledge. Learning strategy and science process skill are factors that influence student's learning outcomes. So there is an intraction between learning strategies and science process skills to biological learning outcomes.

Thirdly, the third hypothesis testing shows that the learning outcomes for students who are taught using Project Based learning strategy is higher than those who are taught using Direct learning strategy, especially for students who have high science process skill.

Based on the opinion (Reigeluth, 2013: 15) that learning outcomes is the influence of a learning strategy that has been learned in the learning process, the more learning strategy used, the better result achieved. It means that the learning process implemented with the right strategy or in line with the context can support the achievement learning outcomes. (Putra, 2003: 57) argues that in science process skills students are trained to be skillful in obtaining and processing information through thinking activities by following scientific procedures such as skillful observation, measurement, classification, conclusions and communication of findings. This means that the process of science skills is a skill to acquire, develop and apply concepts, principles and theories in a real life to find a new knowledge. Students' science process

skills need to be developed through the educational process. Scientific process skills determine the students ability to achieve their success in the learning process. It means that the learning outcomes with Project-Based learning strategy is higher than student outcomes with direct learning strategies for students who have high scientific process skills

Fourthly, in the fourth hypothesis testing Ho was accepted. This indicates that for students who have low science process skills, students' learning outcomes with a Project Based learning strategy are not lower than the result, which is taught with Direct learning strategy. As explained in Chapter II that Project Based Learning is a student-centered, innovative learning, while direct learning is essentially teacher-centered learning so that teachers must be active in learning. Thus, the learning result with Project-Based learning is lower than the results of learning that with direct learning. According to researcher, Ho was accepted sincesome intended indicator is not completely achieved in learning. In addition, the sample size is also possible to be the reason for Ho to be accepted in this study therefore; a larger sample size is needed. Researchers realize that there were some limitations that can affect the condition of research conducted, to complete this research is relatively too short, in addition researchers only examine the results of learning based on learning strategies and skills within the scientific process, limited subjects which was only 120 people, therefore a larger subjects subject needs so it can be generalized widely.

D. Conclusion and Suggestion

Based on the results of research and discussion described, the conclusion can be drawn as follows: (1) Learning outcomes for students who are taught using a Project Based Learning is higher than those who were taught with Direct learning strategy. (2) There was influence between learning strategies and science process skills on Biology students outcomes. (3) Learning result that is taught using Project Based Learning strategy is higher than which is taught by Direct learning strategy, for students who have high science process skill, (4) Learning result of student with Project-based learning is not lower than those who with Direct learning strategy, especially for students with low science process skills.

Based on the conclusion, it is recommended as follows: (1) Project Based Learning Strategy has different characteristics with Direct Learning. Project-Based Learning Strategies make student become more active than Direct learning, either individually or in groups. Therefore, it is expected that the teachers should apply the project based learning, (2) the teachers are expected to choose the right strategy and able to develop the students' science process skill to improve student learning outcomes, (3) teachers are required to encourage and facilitate each activity to develop

students' science process skills, (4) Teachers need to pay more attention to the skills of science processes owned by students so that learning becomes meaningful.

E. References

Ahmad Susanto, *Teori belajar dan Pembelajaran*: Kencana, 2013.

Anderson, Orin W., dan Krathwohl David R, *A Taxsonomy for Learning, Taching and Assesing; A Revision of Bloom"s Taxsonomy of Educational Objectives*, New York: Longman, Inc, 2001

Ann C. How dan Linda Jones, *Engaging Children in Science*, New York ; Marcimilan Publishing Company, 1993

Arends, Richard I. *Learning to Teach*, New York, Mc Graw Hill Companies Inc, 2007

Ango, Mary, *Mastery of Science Process Skills and Their Effective Use in theTeaching of Science*:International Journal of Educology, Vol.16 (10), 2002

Anthony, Nitco J. *Educational Assessment of Students*, New Jersey : Prentice Hall, Inc, 2001

Budiyono, *Metodologi PenelitianPendidikan*, Surakarta: SebelasMaret University Press, 2003

Burden R. Paul , *Methods For Effective Teaching,* New York : Pearson Education, 2016

Ceswell, *Educational Research, Planning, Conducting, and Evaluating Quantitative and Qualitative*, New Jersey: Pearson Merril Prentice Hall, 2008

Dimiyati, *Belajar dan Pembelajaran*, Jakarta : PT. Rineka Cipta, 2009

D.Gall, Meredith.,et al. *Educational Research* Boston: Pearson Education, 2007

Djohar Maknun, *Praktikum Ekologi Berbasis Proyek: Media Pembekalan Keterampil an Esensial Laboratorium* (Jurnal Pendidikan MIPA, Vol.13 (1), Universitas Lampung, 2012

Eggen, Paul dan Kauchak Don, *Strategi dan Model Pembelajaran,* Terjemahan Satrio Wahono: PT Indeks, 2012

Geoffrey Maryk, David De Matto and David Festinger, *Essentials of Research* Design *and Methodology,* New Jersey: John Wiley and Sons.Inc, 2005

George H. Fried, George J. *Hadamenos,* Biologi Edisi Kedua*,* Jakarta: Erlangga, 2005

Gronlund E. N. *Constructing Achievement Test*, Second Edition London: Prentice Hall, Inc, Englewood Cliffs, 2003

Gulo, Strategi *Belajar mengajar,* Jakarta : Grasindo, 2002

Hadamenos*,* Fried, *Biologi,* Edisi Kedua*,* Jakarta: Erlangga, 2005

Harianto Suyono, *Belajar dan Pembelajaran*, Bandung: PT Remaja Rosdakarya, 2011

Hosnan, *Pendekatan Saintifik dan Kontekstual Dalam Pembelajaran Abad 21,* Bogor: Ghalia Indonesia, 2014

James Schreiber, Kimberly Asner-Self, *Educational Research*, Canada : John Wiley

and Sons, Inc, 2011

Joyce, Weil and Calhoun, *Models of Teaching,* 8th edition, Boston: Pearson Education, Inc.,2009

Kadir, *Statistika untuk Penelitian Ilmu Ilmu Sosial*, Jakarta: Rosemata Sampurna, 2010

Kardi, Nur. *Pengajaran Langsung*, Surabaya: Pusat Data Sains dan Matematika Sekolah P rogram Pasca Sarjana UNESA, 2000

L.R. Gay, Geffrey E. Mills dan Peter Airasian, *Educational Research*, Boston, Pearson Education, Inc, 2012

Mahanal,*Pengaruh Pembelajaran Project Based Learning (PjBL) pada Materi Ekosistem terhadap Sikap dan Hasil Belajar Siswa SMAN 2 Malang,* Jurnal Bioedukasi, Vol 1(1), 2010

Margaret E. Gredler, *Learning and Instruction Thery into Practice, London: Pearson, 2009*

M. Hosnan, *Pendekatan Saintifik dan Kontekstual dalam Pembelajaran Abad 21*, Bogor: Ghalia Indonesia, 2014

Mulyani, *Pengaruh Pembelajaran Berbasis Proyek Terhadap Penguasaan Konsep Dan Keterampilan Proses Sains Siswa SMA Kelas X Pada Materi Keanekaragaman Tumbuhan Biji*.Prosiding Mathematics and Sciences Forum 2014

Oliver,Paul, *Understanding the Research Process* ,London: Sage Publication, 2010

OzerdanOzkan, "*The Effect of Project Based Learning Method on Science Process Skills of Prospective Teachers of Science Education in Biology Lessons"* Journal of Educational Sciences, Vol 5(3), 2013

Reigeluth, Charles M, *Instructional-Design Theories and Models*, London: Lawrence Erlbaum Associates, Publishers, 2013

Rustaman Nuryani, *Strategi Pembelajaran Biologi* , Jakarta : Universitas Terbuka, 2007

Semiawan, Conny. *Pendekatan Keterampilan Proses*, Jakarata: Gramedia, 2002

Sitiatava Rizema Putra, *Desain Belajar Mengajar Kreatif Berbasis Sains*, Jogjakarta : Dipa Press, 2013

Sugiyono, *Statistika untuk Penelitian*, Bandung : Alfabeta, 2011

Syaiful Bahri, Djamarah, *Psikologi Belajar*, Jakarta : PT Rineka Cipta, 2002

Wina Sanjaya, *Strateg pembelajaran berorientasi standar proses pendidikan*, Jakarta : Media Prenada, 2008

Tawil dan Liliasari, *Ketrampilan Ketrampilan Sains dan Implementasinya dalam pembelajaran IPA*, Makasar : Unhas, 2014

Tiantong, *The Project Based Learning Model on Student's Multiple Intelligenc* Journa l of Humanities and Social Science Vol. 3(7),2013

Trianto. *Model Pembelajaran Terpadu. Surabaya: Bumi Aksara, 2010*

Uno B Hamzah, *Variabel Penelitian dalam Pendidikan dan Pembelajaran*, Jakarta : PT Ina Publikatama, 2014

The Effect of Problem Based Learning (PBL) Toward Student'S Critical Thinking Ability for The Tenth Graders of MA. Mt. Mamben Lauk in The School Year 2016/ 2017 by Lesson Study Form

Nurul Fajri
HamzanwadiUniversity
nurulfajri_azizi@yahoo.co.id

Abstract

The purposed of this study was to knowthe Effect of Problem Based Learning(PBL) toward Student's Critical Thinking Ability for the Tenth Graders of MA. MT. MambenLauk in the School Year 2016/ 2017 byLesson Study Form.A kind of this study wasQuasyEksperimental Designin the form ofPre-Test Post-Test Control Group Design. Subject of this research wasTenth Graders of MA. MT. MambenLauk. This research was done for once meeting. Instrument of this research was critical thinking test in the form of essay that consisted of 7 questions. Based on the data analysis gain average ofpost-testin experiment class was 80, 8 and control class was 59, 5, while hypothesis testing used statistic analysis t-test on significance level 5% gain $t_{count}$was 6, 11. After compared with t_{table} (2, 045), so t_{count} (6, 11) >t_{table} (2, 045) so could be concluded that there was the Effect of Problem Based Learning(PBL) toward Student's Critical Thinking Ability for the Tenth Graders of MA. MT. MambenLauk in the School Year 2016/ 2017 byLesson Study Form.

Keywords: *problem based learning (pbl), critical thinking ability, lesson study*

A. Introduction

Education is essentially a process of quality of life ripening. Through the process, it is hoped that people can understand what the meaning and the nature of life is, and what and how to carry out the task of life and life properly. In a basic sense, education is the process of becoming, ie, making a person become himself that grows in line with the talent, character, ability, and conscience intact (Mulyasana, 2011: 2).

The purpose of Indonesia's development in the field of education still requires quality improvement, then one effort can be done to improve the quality of education by improving the components of the school. In this case, the educator (Teacher) must have the desire to always improve and look for teaching methods that are appropriate to the situation, conditions, and learning objectives. Teachers are in charge of teaching in the classroom. He teaches students to understand well all the knowledge that has been presented. In addition he also tried to change the attitude, skills, habits, social relationships through the teaching he gave. To achieve these goals the teacher needs to understand as deeply as the knowledge that will be his responsibility and master the teaching methods and techniques (Hamalik, 2001: 124).

Biology as one of the subjects taught at high school level (high school) majoring in IPA contains many concepts that must be mastered by students so that biology lessons among students of class X is still considered as a collection of concepts that must be memorized ahirnya impact on the ability of thinking and learning outcomes students. Biology in addition to emphasize the aspects of remembering knowledge, and understanding, but also emphasizes the aspects of application, analysis, evaluation and creativity, so that students can train the ability to think and solve problems and application of concepts in everyday life.

One of the thinking skills that needs to be developed is the ability to think critically. The ability to think critically trains students to make decisions from various points of view carefully, thoroughly, and logically. If students' thinking ability is developed in the students themselves, it will form intelligent human resources in thinking and critically in solving problems, therefore learning in schools should train students to explore skills and skills in searching, processing and assessing various information critically.

The result of observation and interview in MA. MT. Mamben Lauk, which was held on Tuesday, February 07, 2017, it is known that the learning process applied in schools has not been able to facilitate students in terms of high-level thinking skills, namely the ability to think critically. The lack of students' critical thinking skills in schools is characterized by a lack of student activity in the classroom during the biology learning process. This is seen from the rarity of students issuing ideas / ideas. Conventional methods rarely provide high-level questions or tasks such as solving problems, especially in terms of critical thinking skills. Generally given the Student Worksheet (LKS) which is cognitive (hapalan / mematan). Besides, the average value of the students' learning result completeness is 57% with KKM 70%.

One of the learning models that can construct student's knowledge is the application of Problem Based Learning (PBL) learning model with Lesson Study (LS) pattern. Problem Based Learning is one way of teaching by exposing students to a problem to be solved or resolved. Through the application of this learning model, activity in learning is more dominated by student activities (student center). While the teacher as a facilitator, mediator, motivator, and empathetic listener.

Lesson Study (LS) is a collaboration between several teachers to plan, conduct and evaluate together sustainable learning activities to get good problem solving results in learning.Lesson Study (LS) also provides an ability for teachers to develop how to teach well that can be seen at the planning stage or in the learning process takes place and build good cooperation among all teachers in learning how to membelajarkan students (Yuliana, 2015: 354).

Based on the above description, the purpose of this study is to determine the effect of application of Problem Based Learning Model (PBL) on Critical Thinking

Ability in grade X students MA.MT. Mamben Lauk Lesson Year 2016/2017 through Pattern Lesson Study (LS).

B. Research Methods

Types of research

The type of research used in this study is quasi experiment. The design form of Quasi Experimental used in this research is pre-test post-test Control Group.

Subject of Research

Subjects in this study were students of class X MA.MT. Mamben Lauk Lesson Year 2016/2017.

Plan Research Implementation with Lesson Study Pattern (LS)

T his LS activity was conducted in both classes, namely experimental class and control class, which distinguishes it is the treatment given at the learning that is in the experimental class using PBL learning model, while in the control class using conventional model. Implementation of LS is done in one cycle through stages plan, do, and see.

Instrument Research

The instrument in this study is a critical thinking test of 8 students consisting of indicators: (1) giving a simple explanation (elementary clarification); (2) Building basic skills; (3) Making inferring; (4) Making further explanation (advanced clarification); (5) Setting strategies and tactics (strategies and tactics).

Techniques of Collection and Analysis data

Techniques of data collection of students' thinking ability krtis done by providing critical thinking skills before and after learning both in the experimental and control classes. While the data analysis techniques using quantitative descriptive analysis with hypothesis test using t-test analysis.

C. Results and Discussion

Overall implementation of learning with LS pattern goes well. Each of the LS stages goes according to the design that has been made by the LS Team, both in the experimental class and in the control class. The result of learning implementation with LS pattern can be seen in Table 1 below.

Table 1.Stamp of Lesson Study (LS) implementation in the experiment and control class

No.	Activities	Stages	Day, Date and Place	Information	Observer

1.	*Open Class* (Eksperimen)	Plan	Rabu, 15 Maret 2017; MA. MT. Mamben Lauk	- Define the material ie environmental pollution - Model of learning "Problem Based Learning" - Create Lesson Design	• Komala Sari • Sumiyati • Vina Sari Ratna Hakim • Zulfa Khairunisa (moderator) • Darwilin Mufidatul Hasanah
		Do	Rabu, 10 Mei 2017; MA. MT. Mamben Lauk	Lessons are implemented in accordance with Lesson Design • Student looks active • There are some students who are less active • Learning objectives are achieved	
		See	Rabu, 10 Mei 2017; MA. MT. Mamben Lauk	students who are less active are given more attention • There are students who dominate namely Adi Surya and Rohmi, Rahman Hidayat. • teacher model exceeds a few minutes of specified time	
2	*Open Class* (Kontrol)	Plan	Rabu, 10 Mei 2017; MA. MT. Mamben Lauk	Establish material "environmental pollution • The "conventional" teaching model " • Create Lesson Design	

do	Selasa, 16 Mei 2017; MA. MT. Mamben Lauk	Some students are active and motivated to learn • Some students are less active
see	Selasa, 16 Mei 2017; MA. MT. Mamben Lauk	Handrian Saputra, Haimi, and Alicia Ananda looked dreamy and lazy • learning seems boring

Based on Table 1 above, it can be seen that the implementation of learning with the LS pattern in the experimental class and control class obtained almost the same results, especially related to the students' activity in the classroom. This can be seen from the observation by the observer related to the learning process, that in both classes (experiment and control) found active students and some are less active. Ningsih (2013) states that, LS Implemtation on learning of numerical method with cooperative learning approach can increase learning motivation and student learning result of Mathematics Education Program. Lesson study is an activity of learning assessment conducted by a group of teachers / lecturers in a collaborative and continuous way to test and improve the effectiveness of learning (Garfield, 2006).

Unlike the case with the liveliness of students, students' critical thinking skills in the two classes are different. The students' critical thinking skills in the experimental and control classes can be seen in Table 2 below.

Table 2. Description of Pre-test value and Post-test of experimental class and control class

Class	**Mean**	
	Pre-test	*Post-test*
Eksperimen	49, 4	80, 8
Kontrol	49, 2	59, 5

Based on Table 2 above, it is known that there is difference of Post-test between experiment class and control class, where the average value of post-test in the experimental class is 80, 8. While the mean value of Post-test in the control class is 59 , 5. So it can be said that the critical thinking ability of the experimental class is higher

than the students in the control class. The value of critical thinking skills perindikator students will be described in Figure 1 below.

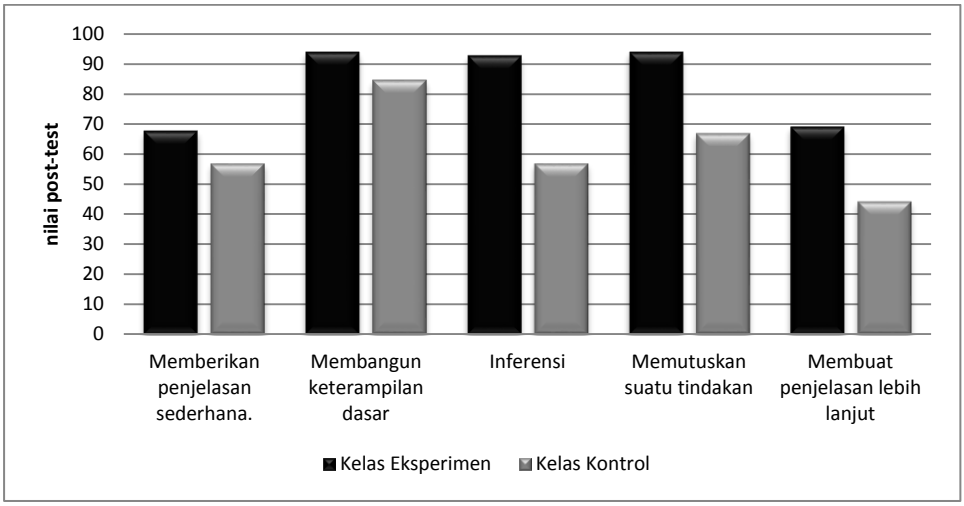


Figure 1 Description of Average Percent Post-Test Value in Class experiments and control classes

Based on Figure 1 above, it appears that the overall experiment class is superior to the control class on each critical thinking indicator. The mean results of students' critical thinking ability perindikator for experimental class and control class are as follows: indicator (Giving simple explanation) = 67,7, 56,9; (Building basic skills) = 93.8, 84.6; (Inference) = 92.7, 56.9; (Deciding an action) = 93, 8, 66.9; (Making further explanation) = 69.1, 44.3.

The result of the students' critical thinking ability analysis for each indicator in the experimental class and the constituent class is as follows The first critical thinking indicator is to give a simple explanation, for the experimental class the average value obtained is 67.7 while the control class is 56 , 9. Differences in value gains in the first indicator is due to students who are taught by Problem Based Learning Model tends to be more critical in finding out about the material taught in group discussion, this is because students who are taught by the model of Problem Based Leaning directly involved in defining and organizing learning tasks related to real issues related to environmental pollution material, so in providing a simple explanation the students in the experimental class get higher scores than the students in the control class who are only taught by conventional method .

The second critical thinking ability indicator is building the basic skill, for the experimental class the average value obtained is 93, 8 while the control class is 84, 6. The difference of value gain in the experimental and control class is caused by the students who are taught by model problem Based Learning has better skills with students who are only taught by conventional methods. For example, when teachers

give problems to students about how to handle waste into goods that have value selling as an effort to overcome environmental pollution, students in the experimental class meberikan various alternatives about the solution of the problem. This student's skill is based on the first phase of Problem Based Leraning model that is to orient learners to the problem, at this stage the teacher motivates the students in the process of solving real problems in daily life related to environmental pollution, so that the problem solving process has implications on the skill formation learners in solving problems and critical thinking as well as forming new knowledge.

Indicator of third critical thinking ability that is inference (conclude), for experimental class average value obtained by student that is 92,7, whereas in control class that is 56, 9. difference of mean value is caused by student which with model of Problem Based Leraning has an in-depth knowledge of the taught concept material, it is based on the Stage of Problem Based Learning model when collecting information both individual and group. At this stage students are encouraged to gather as much information as possible to obtain the clarity needed to solve problems related to environmental pollution material, so that students can give conclusions in accordance with the taught material concept. Whereas students who are taught by lecture method just listen only, so that the understanding of the concept material tends to be superficial and there is no curiosity to search deeper about the material of the concept being taught.

The fourth critical thinking ability indicator is to decide an action, for the experimental class the average value obtained is 93, 8, while in the control class that is 66, 9. The difference in the average value is due to the students who are taught by the model of Problem Based Learning has an understanding of the deeper conceptual material of the literature review as well as the various references that have been used, with this in-depth understanding of the students so knowing how to do and take action that conforms to the concept of the material being taught.

The fifth criterion of critical thinking ability is to make further explanation, for the experimental class the average score obtained is 69,1, while the control class is 44, 3. The difference of mean value is due to a deeper understanding of concept which is owned by students of the experimental class so that in giving further explanation the students who are taught by the Problem BasedLearning model have higher value than the control class.

The result of data analysis shows that students' critical thinking ability after applied learning with Problem Based Learning (PBL) model is higher than conventional learning (lecture). The existence of this influence may occur because each step in Problem Based Learning model (PBL) with Lesson Study (LS) pattern supports the development of students' critical thinking ability. The results of this study are in line with the statement (Hamruni, 2009: 148) which states that "Problem Based Learning (PBL) is one of the learning models that use real world problems as a context

for students to learn about critical thinking and problem-solving skills, to acquire essential knowledge and concepts from the subject matter. "In addition to the Problem Based Learning (PBL) learning model, Lesson Study (LS) learning activities can also improve the quality of learning as expressed by (Syamsuri Istamar, 2011: 22), Lesson Study (LS) improves the quality of learning in the classroom as the teacher develops learning studies based on "sharing" and collaborates with other teachers, conducts research by studying learning, basing on real classes, and focusing on student learning. In addition, Marhamah (2013), stated that learning with PBL model guided by GI can improve students' critical thinking ability.

The difference of the result of critical thinking ability between the experimental and control classes is due to the difference of the learning model used, in the experimental class that is taught by the Problem Based Learning model, giving the students the opportunity to maximize their learning activity. In the learning of Problem Based Learning teachers should create a learning tool that can involve students actively participating both physically and mentally as individuals and as a group in any learning activities that take place in class. Activity students in this class creates an intensive interaction between teachers, students and materials This creates a conducive classroom atmosphere, and provides an opportunity for each student to involve their ability optimally. Optimal ability of students in learning will improve their critical thinking skills. This is inversely proportional to the conventional teaching methods (lectures) that give less opportunity to students to play a more role in determining their own learning activities, students tend to only listen to explanations given by teachers, and not infrequently the students feel bored and saturated with the subject matter given , so the motivation to find out about a theory tends to be less. If given the opportunity to ask or express, students who are taught by lecture methods tend to be passive and rarely anyone wants to ask or express opinions.

In addition, active involvement of students in the formulation stage and problem-solving planning in Problem Based Learning (PBL), can build their own knowledge and increase confidence.So also grouping in the learning process can support students in cooperation, mutual responding, brainstorming, and sharing information so that it can find ideas as an alternative solution to problem solving in many ways, because some students may have different ideas in solving a problem.

D. Conclusion and Suggestion

Based on the results and discussion it can be concluded that there is significant influence of learning with Problem Based Learning (PBL) model to the critical thinking ability of grade X MA students. MT Mamben Lauk through Lesson Study (LS) pattern.

Lesson Study learning pattern in this research is done only one cycle that is one time plan, do, and see both in experiment class and control class, it is suggested to

next researcher to do learning with Lesson Study pattern as much as two skus, so it can give picture more comprehensive to the quality of learning.

E. References

Garfield, J. 2006. Exploring the impact of Lesson study on Developing Effective Statistic Curriculum. (online): www.stat.uackland.ac.nz/-iase/publication/-11/Garfield.doc.

Hamalik, oemar. 2001. Dasar-dasar pengembangan kurikulum. Bandung : Remaja Rosdakarya

Hamruni. 2009. *Strategi dan Model-Model Pembelajaran Aktif Menyenangkan*. Yogyakarta: Fakultas Tarbiah UIN Sunas Kalijaga.

Huda, Miftahul. 2013. *Model-Model Pengajaran dan Pembelajaran*. Yogyakarta: Pustaka Pelajar.

Marhamah, 2015. Pengembangan Pembelajaran Lingkungan Hidup dengan Model PBL dipadu GI melalu Lesson Study untuk meningkatkan Kemampuan berfikir kritis Mahasiswa Biologi STKIP Hamzanwadi selong Tahun Akademik 2013/ 2014. Lybrary UM.ac.id. Malang

Mulyasana, Dedy. 2011. *Pendidikan Bermutu Dan Berdaya Saing.* Bandung: PT Remaja Rosdakarya.

Ningsih, SC., 2013. Implementasi Lesson Study dalam upaya meningkatkan motivasi dan hasil belajar mahasiswa. Prosiding SNMPM Sebelas Maret. Vol. 1.

Riandari, Henny. 2012. *Biologi Untuk SMA/MA Kelas X*. Solo: PT Tiga Serangkai Pustaka Mandiri.

Yuliana. 2015. *Penerapan Model Pembelajaran Problem Based Learning (PBL) Berbasis Local Material (LM) Melalui Lesson Study (LS) Untuk Meningkatkan Ketermpilan Metakognisi, Keteramppilan Inkuiri Dan Hasil Belajar Siswa Kelas X5 Sman 1 Mojo Kediri Pada Materi Tumbuhan,* FKIP UNS, 22 April 2015. (Online), download.portalgaruda.org, 23 Februari 2017.

Increasing Science Process Skills on Plant Physiologiy Through The Lesson Study

Husnayati Hartini
Hamzanwadi University
husnayatiqarira@gmail.com

Abstract

The purpose of this study to increasing the quality of learning through Lesson study, which is to increase science process skills with Guided Inquiry method. Implementation Lesson study carried out in two cycles. Each cycle consists of three stages, namely stage Plan (planning), Do (execution), and See (reflection). Data obtained in the form of data execution Lesson study, the data science process skills of students and data results of questionnaires to the learning that has been done. Lesson Study execution data were analyzed descriptively qualitative. Based on the research data, science process skills of students on plant physiology which aspects of for observation aspect of 46%, interpreting aspect by 43%, grouping aspect 42%, and communicating aspects of 51%. Forward suggested to lecturers, especially courses in biology that emphasizes learning activities that science process skills so that later the learning process will be more meaningful.

Keywords: Lesson Study, Science Process Skills

A. Introduction

Lesson study is a model of collaborative and sustainable quality improvement of learning based on the principles of collectivity and mutual learning to build learning community (Lewis, 2002). Lesson study is not a learning method or strategy but an activity that implements various learning methods / strategies appropriate to the situation, conditions, and problems faced by the teacher. At the micro level, the achievement of quality in learning is the professional responsibility of a lecturer, while at the macro level, LPTK as an institution is very responsible for the formation of qualified teachers, which can contribute to the intellectual development, attitude and morale of each individual learner as a member of the community (Depdiknas Ditjen Dikti, 2005).

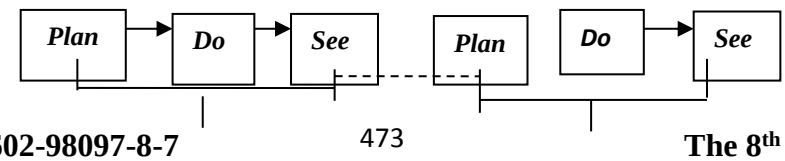
In Hamzanwadi Unversity have a very important role in building a quality learning system because through this institution will be formed prospective educators who will be plunged into schools in various levels of education. One of the steps taken to improve the quality of learning is by designing the curriculum or developing learning tools in accordance with the potential of the region through Lesson Study (LS). Lesson

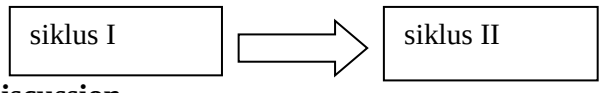
Study is one of the coaching efforts to improve the learning process conducted by a group of teachers / lecturers in a collaborative and continuous in planning, implementing, observing and reporting learning outcomes (Syamsuri & Ibrohim, 2008). It is expected that through lesson study, the quality of learning in the biology education program that is still low can be improved. Based on observations in Biology education program, especially in Plant Physiology, lecturers usually use lecture method in delivering the material. In addition, lecturers also occasionally use practicum method for learning becomes more meaningful because according to Trianto (2010: 69) meaningful learning will not be realized only by listening to lectures or reading other people's experiences, experiencing itself is the key to meaningfulness. Based on the results of learning, especially with the practice method, the science process skills that the average student has is still low. The learning process itself is influenced by various factors that will affect the success in achieving the objectives of the learning process. One method that is expected to improve students' science process skills is the Guided Inquiry method. With inquiry learning the students are not only required to master the course material given, but how they can use the potential they have.

B. Method

This research is a qualitative research used to examine the natural object where the researcher as the key instrument, the sampling is done purposively, the collecting technique is combined and the result of the research is more emphasize the meaning than the generalization (Sugiyono, 2010). In this case conducted learning study (Lesson Study) which implemented consist of two cycle and two open lesson. Each cycle of 3 stages, namely the planning stage (Plan), implementation (Do) and reflection (See). The study was conducted to improve students' science process skills implemented through Guided Inquiry method. Lesson study is conducted in the even semester of the academic year 2016/2017. The subjects of the study are biology students who are taking the Plant Physiology courses, namely students of the four semester with the number of 20 students.

Instruments used in the form of observation sheet and questionnaire. The observation sheet is used to find out how far the improvement of students' science process skill during learning process and questionnaire is used to know the opinion of the students about the learning process that has been going on, including the learning tools that have been developed through Lesson Study. Data analysis used is descriptive statistic technique. Descriptive statistics techniques used to describe the data collected from each research variable.





C. Findings and Discussion

Lesson Study in Plant Physiology courses is conducted by a team of 4 people, including: Husnayati Hartini, M.Si (as model lecturer), the observer is Indra Himayatul Asri, M.Pd, Dr. Marhamah, and Nur'aini, M.Pd.

Planning

Model lecturers develop learning tools consisting of syllabus and RPP, specifying course materials to be submitted, methods and media to be used and instruments for measuring research. The material chosen in open class one is a nutrient elements of the plant and open class two is analyzing symptoms of plant deficiency. Indicators to be achieved during open class one are: 1) Describe and prove the role of nutrients for plants; 2) Analyzing factors that affect growth and development and; and indicator to be achieved during open class two are 1) analyzing symptoms of plant deficiency

Implementation

The implementation of open class one was held on 10 Juni 2017 at the Biology Class. At the time of the implementation of the student looks very enthusiastic to follow the lecture. Students presented the results of plant growth observations that have been done for two months. Students report the measurement data for all growth parameters such as height plant, leaf width and number of leaves. The implementation of open class two was held on 15 Juli 2017 at the Biology Class. Students presented the results of analyzing symptoms of plant deficiency.

Reflection

Observations from observers for Open Class one include: Group 4 difficulty to distinguish plant characteristics that lack of nutrients N, P and K. The data of growth parameter measurement is also not complete and other groups have complete data. Observations from observers for Open Class two include: Learning takes place successfully. The expected indicators are achieved.

Based on the implementation of Lesson study that has been implemented created collaboration between the teams. Furthermore, from observations that have been implemented on learning, lecturers who become observers can learn from the observed learning process. This is in line with Lewis's (2002) statement that the idea contained in the LS is actually short and simple, ie if a teacher wants to improve learning, one of the most obvious means is to collaborate with other teachers to design, observe and reflect on learning do.

Results Skills of the science process

Based on the learning that has been d one, described the result of the students' science process skill (Figure 2).

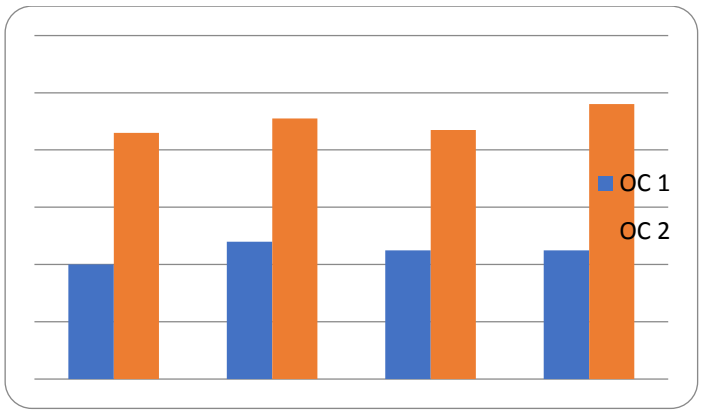


Figure 2. Data science process skills of Plant Physiology

Based on the process skill data in Figure 2 it can be seen that in OC 1 to OC 2 there is an increase of science process skill for observation aspect of 46%, interpreting aspect by 43%, grouping aspect 42%, and communicating aspects of 51%. The interpretive aspect experienced a significant increase in OC 1 to OC 2.

Percentage of the range of categories of science process skills:

78.77% - 100% High

56.55% - 77.77% Medium

33.33% - 55.55% Low

Results of Questionnaire on Lesson Study.

Based on the learning process undertaken through Lesson Study obtained data about student opinions on the learning process and tools that have been developed. The data can be seen in the picture below.

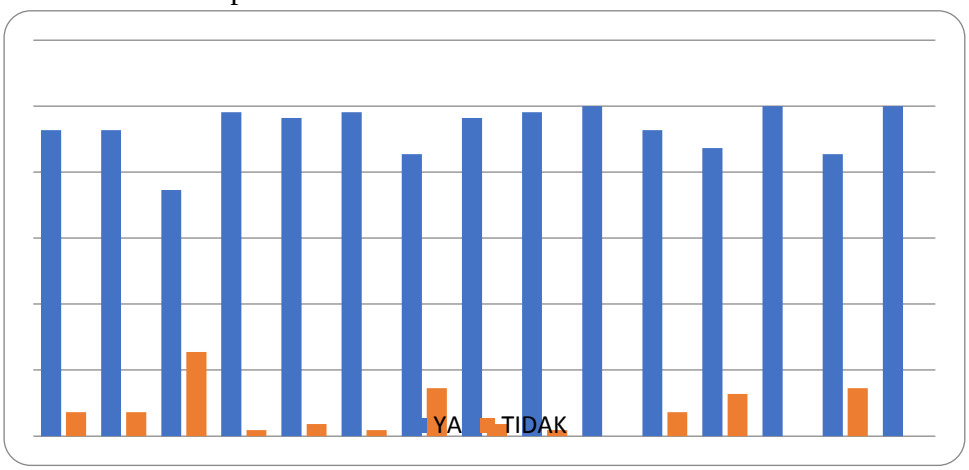


Figure 3. Data of Student Questionnaire Result of Learning that has been done through Lesson Study

Information:

1 = Learning that has been done interesting.

2 = Fun learning
3 = Learning is easy to understand
4 = Students are motivated to learn
5 = Learning encourages students to work with friends
6 = Learning encourages students in learning independence.
7 = The media used is interesting
8 = The media used can help the students to understand the material learned
9 = The teaching materials written in the LKM help in learning
10 = The teaching materials written in the LKM are easy to understand.
11 = The tasks in the LKM provide learning challenges.
12 = Assessment and evaluation are conducted in a transparent manner
13 = Assessment in accordance with the material learned.
14 = The assessment instrument is easy to understand.
15 = Problems in tests in accordance with the competencies demanded.

Based on the data in Figure 3 it is known that the learning that has been done is interesting, fun, easy to understand, make the students motivated to learn, create cooperation and encourage the independence of learning, the media used interesting and help the students to understand the material that is learned, the material written in the LKM easy to understand and assist students in learning, as well as the tasks in the LKM provide learning challenges for students, assessment and evaluation are carried out in a transparent manner and in accordance with the material learned, the assessment instrument is easy to understand and the test questions in accordance with the competencies demanded.

D. Conclusions

Based on data of process skill can be concluded that there are improvement of science process skill (OC 1 and OC 2) for observation aspect of 46%, interpreting aspect by 43%, grouping aspect 42%, and communicating aspects of 51%. It is suggested to the lecturer especially biology study program that in the learning activity to give priority to the students science process skill so that the learning process will become more meaningful.

References

Asri, Indra Himayatul, 2013. *Meningkatkan keterampilan proses sains melalui penerapan metode inquiry terbimbing Pada materi jaringan tumbuhan (Lesson Study MK Anatomi Tumbuhan).* Selong. STKIP Hamzanwadi Selong

Depdiknas, Dirjen Dikti, 2005. *Peningkatan Kualitas Pembelajaran*. Jakarta: Direktur Pembinaan Tenaga Kependidikan dan Ketenagaan Perguruan Tinggi

Lewis Catherine., 2002. *Lesson Study: A Handbook of Teacher-Led Instructional Change*. Philadelphia: Published by Research for Better Schools Inc.

Sugiyono, 2012. *Metode Penelitian Kuantitatif, Kualitatif dan R & D*. Bandung: Penerbit Alfabeta.

Syamsuri & Ibrohim, 2008. *Lesson Study (Studi Pembelajaran)*. Malang: Penerbit Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Negeri Malang.

The Impelementation of Learning Constructivism Mathematics Investigation Model in Improving Activities and Students' Learning Result

Edy Waluyo
Hamzanwadi University
edywaluyo2002@yahoo.co.id

Abstract

This study aimed at determining the impelementation of learning constructivism mathematics investigation model in improving the activity and learning result of mathematics students for the eighth graders of Madrasah Tsanawiyah Mu'allimat NW Pancor. This research was Action Research conducted during two cycles included planning, implementation, onservation, and evaluation as well as reflection and the research subjects was class VIII A Mts. Muallimat NW Pancor consisted of 40 students. Data obtained in the form of students' activity during learning and mathematics learning result data. Data were analyzed using descriptive statistics. The results showed that the data analysis on cycle I obtained data of students' activity with average 20.30 with fairly active category and data of student mathematics learning result with level of 52.50% and still low completences level by indicated to 85%. In the second cycle obtained data on students' activity with an average of 24.38 with the active category and students mastery level in learning by 87.5% and the above level thoroughness indicator.

Keyword : Learning Constructivism, Investigation Model, Activities and Students' Learning Result

A. Introduction

Mathematics learning in a competency-based curriculum is emphasized on problem-solving skills, developing ways of thinking and reasoning, and communicating mathematics ideas to various contexts of science and technology (MONE, 2003). According to the mathematics curriculum of 2004, in the learning process must show the existence of positive interdependence, direct interaction between students, individual responsibility and interaction skills among students. Most of the students, mathematics is a lesson that leaves learning a less enjoyable experience. Learning experiences that imprint during learning will affect students' attitudes toward mathematics. Students' attitudes toward mathematics will be positive if the learning experience that students receive during learning is fun and vice versa if the accepted learning experience is less fun then the students' positive attitude toward the math lesson will be hampered. If so, then the process of learning mathematics that has been done that learning is more concerned with the last result than the process is not sufficient to answer the demands of the mathematics curriculum 2004.

Currently, the learning process at school is considered to fail to actively involve students in the learning process. The result of pre-observation, in general, the process of learning mathematics in school was still dominated by the paradigm of teaching with the characteristics such as teachers actively convey information and passive students receive, teacher-oriented learning not on students, student dependence on teachers is large, less attention to the students' competence and developed as well as opportunities for students to reflect through interactions among students and students with less developed teachers. With this learning paradigm, students do not have the opportunity to develop ideas, creativity, thinking skills and find alternative solutions, but students are very dependent on the teacher and they are not accustomed to find other alternatives that might be used to solve problems effectively and efficiently.

To change such a situation, there needs to be a paradigm shift in learning, especially the paradigm of learning in the schools. An alternative paradigm for solving mathematics learning problems in the schools is constructivist paradigm. The constructivist view holds that students respond to the experiences by constructing a cognitive structure in their brains. The cognitive structure is a mind in the form of belief, understanding, and explanation of a person. Thus, knowledge is acquired as a result of a construction process that is continuously organized, organized, and reorganized and linked to its cognitive structure so that the cognitive structure is gradually modified and developed (Herman Hudoyo, 1979). The results of the diagnosis along with the mathematics teacher of *Madrasah Tsanawiyah Mu'allimat NW Pancor* showed that most of students encountered unpleasant experiences during learning mathematics, indicated to the low students' learning achievement of mathematics. The low achievement of students is caused by many factors such as students, teachers, subject matter, curriculum, and environment. The several factors, it turns out that the subject matter and teachers are the factors that many are complained by the students. Those teacher factors consists of many aspects, especially the way of delivering the subject matter and appearance in front of the class. Observations and identification results obtained that the teacher in the implementation of the learning process of mathematics has not been able to use and put each structure as it should so that in the learning process is still less attention to the selection of strategies, methods, approaches, and techniques so that the learning patterns of all teaching materials mathematics schools are the same that should be different between teaching materials and other teaching materials. Besides, the low achievement of learning mathematics is also caused by concept mastery of mathematical concepts of the students have not meaningful so that students' understanding of the concept of mathematics is low. The formulation of the problem in this research is (1) whether the implementation of learning constructivism mathematics investigation model can improve the activity for the seventh graders of *Madrasah Tsanawiyah Mu'allimat NW Pancor*, (2) whether the

implementation of learning constructivism mathematics investigation model can improve the learning result of mathematics students for the seventh graders of *Madrasah Tsanawiyah Mu'allimat NW Pancor*.

School Mathematics Learning

Learning is an effort to teach students. To get the results of learning mathematics is adequate to require the ability to think, and reasoning and the existence of a quality learning. In the learning contained the meaning of an activity to have and develop a method, strategy, technique or approach to achieve expected learning outcomes. There are three components in learning those are (1). Learning conditions, (2). Learning methods, and (3). Learning outcomes. The learning conditions include the learning objectives, the nature of the field of study to be taught and the characteristics of the students. The learning objective is a statement that describes the expected learning outcomes. The nature of the field of study is a feature of the field of study to be taught which can be used as a basic for defining strategies, methods, techniques or approaches in learning. While the characteristics of students related to the individual nature of students include motivation, interest, intelligence and socio-cultural students. Learning method is a way that can be used to achieve expected learning outcomes. In the learning method contained a sequence of learning steps that can be used to achieve learning objectives. While the results of learning is all the influences that arise due to the use of methods, techniques, strategies or certain approaches with certain learning conditions as well. Conditions and learning outcomes are factors or variables that can not be changed. Therefore, to get the expected learning outcomes, only the factors of learning methods that must be manipulated and selected in such a way that the learning process is done to get results in accordance with the objectives of learning under certain conditions and learning outcomes.

Constructivism Approach

The constructivism approach can be viewed as one of the approaches categorized in the theory of cognitive psychology (Nur, 1996: 156). Basically the application of constructivism approaches in learning is the learner must individually or in groups find and transform complex information, check new information with existing rules and revise as necessary, this means the learner or his or her own learners who construct concepts that need to be learned. The teacher acts as a Facilitator (Soedjadi, 1999,: 156). Marpaung (1999) on learning using constructivism approach, each student constructs his own knowledge. Consequently, students must actively use their minds to build concepts through four stages: schemata, assimilation, accommodation, and equilibrium. While the teacher as a facilitator and create conditions for students to be active and independent eg through the submission of questions (Sugiman: 2002). Slavin (1994) mentions that the implications of constructivism theory in learning are (1) focusing on students' thinking or mental processes, not just on the outcome, (2)

prioritizing the role of students in participating themselves, active involvement in learning activities, (3) on top down teaching means students start with complex problems to solve and then find (with teacher guidance) the necessary basic skills.

Mathematics Investigation Method

Talmagae and Hart (1997) stated that investigative learning activity begins with solving problems or problems given by the teacher, while the next learning activities tend to be open, which means not strictly by the teacher. Students can choose the path that is appropriate for them. Students work and discuss the results with their friends then the atmosphere of this investigation will be a very potential in supporting the understanding of students (Krismanto: 2001). Polya (1981) states that teaching to think requires teachers not only to provide information. Teachers should be able to put themselves in accordance with the conditions of students, understand what is in the minds of students, build the ability of students in processing or using information obtained (Krismanto: 2001). In the investigation, students work freely individually or in groups. Teachers only act as motivators and facilitators who encourage students to express opinions or pour their thoughts and use their initial knowledge in understanding new situations. Teachers also play a role in encouraging students to improve their own learning outcomes as well as their group work. Sometimes students need others including teachers to be able to explore the necessary knowledge, for example through the development of more directed, detailed, and detailed questions. Thus the teacher should always keep the atmosphere to learn that the investigation does not stop halfway. In Mathematics Learning Strategy (MORA, 2004) it is emphasized that learning with Mathematics Investigation Model is done through phases those are (1) Student orientation on problem, (2) Organizing student to study, (3) Guiding Individual or group investigation, (4) Developing and proposing works, (5) Analyzing and evaluating the investigation process.

B. Method

The subject of this research was the the eighth grade students of *Madrasah Tsanawiyah Mu'allimat NW Pancor Lombok Timur* and 2 (two) math teachers of *Madrasah Tsanawiyah Mu'allimat NW Pancor*. This was action research divided into two cycles, which consists of 5 stages: 1) planning, 2) implementation of action, 3) observation, 5) evaluation, and 5) reflection.

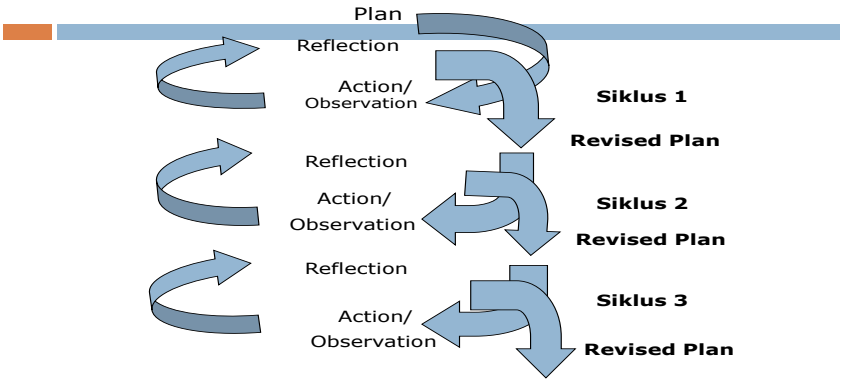


Figure 01. Action Research Design

The data collected in the form of students' activity data and data of students' mathematics learning result and analyzed by using descriptive statistic. Student activity data was analyzed by using students' activity guidance as follows.

Table 01. Students' Activity Level Instruction Guidelines

Interval	Category
X > Mi + 1 SDi	Active
Mi – 1 SDi ≤ X ≤ Mi + 1 SDi	Fairly active
X < Mi – 1 SDi	Less active

Data of the students' learning results were analyzed using guidelines:

$P = \frac{n}{N}$ x 100% , P = percentage of learning achievement l, n = Number of students having score ≥ 65, N = Number of students joining test. The indicators of successful implementation of the action are (1) Students are declared quite active during the learning based on the students 'activity evaluation hierarchy, (2) The students' completeness level after attending the learning achievement P ≥ 85% .

C. Findings And Discussion

The Results of cycle I

a. Planning

This stage has been arranged learning process planning that includes Learning Plans, Learning Scenarios, Observation Sheets as well as evaluation tools of

teaching and learning activities that become a reference for teachers in implementing actions.

b. Action

In the implementation stage of the action, the learning is carried out in accordance with the learning scenario that has been made is the use of learning mathematics investigation model.

c. Observation and Evaluation

The Result of Observasi in Learning

Observations conducted during the implementation of learning using observation sheets that have been made Observation results show that there were still less in the process of learning of cycle I which include: (1) Teachers lack motivation in the learning process, (2) Problems given (3) Teachers were not optimal in providing guidance to students either at the time of solving the problem of discussion even when preparing the work, (4) the teacher had not implemented optimally selected learning model, (5) Learning tools such as textbooks or other supporting books were not sufficient, (6) Students' learning motivation were still low, (7) Most of the students were not familiar with the model of learning used by teachers, (8) Less cooperation in solving problems given.

Students' Activity in Learning Data

The data of students' activity during the learning process using learning mathematics investigation model in cycle I was collected by using students' activity guidance and obtained data as follows:

Table 02. Summary of observations of students activity cycle I

Students	Total Score	Mean Score (X)	Category
40	812	20.30	Fairly Active

Based on the category of students' learning activities of the first cycle of students' activity in learning was fairly active. Therefore, students' activity in the next cycle needs to be improved.

Learning Achievement Test Data

The data of mathematics learning results of students after following the learning by using learning mathematics investigation model in the cycle I was collected by using learning result test. Data about mathematics learning result of cycle I can be seen in following table:

Table 03. The summary of data on the result of students' learning cycle I evaluation

Students	Successfully Students	Unsuccessfully Students	Percentage of Successfully
40	21	19	52.5 %

The above table seen from 40 students joined the result of learning achievement test of cycle I got 21 students was successfully and 19 students were not successfully. Therefore, the percentage of students' learning successfully on cycle I was 52.5%. The result of percentage was still less from 85%. Based on the successfully indicators was P ≤ 85% so in the cycle I was not classical successfully. Therefore, it was needed to improve on the next cycle.

d. Reflection

Based on the results obtained in the first cycle is the percentage of students' learning mastery had not reached the expected results, the researchers conducted action on cycle II by improving the less that was in cycle I, among others (1) give more motivation to students to be more active and (2) more employment opportunities for students to ask questions, (3) seek more optimal guidance for each student in solving problems given, discussing or at the ready of the work, (4) math problem technique more contextual and appealing to students.

The Results of Cycle II

a. Planning

The second cycle of learning planning was prepared by considering the results of reflection and evaluation that was in the first cycle by seeking improvements. The planning was composed including Learning Scenario, Observation Sheet and Evaluation tool teaching and learning activities.

b. Action

In the second cycle implementation stage, the learning was carried out in accordance with the scenario that has been made with the improvement steps in accordance with the results of the first cycle reflection and evaluation.

c. Observation and Evaluation

Teaching and Learning Observation Result Data

The observations results during the learning process in cycle II, in general the learning process has been running well, where the less that occur in the previous cycle most can be repaired although there are still some less results. The important things that can be seen from the observation in this second cycle

are (a) The motivation given by the teacher has increased the students' learning spirit, (b) The guidance given by the teacher can assist the students in solving the problem or preparing the students' work so students can formulate formal mathematics to get a new concept.

The Data of Students' Activity in Learning

Based on the result of students' activity observation in learning of cycle II, the mean scores can be seen on the table as followed:

Table 04. The Summary of data on the result of students' learning cycle II evaluation

Students	Total Score	Mean Score (X)	Category
40	975	24.38	Active

Based on the category of students' learning activities then on the second cycle of students' activity in learning was classified into active. Thus there was an improvement in students' activity when compared with students' activity on cycle I.

The Result of Learning Achievement Test

The summary of students' learning result of cycle II can be seen in the following table:

Table 05. The Summary of Students' Learning evaluation Result Data of Cycle II

Students	Successfully Students	Unsuccessfully Students	Percentage of Successfully
40	35	5	87.5 %

From the table above is seen that from 40 students who joined the test results after learning in cycle II there were 35 students who completed the study and 5 students had not finished learning, so that the percentage of students' learning completeness in the first cycle was 87.5%. The detailed data about students' learning outcomes after joining the learning in cycle II can be seen in appendix 13. Based on predetermined success indicator that was $P \leq 85$ % then in the implementation of cycle II had achieved mastery learning classically so that the implementation of action was stopped. This means that the hypothesis of action says that the use of Learning Mathematical Investigation can

improve the activity and learning reuslt of mathematics students of class VIII *Madrasah Tsanawiyah Mu'alliamat NW Pancor Lombok Timur.*

e. Reflection

After seeing the results obtained in this second cycle, then there was an increase in student activity in learning and learning mastery from cycle I to cycle II. Improvement of process and learning outcomes that had been achieved in cycle II was inseparable from the efforts of researchers in improving deficiencies in the first cycle, especially in improving student learning motivation. From the data of the evaluation result of cycle II, it was found that the activity of the students during the learning was classified as active and the percentage of the students' learning result completeness at the end of the cycle was 87.5%.

Discusión

In accordance with the results of research that has been implemented from cycle I to cycle II, there is increased activity and learning outcomes of students' math. By generating students' learning motivation (including by providing a direct assessment), increasing student activity and involvement in the learning process, especially in discussing each given problem, and providing wider opportunity to ask questions, has increased student self-confidence in learning. This increase is seen from the more active students in solving problems and more daring to ask the difficulties experienced. The following table shows increased activity as well as student learning outcomes during learning.

Table 06. Summary of Action

Action	Cycle I	Cycle II	Improvement
Students' Activity Level	20.30(fairly active)	24.38 (active)	4.08 (20.1%)
Successfully percentage	52.5 %	87.5 %	35%

Based on the above table shows that there is an increase for student activity in learning that is equal to 20.1% and increase student learning outcomes after following learning by 35%. This improvement indicates that during the implementation of the action from cycle I to cycle II, students with teacher guidance slowly land can develop thinking skills and problem-solving skills through discussion both in groups and between groups, and can become independent learners. Thus during the learning process students feel the need to make more study preparation to follow the learning when compared with their

habits so far. Besides the learning environment becomes more conducive where the dominance of teachers in the learning process can be reduced, in addition to teachers and lecturers as researchers feel challenged in applying this Mathematical Investigation study so that need to make more preparation to apply this lesson than the habits done so far. By experiencing their own used learning Mathematical Investigation, researchers in this case lecturers and teachers feel the ability to apply this learning becomes more increased.

D. Conclusions and Suggestions

Conclusion

From the results of research and discussion can be drawn conclusions, among others:

1. Application of learning Mathematical Investigation in learning mathematics can increase student activity in learning grade VIII of *Madrasah Tsanawiyah Mu'allimat NW Pancor.*
2. Application of Learning Mathematical Investigation also in the cognitive abilities of students of grade VIII *Madrasah Tsanawiyah Mu'allimat NW pancor.*

Suggestions

Based on the results achieved in this study, the suggestions that researchers can convey are as follows:

1. To the school math teacher is expected to optimize the learning of Mathematics Investigation as one of the alternative learning model in the class.
2. For researchers who want to study more about learning Mathematical Investigation is expected to try to apply on other subjects with more perfect.

References

Depdiknas, (2003), *Kurikulum 2004 SMP*, Jakarta : Depdiknas.

Depag RI, (2004), *Strategi Pembelajaran Matematika*, Jakarta : Depag RI

De Lange, (1987). *Mathematics Insight and Meaning*, OW & OC : Utrecht

Gravemeijer, (1994), *Developing Realistics Mathematics Education*, Utrecht : Freudenthal Institute.

Hudojo, H, (1979), *Pengembangan Kurikulum Matematika dan Pelaksanaan Didepan Kelas*, surabaya : Usaha Nasional.

Soedjadi, R, (1999), *Kiat Pendidikan matematika di Indonesia*, Jakarta : Dikti.

----------,(2000). Nuansa Kurikulum Matematika Sekolah di Indonesia, *Prosiding Konferensi Nasional Matematika*, X, 17-20

UPI, (2001), *Strategi Pembelajaran Kontemporer*, Jakarta : JICA.

Van Reewijk, Martin,(1985). *The Role Of Realistics Situations in Developing Tool for Solving System Equations.* http://www.fi.uu.nl/en/indexpublcaties. Diakses pada tanggal 29 Mei 2006

Zamroni (2000). Paradigma Pendidikan Masa Depan, Yogyakarta : Bigraf Publising

Zulhardi, (2002). Pendidikan Matematika Realistik Indonesia (PMRI): Perkembangan dan Permasalahan, *Jurnal Matematika atau Pembelajarannya*,VIII:651-656

Education and Social Responsibility
Critical Awareness, Continuous Responsibility and Participation

Khirjan Nahdi[1], Zainul Yasni[2]
Hamzanwadi University
Email: nahdi_nw@yahoo.co.id / khirjan.nw@gmail.com

Abstract

This writing is elaborating the education as social responsibility. Here, the author put emphasis on three main points;critical awareness, continuous responsibility and participation as a sub discussion. Through this writing the author try to provide some argument related to the government and societies' role in promoting a good education for the community. Also,give some critical views about how the education might give more benefit towards society through a good education by focusing the discussion on a question stated by Tesconi Jr. et al in social paradigm "whose the education for? And who received the educational benefits?. This will allow the reader to put more concern towards educational process, quality and result.

Keywords:*Education, Critical Awareness, Responsibility and Participation*

A. Introduction

As a universal and long term investation, it will never late to promote some strategies to improve education. Education is always facing two main problems: *educational thinking and educational action*, therefore all efforts made were referred to those problems. Education is public need and becomes a public responsibilities. Education becomes historians need in human history, so that why it becomes human's responsibility collectively and contiously. The relation between educational thinking and action was influenced by a social dynamic where the education was developed and transformed. Thinking and action that accomodate dynamic civilization in social space, which was understood as educaton for problems (Freire, 1985). The latin proberb stated that "*non scholae set vitae discimus", which meansthat the school is not only for number, but it is for life.* However, some views related to who is reponsilibilty and how to promote a good benefit in education is also varied.

B. Body Text

Educational Mainstream

Some important points elaborated in this writing are including society's responsibility, critical awareness, continous responsibility and participation towards

education. This elaboration is also aimed at giving correction towards mainstream view that the education is a merely reponsibility of governement and as the the facilities for the society. As a result of this mainstream, the government indirectly think as the main elment who has responsibility to the educational process and output; therefore, some regulation implied was not deliberative for the education. Jurgen Habermas (in Hardiman, 2008) said that the societies' view towards some aspirations are depending on the goverment only (including education) led to producing some regulation that are not based on the aspiration and public needs. On the other hand, the society become apathic and not actively participate in educational process and output. In implementing the educational policy, the government's responsibility stop at the governments' institution like school, and if there is a problem in term of policy and its implementation the protest goes to the government as the main responsible person.

The different views between governement and societies assumed as the result of missinterpretation towards a theoritical framework on functional theory followed by Parsonian group, that the most important thing in society's culture is the existence of addaptation process from external variable (new information) to accomplish the mission through an integrative system to promote an equality among the society. As the result, the education is viewed as a single stand withtin the social structure, where the government as the most responsible element to give more benefit for the society. The society's reality towards this responsibility (educational responsibility) was viewed as the weak social paradigm designed by Talcott Parsonsn, who put emphasis on the social case by ignoring the public interest in universal task. The expectation for doing this is that, the society could develop the critical awareness offered through conflict paradigm by Dahrendorf (Ritzer, et al, 2003) that the scoiety should aware to the changing situation which always move dinamically. As the implication, the view about education should be based on the thinking about social dynamic and on the other side the government should accomodate every single movement. The author did not mean to compare both paradigm, but try to find the thinking framework that could create an equal regulation and policy to promote a harmony within the society. Yet, the regulation designed should be able to accomodate all aspects within the community by creating a various context that is in line with social environment. In educational context, management system is viewed as the pivotal aspect to produce a good managerial road from environmental analysis, educational plan, educational program implementation, and educational management control. Analysis management will produce a precious information about the social perception about education through their critical awareness, understanding their responsibility, which is believed that in the next step will lead them to participate in educational process. In planning step, the implementation and control from society might help them to get the *value* and sensitivity about education which help them to get involve in the educational process.

Critical Awareness and Social Theory

The society's mainstream was reinforced by the social paradigm and its implications for the role of government and society towards education raises a simple question, *whose the education for?* to clarifay this question, Tesconi, Jr. et al questioned, *who received the educational benefits?* In the opening of 1945 Constitution (Government of Indonesia) mentioned that the state is responsible for intellectual life of the nation. The purpose of national education in Law no. 20/2003 on National Education System mentioned about intelligence with various entities (Government of Indonesia). The word perceiving contains the meaning of a number of skills, characters, and awareness of the citizen (society) by which he is able to accommodate the dynamics of life in a current situation and in the future. Citizens' skills, character and awareness will be built through the nation's development instrument, namely education with various forms, types, and ladder. Thus, education is directed to society's intelligence in the form of achievement for a number of skills, character, and consciousness as individual and society. Intelligence will produce two important dimensions in the process of accommodation of present and future life, as Erich Fromm (1982) has described that the dimension of being a man power (*man power of development*) and the dimension of being a humanism (*human with humanity*).

It is clear that the education is for the society and the benefit is as much as possible for the society. If so, the next question is, *who is responsible?* Accommodating the functional social paradigm of Parsons and Dahrendorf's conflict paradigm, education is the responsibility of the government structure with its various infrastructures and also community responsibilities with various conflicts of interest. It is a vertical nature that the humans who formed the society were born with various differences (conflict). Physically and psychologically, humans are born with a variety of nativist innate that is in behavioristic context of nativist can be developed well to accommodate the dynamics of individual and social life. Even since in the womb into a society, as Crain (2007) mentioned that the man comes with various dynamics of internal conflict within himself. A various nativisim realities have consequence towards the diversity of creation and various kinds of behavioristic environment as well. In addition to the different aspects of nativism and behavioristics, the social, cultural, economic, demographic, and the value surround the context is also varied. The whole difference (conflict) will bring different forms of interest that are not the same. This context might raise the critical awareness of individuals and society that with these differences, accommodation of various interests is unlikely to be uniform. If there are educational thoughts and practices that tend to be uniform, there will be unfair educational practices because they are trapped in the act of simplifying education issues.

The ideal context expected the policy makers with their various structural instruments (departments, agencies, and work units) can formulate a strategic regulation based on the type and degree of disparity to accommodate the all context. David Fred R. (1997) called this as a strategic management, starting from strategic planning, consistent and measurable implementation, and comprehensive control. For example, elementary school education teacher planning for urban areas, with the economic community of upper class and urban planning will be different from the rural community of teachers in the lower economic class and traditional. Through this illustration, there are several aspects of planning that must be different from the economic background, ethnicity and level of modernity. In some cases concerning to the same basic needs, such as teacher qualifications and educational infrastructure can be standardized because it involves general needs.But some other partial entities, such as infrastructure and contextual carrying capacity, must be initiated by the community in mutual assistance. In partial cases as a result of differences in the modernity level, thus limiting the path of information and transport, geographic differences, cultural differences and other differences will create a critical awareness of the community, which may generates initiatives to take responsibility for the educational process and outcomes. There is still concern if the highly varied of educational context with a various backgrounds is managed on a similar basis and in asimilar managerial system might pomote education as a non-dialectical praxis. Barnadib (2000) claimed that it is as an unresponsive educational practice towards a dynamic context and does not consider the ideal aspects of educational thinking. For an example; education policies and programs aimed at creating national standards for the purpose of competence competitions in the global level through the National Examination (UAN) for Primary-Secondary Education, indeed this policy is good if we are looking at glanceinto its goals. The question here is, *how is the planning process, starting from teacher-student, school, and community preparation? How is the implementation at the empirical level?* The policymakers have forgotten that the territory of the unitary state of Indonesia is very wide with various topography, ethnicities, levels of economy, values, and other differences. Instead of rejecting the policy as a policy aimed at creating an equal competence on a global level. Ideally, the policy should be an indicator of educational performance that must be well prepared in various ways base on the community context as the beneficiaries of education. At the same time, the community is also required to have a critical awareness to some policies that might harm people themselves and the nobel ideas of education will never be enjoyed. The awareness should promote recommendations to the policy makers rather than just accepting them as wild and unobjectionable. The mechanism that can be taken by society is the process of representation to the related bodies according to their capacity. Through such

awareness and action might promote the community's responsibility for education, which is called participation in education.

Participation and Continous Responsibility

Critical awareness referring to a social theory conflict understanding appears as the result of awareness of each individual in society is facing the external and internal change situation. The changes within the individuals and societies will produce different interests in education. To produce a harmony and equality, it is impossible for society to make policies within the various framework of educational management. Nor it is impossible to practice a similar technique of education as the context of society is not similar. The overall education policy should be as a general product, whereas technical practice is a partial management process in line with the context. In this diverse context, the public is expected to have an awareness that the educational context is full of dynamism and diversity. This awareness will lead to participation since the process of policy formulation, planning, implementation to the evaluation process. In addition to the strategic reasons for a policy product, participation is also a fundamental right of the community as mentioned by Cohen et al (in Irenne, 2011).

Public participation in a policy formulation is important because people who know the best about the context in their area. Community participation in educational process and outcomes based on a critical awareness of its internal-external context will lead to natural participation. Usually, the community participative action becomes consistent participation over a long period of time. The form of community participation in educational processes and outcomes should be restored within the context of the education management system, in relation to planning, implementation and control. Yet, the form of community participation in this context does not become the whole of the entire educational management product, but rather as a part that may be interfered by their capacities. In this context, Seymour B. Sarasin (1994) called the participation as an asset and deficit. Participation as an asset when education stakeholders are able to coordinate and work with others, including the community on mutual responsibility and mutual trust basis. And the form of participation it is not possible the take over the responsibility between the responsibility of policy and technical responsibility. Thus, participation is concerned with the clarity of job and responsibilities. If there is a reverse condition, a responsibility can not be shared and managed together, participation becomes a deficit or deficiency. All education responsibilities seem to be a one-sided responsibility, refers to the government with a variety of their bureaucracy infrastructure. The concept of asset according to Seymour is also interpreted as a long-term investment, which can be utilized and developed continuously any time, to fill each deficit slot during the process of management in education. And it will be a long-

term deficit if the trust of each other among education stakeholders is not built appropriately in managing all resources for the benefit of educational processes and outcomes. The need for community participation as beneficiaries of education is tailored to their respective capacities. Participation arises in the form of policy access, such as influencing curriculum implementation policies that are responsive to the contextual conditions of educational institutions in rural areas, or policies on teacher provision and distribution that take into account local aspects and conditions, and so on. There are also emerging participation in direct educational acts, such as the provision of community learning rules beyond school time, the provision of community to promote learning, the building of educational institutions in mutual assistance, to the provision of learning facilities for their children as a continuation of their learning process at school. In essence, the participation is concerned with the awareness of internal and external dynamics of individual and society to produce an initiatiative action individually and collectively to take a role based on their capacity in educational processes and outcomes. Participation does not mean as a ceremonial act immediately for self-fulfilling propechy only. Participation is the internal awareness that is responsible for being a long-term entity in educational investment.

C. Conclusion

Education is the community's property, it is not a facility or gift from the government, so it must be returned to the community. The government and others are only responsible for assisting with capacity as understood in the triadic cycle between structure, culture and action (Bourdieu, 1998). The government structure is responsible for creating a framework in the formulation of policies and plans formulated with the community. Educational action in its implementation process must take into account the dynamic context of society, with the ultimate goal of building a culture through the dimension of having and being. Idealism constructed through such a frame of mind makes everyone aware that education belongs to society and society must be involved in it in various forms of sustained participation.

References

Barnadib, Imam. 2000. *Pendidikan, Demokrasi, otonomi, Civil Society, dan Globalisasi*. Yogyakarta. Kanisius.

Bourdieu, Pierre. (1998). *Practical Reason*. Stanford California. Stanfor University Press.

Crain, William. (2007). *Theories of Development, Concept and Aplications* (third edition). New Jersey. Prentice Hall.

David Fred R. (1997). *StrategicManagement*. New Jersey. Prentice Hall.

Fromm, Erich. (1982). *To Have or To Be?* New York. Harper & Row Publisher Inc.

Hardiman, Budi, F. (2008). *Demokrasi Deliberatif: Menimbang 'Negara Hukum' dan 'Ruang Publik' dalam Teori Diskursus Jurgen Habermas*. Yogayakarta. Kanisius.

Irenne, Budiningrum Siti. (2011). *Desentralisasi dan Partisipasi Masyarakat dalam Pendidikan*. Yogyakarta. Pustaka Pelajar.

Pemerintah RI. (2003). *UUD 1945*. Jakarta.

Pemerintah RI. (2003). *UU No. 20/2003 Tentang Sistem Pendidikan Nasional*. Jakarta.

Ritzer, George and Douglas J. Goodman. (2003). *Teori sosiologi modern* (TerjemahanAlimandan). McGraw-Hill. (Bukuasliterbittahun 2003).

Seymour B. Sarasin. (1994). *Parental Involvement and Political Priciple*. San Francisco. Bass Inc. Publisher.

Tesconi, Jr. *etal*. (1974). *Education For Whom? The Question of Equal Education Opportunity*. New York. Harper & Row Publisher.

The Implementation of Project Based Learningon Database Practicum Class to Improve The Students' Motivation and Achievement in The Informatics Education Program Of Hamzanwadi University

Baiq Desi Dwi Arianti
Hamzanwadi University
baiqdesidwiarianti@gmail.com

Abstract

This research aims at describing the implementation of Project Based Learning(PBL) model on Database Practicum class to improve the students' motivation and achievement of Informatics Education Program ofHamzanwadi Universityin the academic year 2016-2017, and to share some pedagogical practices that Indonesian lecturers can develop to help their students incrase their achievement and motivation in classes. This research is an experimental research. The subject is allthe fourth semester students of Informatics Education Program of Hamzanwadi University consisted of 47 students in 2 classes: 4A, 4B. The data used to measure the level of success of PBL model is obtained from the frequency of the students'final result and the result of the observation and the direct interview to the students in every season.The results of students' achievement is good. Out of 47 students, 32 students with an average score higher than 85, 8 students got score between 75-84.99, 0 students got 55-69.99, 2 students got score between 40-54.99, and 5 students got ≤ 39.99. Additionally, from the direct observation and evaluation, it is seen that the learning atmosphere is more active and alive due to the reward value given. Besides, the students become passionate and enthusiastic to get into the top 10 positions and get a high score. Surprisingly, the students want this method to be done at all meetings because the method is not boring, and the material is understood better.

Keyworsd :*project based learning, database practicum, motivation, achievement*

A. INTRODUCTION

The education world especially vocational education in Indonesia deals constantly which uncertainty every year. This requires for the lecturers to have a more adequate soft skills. Informatics engineering education as one of the majors in vocational schools has the challenge to produce prospective lecturers with good skills. The biggest challenge for informatics education students is that besides facing the education field, they have to deals with the technology who constantl change. This requires students as prospective lecturers to have soft skills that fit with the development of the world of education and engineering.

Today's vocational engineering graduates need to have strong communicaiton dan teamwork skills, but in fact they don't. They need to have a broader perspective of the

issues that concern their profession such as social, environmental and economic issues, but they haven't. Finally, they need are graduating with good knowledge of fundamental engineering science and computer literacy, but they don't know how to apply that in practice (Mills, 2003). If the industry studies, accredition criteria and reviews of engineering education are examined if is clear that the profession, the industry employers and the students them selves are calling for significant changes to the current philosophy and delivery of engineering education. What are the critical issues that need to be addressed? These can be summarised as follows (Mills, 2003): 1) Engineering curricula are too focussed on engineering science and technical courses without providing sufficient integration of these topics or relationg them to industrial practice. Programs are content driven. 2) Current programs don't provide sufficient design expriences to students. 3) Graduates still lack communication skills and teamwork experience andprograms need to incorporate more opportunities for students to developthese.4) Programs need to develop more awareness amongst students of thesocial, environmental, economic and legal issues that are part of thereality of modern engineering practice. 5) Existing faculty lack practical experience, hence are not able to adequatelyrelate theory to practice or provide design experiences. Present promotionsystems reward research activities and not practical experience or teachingexpertise. 6) The existing teaching and learning strategies or culture in engineeringprograms is outdated and needs to become more student-centered.

Education in the field of engineering in addition to providing sufficient theories, should provide examples of solving real projects by utilizing learning strategies that support education in engineering (Purnawan, 2007., Rais, M. 2010). This will provide an opportunity for students to experience the whole range of learning (cognitive, effective, and psychomotor), and develop all intelligence (emotional, spiritual, social, etc.).Database Practicum is one of engineering field inInformatics Education Program at Hamzanwadi University. As a field of engineering, Database Practicum requires a teaching method that can improve students motivation and achievement, because this course requires concentration and good perseverance to be mastered. This resulted in students often feel saturated because they have to deal with computers in the long term, so that absorption of lecture material is not maximal. Practicum itself should be done in a pleasant situation so that the material can be absorbed properly. One method that can be applied in this course is the method of Project Based Learning (PBL).

PBL is a social practice into which students are socialized through a series of group activities involving the simultaneous learning of language, content, and skills (Slater, Beckett, & Aufderhaar, 2006, Mali, Y.,C., G.2016). PBL is also "an approach to instruction that teaches curriculum concepts through a project" (Bell, 2010, Page.41). PBL is a model that organizes learning around project. To capture the uniqueness of PBL and to provide a way of screening out non-examples from this revies, the

following set of criteria are offered. These criteria do not constitue a definition of PBL. The five criteria (Thomas W.J., 2000) are centrality, driver question, constructive investigations, autonomy, and realism. 1) *PBL project are central, not peripheral to the curriculum*. This criterion has twocorollaries. First, according to this defined feature, projects are the curriculum. In PBL,the project is the central teaching strategy; students encounter and learn the centralconcepts of the discipline via the project. There are instances where project work followstraditional instruction in such a way that the project serves to provide illustrations,examples, additional practice, or practical applications for material taught initially byother means. However, these "application" projects are not considered to be instances ofPBL, according to this criterion. Second, the centrality criterion means that projects inwhich students learn things that are outside the curriculum ("enrichment" projects) arealso not examples of PBL, no matter how appealing or engaging. 2) *PBL projects are focused on questions or problems that "drive" students toencounter (and struggle with) the central concepts and principles of a discipline*. Thiscriterion is a subtle one. The definition of the project (for students) must "be crafted inorder to make a connection between activities and the underlying conceptual knowledge that one might hope to foster." (Barron, Schwartz, Vye, Moore, Petrosino, ZechBransford, & The Cognition and Technology Group at Vanderbilt, 1998, p. 274, Thomas W.J., 2000).This isusually done with a "driving question" (Blumenfeld et al., 1991, Thomas W.J., 2000) or an ill-defined problem(Stepien and Gallagher, 1993, Thomas W.J., 2000). PBL projects may be built around thematic units or theintersection of topics from two or more disciplines, but that is not sufficient to define aproject.3) *Projects involve students in a constructive investigation.* An investigation is agoal-directed process that involves inquiry, knowledge building, and resolution. Investigations may be design, decision-making, problem-finding, problem-solving,discovery, or model-building processes. But, in order to be considered as a PBL project,the central activities of the project must involve the transformation and construction ofknowledge (by definition: new understandings, new skills) on the part of students(Bereiter&Scardamalia, 1999, Thomas W.J., 2000). If the central activities of the project represent nodifficulty to the student or can be carried out with the application of already-learnedinformation or skills, the project is an exercise, not a PBL project. This criterion meansthat straightforward service projects such as planting a garden or cleaning a stream bedare projects, but may not be PBL projects. 4) *Projects are student-driven to some significant degree*. PBL projects are not, inthe main, lecturer-led, scripted, or packaged. Laboratory exercises and instructionalbooklets are not examples of PBL, even if they are problem-focused and central to thecurriculum. PBL projects do not end up at a predetermined outcome or takepredetermined paths. PBL projects incorporate a good deal more student autonomy,choice, unsupervised work time, and responsibility than traditional instruction andtraditional projects. 5)

Projects are realistic, not school-like. Projects embody characteristics that givethem a feeling of authenticity to students. These characteristics can include the topic, thetasks, the roles that students play, the context within which the work of the project iscarried out, the collaborators who work with students on the project, the products that areproduced, the audience for the project's products, or the criteria by which the products orperformances are judged. The distinction between academicchallenges, scenario challenges, and reallife challenges (Gordon 1998, Thomas W.J., 2000). PBL incorporates real-lifechallenges where the focus is on authentic (not simulated) problems or questions andwhere solutions have the potential to be implemented.

This research reaffirms the benefits of PBL and ideas that "all program instructors in their PBL learning program are free to design their individual class prohect as long as they fit within the framework of the course" (Foss et al., 2007, p.6). With this in mind, the students learning activities were designed using PBL that would seem to help the students to incrase their achievement and motivation. This research aims to explain the implementation of PBL in databasepracticumcourse, and to share some pedagogical praactices that Indonesian lecturers can develop to help their students incrase their achievement and motivation in classes.

B. Method

This research was conducted onInformatics Education Program of Hamzanwadi University, and the subject of the research is the students of PracticumDatabse course at fourth semester, with total of participants is 47 students, divided into 2 classes in 2016.

The learning method used is the method of Project Based Learning (PBL). The steps in the PBL are as follows: 1) *Determination of fundamental or essential questions*. The PBL model emphasizes the construtivist principle, where the students are expected to build their own knowledge based on their personal experience in real life. Therefore, PBL is very important starting from a fundamental or essential question that will become a problem to be solved through a project made by the student. Lecturers will first provide a stimulus in the form of material explanations by giving examples in the form of real problems around the students presented at the beginning of learning. For example, a practicum to create a table of learning outcomesin the data base, the lecturer will provide an explanation by giving the example closest to the life of the students, the names of columns are required in the table of student learning outcomes, so that students have a reflection of the required columns.2) *Design project planning. At this stage, students are given independence and freedom to be creative.* After the essential question can be formulated by the students, then the student will design the project planning that will be done. If usually in the PBL project is done in groups, but in this research try to developed into individuals project for more focus on understanding and

mastered the project. 3) *Develop a schedule.* Although PBLs give students the flexibility to be creative in determining how projects are created and implemented, students still need to create a schedule that keeps the project well done with effective time. This is where the ability of students trained to critical and clever estimate the things needed for preparation, manufacture, until the project can be completed in a right time. 4) *Monitor project progress.* In this step the progress of the project should be seen from the aspects of lecturers and students. So it can be known the project is in accordance with the plan or not, the obstacles are found and how to overcome them. 5) *Test the process and learning outcomes*. Lecturers in implementing the PBL model should test the learning process and outcomes as long as the students undertake the project and at the end of the project. Both of these are very important, so that the lecturer can provide feedback, reinforcement, assistance, facilities, and the like. In addition, the lecturer should also evaluate how the acquisition of student learning outcomes, both from aspects of attitude, skills, and knowledge. 6) *Evaluate the experience of making projects or executing projects*. Lecturers can make students to do self-reflection in the purpose of making students accustomed to always evaluate each project's learning.

Base on the six ways PBL method above, in this research developed several stages of application of PBL to measure individual ability of each student as follows: 1) Lecturer explains practicum material to see at that time, and give a real example to the student. 2) Students try to practice making project according to the material at the meeting. 3) Once the student understands the material, the lecturer will give the experiment project which must be decided by the student in a certain time. 4) Students will be rewarded by lecturers for those who can work on the project on time. For the first 10 people who can do it properly and correctly, will be awarded with 100 points by the lecturers, while the following will be given according to their ability to explan the project they made. 5) When the examination is done by the lecturer on the work of the students, the student will explain the project, followed by the questioning by the lecturer

C. Findings and Discussion

The results of this research can be concluded that the PBL model can improve students' motivation and achievementof Informatics Education Program in fourth semester at Hamzanwadi University on Database Practicum course. These results can be seen from the acquisition of the final score of semester and observation of individual development of students and the state of the class in each week directly. The acquisition from the value of stuendts in the end of semester can be seen from the table below:

Table 1.1 Frequency of studets final semester score achievement using PBL method

No	Internval	In letters	Frequency
1	85 - 100	A	32
2	75 – 84.99	B	8
3	55 – 69.99	C	-
4	40 – 54.99	D	2
5	≤ 39.99	E	5
	SUM		**47**

For more details about the frequency of the final semester score data at table 1.1 can be seen in the form of histrogram graphs as shown in the figure below:

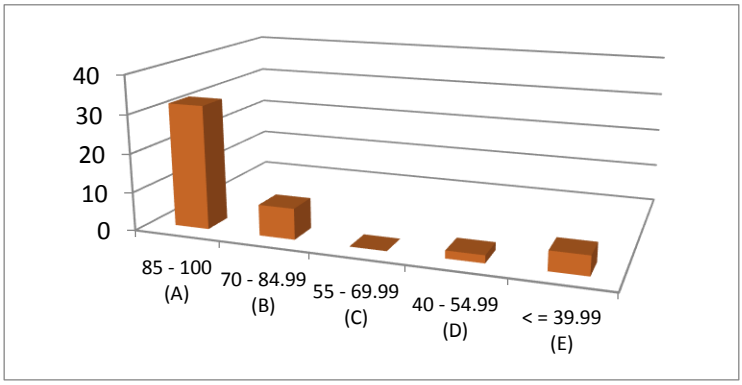


Figure 1.1 Frequency of studets final semester score achievement using PBL method

Overall can be seen that the results of student achievement is good. Out of 47 students, there were 32 students with an average score above 85, 8 students got score between 75 - 84.99, 0 students got 55 - 69.99, 2 students got score between 40 - 54.99, and 5 students got ≤ 39.99.

From direct observation and evaluation it is seen that the learning atmosphere is more active and not boring, due to the reward value given. Students become passionate and enthusiastic to get into the top 10 positions, to get a high score. Even students want this method to be done at all meetings season. Students feel this method is not boring and understanding of the material is more achieved than the use of conventional methods.

D. Conclution

Based on the results of the discussion above, it can be concluded that the application of PBS learning model can improve student motivation and achievement in the course practicum database on Prodi Education Informatics, Hamzanwadi University. This can be seen from the acquisition of the value of the student, with the most value is 85 with the number of students as much as 32 students, the second diurutan as many as 8 people with a range of values between 75-85.99, while 2 students got the score between 40-55.99, and 5 students got a score of ≤ 39.99. It can be seen

that there are 7 students who are not graduated in this course. This is not due to the failure of PBL model implementation, but more due to the absence of students in the lecture session and there is also due to not take the final exam. Student response at the time of learning activities look more enthusiastic and active. Students become passionate and enthusiastic to get into the top 10 positions, to get a high score. Even students want this method to be done at all meetings season. Students feel this method is not boring and understanding of the material is more achieved than the use of conventional methods.

Reference

Ana, Sunarsih & Rohaeni, N. (2013). *Pengembangan Tugas Akhir Melalui Project Based Learning Model Untuk Meningkatkan Generic Green Skill Siswa*. Jurnal Pendidikan Teknologi Kejuruan, 21(3)

Basjaruddin, N., C. & Rakhman E. (2011). *Penerapan Metoda Project Based Learning (PBL) Pada Praktikum Mekatronik*a. Procceding from JBPTPPOLBAN. Industrial Research Workshop and National Seminar.

Bell, S. (2010). *Project-Based Learning ForThe 21st Century: Skills ForTheFuture*. The Clearing House,83, 39–43.

Foss,P.,Carney, N.,McDonald, K.,&Rooks, M. (2007). *Project-BasedLearningActivities For Short-TermIntensiveEnglish Programs*. AsianEFLJournal, *23*, 1-19.

Lestari, D., P., Fatchan, A. & Ruja I., N. 2016. *Pengaruh Model Pembelajaran Project Based Learning Berbasis Output Study Terhadap Hasil Belajar Geografi Siswa SMA*. Jurnal Pendidikan : Teori, Penelitian, dan Pengembangan, 1(3), 475 – 479

Lestari, T. (2015). *Peningkatan Hasil Belajar Kompetensi Dasar Menyajikan Contoh-Contoh Ilustrasi Dengan Model Pembelajaran Project Based Learning Dan Metode Pembelajaran Demonstrasi Bagi Siswa Kelas XI Multimedia SMKMuhammadiyah Wonosari*. Skripsi. Program Studi Pendidikan Teknik Informatika, Fakultas Teknik, Universitas Negeri Yogyakarta

Lindawati, Fatmarlyanti, S., D. & Maftukhin, A. (2012). *Penerapan Model Pembelajaran Project Based Learning Untuk Meningkatkan Kreativitas Siswa Man I Kebumen*. Jurnal Radiasi, 3(1)

Mali, Y.,C., G. (2016). *Project-Based Learning in Indonesian EFL Classrooms: from Theoryto Practice*. IJEE (Indonesian Journal of English Education), 3(1), p.89-105.
doi:10.15408/ijee.v3i1.2651

Mills, J., E. (2003). Engineering Education – Is ProblembasedOrProject-Based Learning TheAnswer? AAEE (The Australasian Association for Engineering Education Inc), 2003-04

Rais, M. (2010). *Project Based Learning: Inovasi Pembelajaran Yang Berorientasi Soft Skill*. Makalah. Seminar Nasional Pendidikan Teknologi dan Kejuruan, Fakultas Teknik, Universitas Negeri Surabaya

Sudarya, Y. (2008). *Pengembangan Project Based Learning Dalam Mata Kuliah Evaluasi Pembelajaran Di PGSD Bumi Siliwangi UPI*. Jurnal Pendidikan Dasar, 10

Thomas, J. W. (2000). *A Review Of Research On Project-Based Learning*. The Autodesk Foundation 111 McInnis Parkway San Rafael California 94903

Quality of Lesson Study Program on The Learning Outcomes in Evaluation of Geography Subject

Hasrul Hadi[1] dan Sri Agustina[2]
Hamzanwadi University
[1]hasrul.hadi77@yahoo.com, [2]agustina.sri87@yahoo.co.id

Abstract

This researchaimsat knowing lesson study program quality on thelearning outcomes.Evaluation of Geography subject.This study is utilized evaluative research design with focus study on each stage of lesson study program, beginning from planning stage (plan), implementation stage (do), and reflection stage (see) on each lecturing. The research is done on lessonstudy that is applied on the studentsofsemester V.B at Geography Education StudyProgram of Hamzanwadi University.This research consistedof 4 lecturing cycles. Data collecting is done by observation technic, documentation and indepth discussion. The research starts from describing each stage process of lesson study in each lecturing cycle, then the critical analisis quantitatively and qualitatively done in each stage. Base on result of data analysis, quality of lesson study program percentage is on 73.57% . After the percentage is converted on Referenced Directive Table Estimation, the quality of LessonStudy was at Good category, but there are some low case of quality in each stage of the lesson study; the presence and participation of lesson study and monev team is low, the model-lecturer is replacement with sudden time, psychological pressure for model of lecture and student with existence lesson study team in the class (observer, cameramen, and monev team), and this is the critical suggestion for the monev team of the lesson study.

Keywords:*program quality, lesson study, Evaluation of Geography learning outcomes*

A. Introduction

An effort to upgrade education quality is improve of teaching and learning process. Therefore, effort to upgrade learning quality must done with continually. Good teaching and learning activity needs to involve various of component who shall be accomplished as student, educator, the purpose of learning, content of learning, learning model, teaching method, medium of learning and learning evaluation (Sanjaya, 2006).

To get good learning outcomes, the learning system in the classroom is done with lesson study. Tjipto Subadi (in Susilawati, 2012) explain that *lesson study* are not a methodic to teach an also not a learning strategy, but *lesson study* are a educator profession construction model through teaching and learning (study of learning) collaborative with cycle system and sustainability based on colegality principle and *mutual learning* to build the *learning community*.

Lesson Study are not a methodic or strategy, but that is learning activity which the subject of that activity is included lecturer, student and some observer (consisting of lecturer in same major). *Lesson Study* consisting of three stages, that is planning (*plan*), implementation (*do*) and reflection (*see*), which that is done with sustainability (Susilawati, 2012).

The important thing in lesson study is preparation of personnel who will be in charge of this Lesson Study activity. Personnel joined in a team who are colleagues from among lecturers in the same study program. The team components is model lecturer, observers, monev teams, and cameramen.The joint tasks of all teams include discussion to prepare the learning activities (*plan*), as well as a discussion of reflection on the learning activities that have been implemented.

Every component must be done optimally. For example in the planning stage, would be a very important and decisive for the next stage. Planning (*plan*) is done must accommodate the problems faced by students, so it can help solve the problem of learning in the classroom.

The important things in the planning of learning according to Sumiati and Asra (2008) are: 1) what goals to be achieved from learning, 2) what learning materials can lead learners to achieve the goals, 3) how the learning process will be created by educators so that learners can achieve goals effectively and efficiently; and 4) how to create using evaluation tools to know or measure whether the goal is achieved or not. Therefore the aspect of planning needs to be implemented as much as possible.

In Japan as the origin of the first time lesson study conducted emphasize on the implementation which is accompanied by research activities (research based). This is as stated by Doig and Groves (2011) which states that Teaching and learning activities with research is at the core of lesson study in Japan, primarily because it provides opportunities to test classroom learning plans and provide opportunities for observation and reflection. In addition, In the implementation of learning should also be ensured conformity with previous learning planning has been done carefully. Starting from the opening, core, and closing activities of learning should be carried out in accordance with the planning. Especially what learning methods used, learning media and supporting learning resources.

Often, learning activities are emphasized on planning and implementation aspects also without any further evaluation process of that two stages. So the result is less than the maximum. Leong, et al (2016) states that lesson study involves not only lesson planning and teaching but also observing and critiquing the lessons observed by a number of collaborating teachers.

But in the implementation there are still many problems, especially in terms of treatment of each component personnel, both model lecturer, observer, cameraman and from the monev team.The existence of inappropriate actions from that four components

causes less effective lesson study program implemented. From that phenomenon, it is necessary to conduct a research to know exactly what is the main problem of lesson study activity, especially from its stages.Therefore, this study aims to determine the quality of lesson study program by reviewing each stage. Thus, it is expected that in the future, the results of this research can be used as a reference to improve the lesson study program maximally.

B. Method

This study is an evaluative research. Sukmadinata (2012) specifies the purpose of evaluative research, 1) assisting planning for program implementation; 2) assist in the determination of improvement or program change decisions;3) assist in the determination of sustainability decisions or discontinuation of the program; 4) finding facts of support and rejection of the program; and 5) provide developments in understanding the psychological, social, political processes in program implementation as well as the factors that affect the program. The purpose to be achieved in this research is to know and ensure the implementation of each stage of the lesson study has been running well and effectively and know the quality of lesson study program in general. So that can be used to determine the decision to perfect the lesson study program that has been implemented. Data collection is done through observation, documentation and in-depth discussion with this lesson study program team.

The process of data analysis is done through two stages. First, the percentage analysis of lesson study stages quality based on the cycle. Second, the percentage analysis of each lesson study stage based on the entire cycle data. It aims to obtain conclusions about each stage of the lesson study quality (*plan, do* and *see*) with reference to the Referenced Directive Table Estimationdetermined. To make it easier to understand it will be presented using graphs. The results of the analysis in this study are then presented descriptively. The quality analysis of each stage is quantitatively calculated based on several formulas as follows:

1. Calculate the average number of each stage lesson study quality using the following formula:

   $M = \frac{\sum X}{N}$

   (adapted from Pembrianti and Putra, 2014)

   Information :

   M =Mean (average) quality score of the each stage of lesson study

   $\sum$ X =the sum of all quality scores per stage

   N =The number of data at each stage
2. Percentage quality of each stage is calculated using formula:

   M% = $\frac{M}{IMS}$ x 100%

(adapted from Pembrianti and Putra, 2014)

Information :

M% =Percentage of average scores each stage

M =Mean (average) quality score of the each stage of lesson study

IMS=Ideal Maximum Standards

3. Percentage quality analysis results of each stage are presented using graphs. While the results of percentage stages analysis of lesson study obtained then converted into the Referenced Directive Table Estimation five scale as follows:

Table 1. Classification of Quality Each Stage of Lesson Study

Quality Level(%)	Category
85-100	Very good
70-84	Good
50-69	Neutral
30-49	Bad
0-29	Very Bad

Source :*adapted from Pembrianti and Putra, 2014.*

C. Findings and discussion

This research was conducted at STKIP Hamzanwadi Selong, East Lombok, NTB. Precisely implemented in the Lesson Study program organized by the Geography Education Study Program in the course of Evaluation of Geography Learning Outcomes semester V.B. The time of this lesson study program is in the odd semester of academic year 2014-2015. The object of this study focuses on quality of lesson study program measured through the quality of each stage of the lesson study program, like the planning stage (*plan*), the implementation stage (*do*), and the reflection stage (*see*). For more details will be described as follows.

Quality of each Lesson Study stage in each cycle

Each cycle of lesson study program consists of three stages, that is planning (*plan*), implementation (*do*), and reflection (*see*). The implementation of this lesson study program is implemented with four cycles. This description will be explained on the basis of the quality of the components of the lesson study at each cycle and its impact on

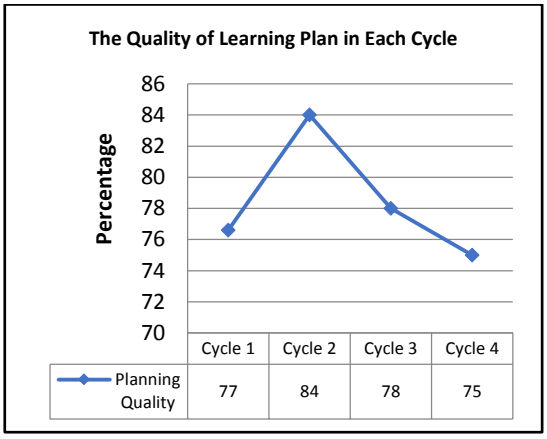
continuity of learning in the classroom. Lesson study components include model lecturer, observer, cameraman and internal monev team. To make it easier, the discussion will be described the development of cyclical quality based on the stages of lesson study program as follows:

- ***Quality of Learning Plan Stage (Plan)***

As a reference for measuring the quality of the lesson planning stage (*plan*), several indicators are used, such as: 1) the presence of the lesson study team; 2) input

and giving of opinion; 3) the organizational structure; 4) internal monev team; and 5) model lecturer. Based on the results of data analysis at the planning stage (*plan*) obtained results as in figure 1. As follows:

Figure 1. Graph of learning plan quality



Source :*primary data, 2017*

Based on Figure 1. It is known that there is a sharp increase in the quality of learning plan

from cycle 1 to cycle 2. In the cycle 1, the quality of learning plan is at 77% while in cycle 2 it increases to 84%. To explain this phenomenon there are several notes of observation that quite different contrast, including:

1) in the 1st cycle, there is no lesson study team that provides suggestions related to instructional media and student assignment design, therefore forced to use not optimally media with so many assignments that students are not enough time in doing it, while in cycle 2 lesson study team provide suggestions on the design of learning, learning media, as well as to observer difficulties in previous observations; 2) if previously in cycle 1 only use one learning model only (expository), in cycle 2 is done combination of learning model that is by using Learning Together (LT) and Number Head Together (NHT) learning model; and 3) in cycle 1 the internal monev team is not present in providing input, while in the cycle 2 of the internal monev team comes and provides inputs to help facilitate the learning plan process. Activity *Plan* cycle 2 can be seen as in figure 2. as follows:

Figure 2. Learning plan activities (*plan*) in cycle 2

Source :*primary data, 2014*

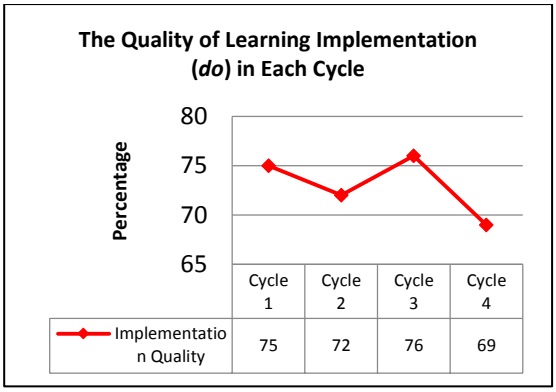
Figure 2 shows that all components of the lesson study's team are present and participate in the planning activities in cycle 2. Composition of lesson study's team components that are present complete, starting from the model lecturer in this case is Sri Agustina, M.Pd (with green headscarf / picture 2.C), internal monev team that is Sururuddin, M.Pd (seated solitude / picture 2.B), and 5 observers (Suroso, M.Si, Haerudin, M.Si, Hasrul Hadi, M .Pd, Tuti Mutia, M.Pd, and Susmala Dewi, M.Pd / Figure 2.A and C) and M. Jailani Alfansuri, M.Pd. as cameraman.

Meanwhile, if observed in the next cycles (3 and 4) then seen a decrease. In cycle 3 the percentage of learning planning quality is at 78% and cycle 4 at 75%. This is due primarily to the fact that the presence of lesson study's team and the internal monev team is so poor that most of the work is hung on the model lecturer simply to make it very busy. In addition, the quality of planning is also reduced.

- ***Quality of Implementation stage (Do)***

To know the quality of learning implementation (*do*), data collection through observation with indicator of activities conducted by lesson study team. Based on the data analysis, obtained the quality of the implementation of learning (*do*) as in figure 3. as follows:

Figure . Graph of Implementation learning quality (*do*)



Source :*primary data, 2017*

In the figure 3, although in the second cycle planning the quality is quite high (84%, see figure 1) but in the cycle 2 do activity, the graph decreases (from cycle 1 to cycle 2).

Based on the findings, this decrease occurs as follows: 1) the number of observers present in cycle 2 is only 4 out of 6 observers, where the observer team cycle is complete, so that they have difficulty assessing the students, 2) the change of model lecturer suddenly with the reason that the original model lecturer should follow other academic activities that can not be abandoned, so the new model lecturers do not have enough time to do the maximal preparation, 3) the existence of tension or psychological disorder when the new model lecturers do the learning process because they are in new situations with the presence of lesson study's teams in the classroom, 4) students also since cycle 1 experiencing psychological learning disorders due to the hectic lesson study's team present in the classroom while ongoing learning process.

Meanwhile, in cycle 3, there was an increase in the quality of learning implementation (*do*) from 72% to 76%. This is mainly due to the presence of a complete observer team coupled with the presence of an external monev team from the State University of Malang. Therefore the process of observation and assessment of both model lecture and student to be better. In addition, improvisation model lecturerthat also make the increased quality of learning implementation. Implementation of learning in cycle 3 can be seen in figure 4. as follows:

Figure 4. Implementation of learning cycle 3

Source :*primary data, 2014*

From Figure 4 we can see that there is a fairly active learning activity, conducted in groups by students. They complete the assigned tasks together with the guidance of the model lecturer (figure 4.A). In addition, the learning activities are also equipped with student worksheets previously prepared by the team (figure 4.C). Eventually each group was asked to write down their work on the whiteboard (figure 4.E). When the learning activities take place, the observer team performs the assessment (figure 4.B,

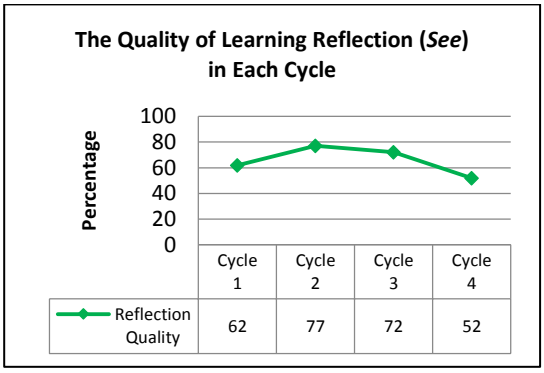
D). Meanwhile, observations were also conducted by internal and external monev team (figures B, and F).

The graph of learning implementation (*do*) goes back down in cycle 4 because only a few observers are present. In addition, the quality of declining planning also triggers the decreasing quality of learning (*do*) in cycle 4.

- ***Quality of Reflection Stage (See)***

As with the planning and implementation, reflection also refer to the observed data. Based on data analysis, the results obtained as in figure 5 as follows:

Figure 5. Graph of Reflection Learning Quality (*See*)



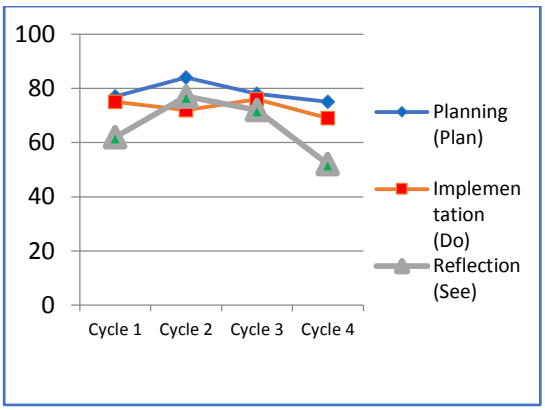
Source :*primary data, 2017*

in Figure 5. it is seen that the reflection (*see*) only quality increases in cycle 2. This is mainly due to several factors, among others: 1) the number of observers are present complete and provide important inputs in the activities of reflection activities, 2) the presence the internal monev team also contributes to input during the reflection, 3) the model lecturer receives input from the team so that it becomes the reference in the lesson study activity in the next cycle.As for decline the reflection graph in the next cycle (cycles 3 and 4), among others, is caused by 1) good enough implementation (do) in cycle 2 so that the team present, both observer, internal and external monev team do not comment much for improvement in the next cycle, some give praise to the implementation of learning activities are quite good, 2) while in cycle 4 the reflection activity has decreased its quality (52%) due to the decreasing number of teams present, especially observer, so that the suggestion and input on cycle 4 reflection becomes less than maximum. The team's lack factor is also caused by some of the team members who left earlier from the rest of the team after the learning activities (*do*) were completed without following the reflection (*see*).

Quality of Lesson Study Program

This is visual picture graph of lesson study program quality every stages:

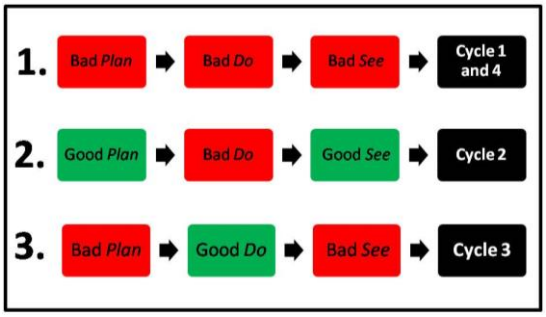
Figure 6. Graph of lesson study quality in each stage



Source :*primary data, 2017*

Both at the stage of plan, do, and see. The final analysis shows the number of 73.57%. Therefore, the quality of the lesson study program in the Evaluation of Geography Learning Outcomes is in the "Good" category. However, although quantitatively it is in the "Good" category there are some important notes qualitatively as a result of the findings, among others, can be explained by Figure 7. as follows:

Figure 7. Results of each stage of the lesson study program



Source :*primary data, 2017*

Based on figure 7 above it can be explained that:

1) *Planning Quality is directly proportional to implementation and reflection.*
   This phenomenon occurs in cycles 1 and 4. It is understood that in cycle 1 is the beginning of lesson study activities implemented, so that the implementation of each stage has not been maximized. While in cycle 4 the quality of all stages decreased mainly due to the presence of factors a) the lack of lesson study's team and internal monev team present so that the planning is only charged mostly to the model lecturer, b) the low quality of planning influences the low quality of learning implementation, c) the low reflection quality is mainly due to the lack of lesson study's teams present to provide input on reflection.
2) *Good planning does not necessarily result in good implementation.*
   This is especially true in cycle 2. The main factor why good planning can not work properly is the sudden change of lecturer model without much preparation. Though the model lecturer is the main determinant of the success of learning in

the classroom. The new model lecturer tend to have strong psychological pressure with the new conditions they face in the classroom. In addition, the low attendance rate of the observer team also triggered the worsening of the implementation of learning because the observer is quite difficult in assessing the activeness of the students.

3) *Bad planning does not necessarily lead to poor implementation.*
In cycle 3 the quality of planning is done less well. But there are some things that cause the increased quality of learning implementation, among which is the ability of improvisation of lecturers model. In addition, the presence of external monev team spurred the spirit of the model lecturer to give the best although there is a bit of psychological distress. The low quality of reflection is also caused by the successful implementation of learning well, therefore weakening the critical power of the team to provide advice and input when reflecting.

D. Conclusions and Suggestions

Based on data analysis conducted, it can be concluded that the quality of lesson study program in the Evaluation of Geography Learning Outcomes is in "Good" category. This is in accordance with the result of the final calculation of each stage of the lesson study program such as plan, do, and see which is at 73.57%. Nevertheless, there are some important qualitative notes to note regarding the low quality of each lesson study stage, especially:

1) poor quality of planning due to lack of attendance and active participation of lesson studys team and monev team in providing careful planning advice
2) low quality of learning implementation caused by low quality of planning and change of lecturer model suddenly
3) psychological pressure for model and student lecturers due to the new situation in the classroom (the presence of lesson study team) also triggered a decrease in the quality of learning implementation.
4) The low quality of reflection is due to the better implementation so as to reduce the critical power of the lesson study team and the monev team in providing suggestions and inputs on reflection.

Based on the results of this research, the researchers recommendations is :

1) The presence and active participation of all lesson study team members play an important role in the quality of all stages in the lesson study, so that in the future the attendance aspect must be taken seriously.
2) Commitment must be built primarily in determining the position of the lesson study team, especially the model lecturer, not to be replaced frequently so that the lesson study process can work well in accordance with what is planned

3) Psychological disturbance or pressure due to the presence of observer, cameraman and monev team should be able to be reduced, so that the learning process can run smoothly
4) Successful implementation of learning should not be a trigger weak team's critical power in providing input at the time of reflection, so that the next cycle can be done with maximum results.

References

Doig, Brian., dan Groves, Susie. (2011). Japanese Lesson Study: Teacher ProfessionalDevelopment through Communities of Inquiry. *Mathematics Teacher Education and Development.* (13), 77-93.

Leong, S.S.M., Said, H.M., Shahrill, M., dan Perera, JSHQ. (2016). Using lesson study to enhance meaningful understanding on the topic of pressure. *International Journal of Environmental and Science Education.*(11), 8425-8435.

Pembrianti, E.Z., dan Putra, A.M. (2014). *Penerapan Green Class Sebagai Model Pembelajaran Kontekstual pada Mata Kuliah Ekologi Lingkungan untuk Meningkatkan Afeksi Mahasiswa Program Studi Pendidikan Geografi STKIP Hamzanwadi Selong.* Laporan Penelitian. Tidak diterbitkan. Program Studi Pendidikan Geografi STKIP Hamzanwadi Selong.

Sanjaya, W. (2006). *Strategi Pembelajaran Berorientasi Standar Proses Pendidikan.* Jakarta: Kencana.

Sukmadinata, N.S. (2012).*Metode Penelitian Pendidikan.* Bandung : PT Remaja Rosdakarya.

Sumiati dan Asra. (2008). *Metode Pembelajaran.* Bandung : CV Wacana Prima.

Susilawati, S.A. (2012). *Implementasi Lesson Study dalam Meningkatkan Pembelajaran Mata Kuliah Geografi Tanah.* Makalah Seminar Hasil Lesson Study Semester Genap tahun ke-2 di Auditorium Jazman, UMS.

Developing Illustration Drawing-Based Economic Market Lesson For Class X of MA Mu'allimin NW Kelayu

Muhammad Zainul Majdi[1], Farhana Muhammad[2], Herlina Martini[3]
Hamzanwadi University, Indonesia
m.zainulmajdi@gmail.com, Farhana.fm88@gmail.com, Martini.herlina@yahoo.com

Abstract

The objectives of this research are: (1) to develop illustration-based teaching material; (2) to know the feasibility of illustration-based teaching materials; (3) to find out teacher's response and student's response to the development of illustration-based instructional material on economic subjects. This research is Research and Development (R n D) research using Borg & Gall development model. The subjects of the study were the students of class X MA Mu'allimin NW Kelayu consisted of 2 classes: small group try out of 9 students, and large group consisted of 30 students. The main instrument is illustration-based teaching material. Data collection techniques used observation techniques, interviews, and questionnaires. The technique of data analysis was throughLikert scale which then changed to percentage number and draw conclusion.The result of the research shows that 1) the result of feasibility test of expert team covering media expert and material expert obtained by material validation that 76% with valid category, and validation of view that is equal to 85% with valid category (valid) without revision; 2) the result of the assessment of the teacher obtained the percentage of assessment of 82% with very valid category (valid); 3) The small group try out resulted 93% with very good category; 4) the large group resulted 92% with very good category. The overall result of the research shows the illustrated picture-based economic resource materials on the material money value of use in economic lesson.

Keywords:*development, teaching materials, illustration drawings*

A. Introduction

Education is one aspect that affects the progress of a nation. Until now more and more people are aware of the importance of education. The government has also launched a 9-year compulsory school policy. It is a concrete manifestation of the goverment that always strives to keep advancing and educating the nation. But the success will not be achieved if there is no support from various parties involved who participate directly participate in the process of achieving that success. Both from the government, to the teachers at each level of school

Teachers are one of the most important aspects that can also affect the quality of education. The way of delivering material done by teachers during teaching and learning activities, can affect students in understanding the subject matter provided. But not only teachers who play a role, there are other aspects that can also affect such as learning environment, also completeness of facilities and infrastructure. In addition, there is also a media supporting the learning process such as teaching materials used.

According to Amri (2010: 159) teaching materials are all forms of materials used to assist teachers / instructors in carrying out teaching and learning activities in the classroom. So it is expected that the right teaching materials for learners, can provide benefits and ease in learning a material that will be taught by the teacher.

Learning materials are external factors that can strengthen students' motivation to learn. With well-designed instructional materials and interesting contents and illustrations will stimulate students to take advantage of these teaching materials (Majid, 2012: 42)

As is known that humans are visual beings, that is more interested in something that is visible to the eye. Edgar Dale (Anitah, 2010: 8) says that images can divert learning experiences from the learning stage with the symbol of words to a more concrete level (direct experience). Through the image can be translated abstract ideas in a more realistic form that can facilitate understanding and strengthen the structure of memory.

Images or illustrations can be used to construct instructional materials. Anitah (2010: 11) defines ilutrasi is a picture or form that accompanies the text, picture or writing is a unity that aims to clarify the text or printed book published.

According to Weidenmann (Majid, 2012: 178) illustrates that seeing a picture / photo is more meaningful than reading or listening. Through reading that can be remembered only 10%, from listening to the remembered 20%, and from seeing 30% recall. Teaching materials with well-designed images can provide a better understanding.

Economic subjects are Social Science lessons (IPS) that examine the behavior and actions of humans to fulfill their diverse needs. In the process of delivery of subject matter economics more emphasis on verbalism or teacher in applying method of teaching emphasize on activity of teacher, not at student activity so that happened of accumulation of information to learners. Whereas if teachers are able to develop teaching materials that attract students attention it will also motivate and improve student learning outcomes.

Based on the observations that have been done in MA Mu'allimin NW Kelayu, it is known that the teaching and learning facilities used are still not complete due to the limited cost of the school, the material is also not complete, in the school library there is a book package used for reference but the number Inadequate for all learners. At the time of economic learning process learners are also less eager to read or study books mareka package, and there is no illustration-based teaching materials used in the learning process. Therefore, this illustration-based drawing material is very much needed by the students of class X MA Mu'allimin NW Kelayu so that the researcher is interested to do the research by developing the illustration-based teaching material in class X MA Mu'allimin NW Kelayu on economic subjects.

Furthermore, with various considerations of limitations, this development leads to the subject of money. The reason for choosing this subject is because the researcher feels the application of illustrative picture media is suitable to be applied in this subject. In addition, the selection of this subject is also because it consists of several economic concepts that must be understood by students such as money history, money function, money type, money demand and money supply.

The development model used to develop the illustrated image-based teaching materials is the Borg and Gall development model. The reason for choosing this development model is

because the model is perceived in accordance with the development steps as well as testing the feasibility of teaching materials that researchers will develop.

From the description of the above description, it is this that encourages the author to conduct research entitled "Development of Economic Image Based Image Illustration In Class X MA Mu'allimin NW Kelayu 2017/2018 school year".

B. Theoritical review

Development of teaching materials

The most important thing that teachers often face in learning activities is choosing or determining learning materials or appropriate teaching materials in order to help students achieve competence (Darmadi, 2010: 211). In addition, teachers should also be able to develop existing teaching materials to create an interesting learning for students.

Learning materials need to be developed carefully so that learning in accordance with the objectives to be achieved. Herry (2012: 5) said that developing learning materials is an activity of designing learning materials into materials that are ready to be delivered / used in the learning process.

Amri (2010: 160) suggests the principle of development should be in sequence as below:

1) Starting from the easy to understand the difficult, from the concrete to understand the abstract.
2) Repetition will strengthen understanding.
3) Positive feedback will provide reinforcement to learners' understanding.
4) High learning motivation is one of the determinants of learning success.
5) Achieving the goal is like going up the stairs, step by step, will eventually reach a certain height

Teaching materials

Amri (2010: 159) defines teaching materials are all forms of materials used to assist teachers / instructors in carrying out teaching and learning activities in the classroom. Or it can be said that teaching materials is everything that is used to assist teachers in implementing the process of teaching and learning in the classroom.

Darmadi (2010: 214) suggests there are several principles that need to be considered in preparing the teaching materials, as follows:

1) The principle of relevance means interconnectedness. Learning materials should be relevant or relevant or have to do with the achievement of competency standards and basic competencies.
2) The principle of consistency. If the basic competencies that must be mastered by students of four kinds, then the teaching materials that must be taught must also include four kinds.
3) The principle of adequacy means that the material taught should be sufficient in helping students master the basic competence taught. Material should not be too little, and should not be too much. If too little will be less helpful to reach the standard of competence and basic competence. Conversely, if too much will be a waste of time and energy that is not necessary to learn it

There are several types of teaching materials as proposed by Amri (2010: 161), namely: (1) Visual teaching materials consist of printed materials such as hand outs, books, modules, worksheets, brochures, leaflets, wallchart , Photo / image, and non printed (non printed) like model / model. (2) Hearing materials (audio) such as cassettes, radio, LPs, and audio compact disks. (3) Audio-visual teaching materials such as video compact disks, films. (4) interactive teaching materials such as CAI (Computer Assisted Instruction), interactive multimedia compact disc (CD), and web based learning materials.

Illustration Drawings

Images are often used visual media because they are easy to understand and can be enjoyed, easy to find and find everywhere, and many provide explanations when compared with verbal media. Well designed photos / images can provide a better understanding.

According to Weidenmann (Majid, 2012: 178) illustrates that seeing a picture / photo is more meaningful than reading or listening. Through reading that can be remembered only 10%, from listening to the remembered 20%, and from seeing 30% recall

In the Great Indonesian Dictionary the fourth edition of illustration is defined as a picture to clarify the contents of the book, essay. Anitah (2010: 11) defines illustrations as images or embodiments that accompany the text, images or writings are an entity that aims to clarify the published text or printed book.

Presentation of subject matter by using the picture is certainly a special attraction for students. Then the use of images / photos should be in accordance with the subject matter taught, and the desired goals.

The difference between image and verbal images is: (1) image media visualize what it is in detail, (2) verbal (words) weakness lies in the limitations of memory in telling stories and explaining so there may be things that are scattered or forgotten in conveying the message.

From the results of research Seth Spaulding quoted from Idawati (2012: 35) about how students learn through the pictures, can be concluded as follows:

1) Picture illustration is a teaching tool that can attract students' learning interest effectively.
2) Picture illustration is an abstract level device that can be interpreted based on past experience through the interpretation of words.
3) Picture illustration helps students read textbooks especially in interpreting and recalling the content of the accompanying text material.
4) Illustration of the image of its contents must be linked with real life in order to be effective student interest.
5) In booklets, most children prefer half or one full-length pages, along with some clear instructions. Better yet, if more than half the contents of the booklet contain illustrations of images.

The illustration of the image of the contents should be arranged in such a way that it is not contrary to the eye movements of the observer, and the most important parts of the illustration should be centered in the upper left of the image field.

According to Anitah (2010: 9) the benefits of images as visual media are:

1) Create attraction for students. Images with different colors will be more interesting and arouse students' interest and attention.
2) Easing students' understanding. An abstract explanation can be helped with drawing so that learners can more easily understand what is meant.
3) Clarify the important parts. Through the drawing, can be enlarged parts that are important or small so that can be observed more clearly.
4) Shorten a long description. The description may be indicated by a picture only

While Live and Lepts in Akbar suggested visual media functions include:

1) Attention function, which attracts the attention of students to concentrate on the content of the lesson.
2) Affection function, which is to create student feelings of pleasure.
3) The function of cognition, namely the tool to understand and remember information.

Effective And Exciting Learning

One of the learning goals teachers must achieve should create an effective, efficient and enjoyable learning environment that will enable students to remember, understand, and understand the material described by the teacher. As the principle in quantum learning books that learning should be fun and takes place in a happy atmosphere so that the entrance to new information will be wider and well recorded (Ulfah, 2013: 60).

Effectively defined as the achievement of a goal (competence) which is the main foothold of a learning design (Susilawati, 2012: 492).

According to De Potter et al. (1992) in Maaruf (2009: 24), there are three kinds of student modalities to be self-strength to develop the ability to learn effectively, namely visual, auditorial and kinesthetic modalities. With visual modalities meant that the power of student learning lies in the sense of 'eye' (reading text, graphics or by seeing an event), auditorial strength lies in the sense of 'hearing' (listening and listening to explanations or stories), and kinesthetic power lies in ' '(Such as pointing, touching or doing). Thus, by understanding the tendency of the student's modalities potential, a teacher must be able to design a media, method / or contextual learning material relevant to the student's potential or learning modalities.

According to Maaruf (2009) effective is active and fun, and fun is to create a fun learning atmosphere so that students focus their attention fully on learning, and time of task (attention of task) to student learning.

While Susilawati (2012: 492) suggests fun defined as a teaching atmosphere that "live", vibrant, conditioned to continue, expressive, and encourage concentration of learners' attention to learning.

C. Method

In the development of this resource, the development procedure is done through 8 stages, namely:

1. Requirements analysis phase

Needs analysis is done by observation on teacher and class X students in MA Mu'allimin NW Kelayu. Next is to collect information about the manufacture and development of illustrated illustrative-based instructional materials as needed.

2. Learning development planning stage
   Planning of learning development by referring to Competency Standard and Basic Competence of economics subject according to RPP used in MA Mu'allimin NW Kelayu.
3. Product development stage
   Product development is done by outline the contents of teaching materials, explaining what will be written, referring to the Competency Standards and Basic Competencies economic subjects especially for the class X in MA Mu'allimin NW Kelayu. Given this, the researchers can easily develop teaching materials images illustration in MA Mu'allimin NW Kelayu.
4. Initial product
   Initial product is the first result of illustration-based image teaching material before revision. The illustration-based teaching materials will then be validated by the material and media experts before being tested in the X grade students at MA Mu'allimin NW Kelayu.
5. Validation of products
   Validation of teaching materials is done by media experts and material experts. In validation, material experts and media experts used a questionnaire to find out the level of eligibility of the teaching materials measured by the Likert scale. The researcher revised the module based on the suggestion of material experts and media experts, so that the final result of the teaching materials was obtained.
6. Trial of small group products
   Trial on small groups of 9 students of class X MA Mu'allimin NW Kelayu and asked for his assessment by questionnaire. Then do the analysis of the results of the assessment of students, then do the revision based on the assessment of learners.
7. A large group product trial
   Trial on a large group of 30 students of class X MA Mu'allimin NW Kelayu and asked for his assessment by questionnaire. Then do the analysis of the results of the assessment of students, then do the revision based on the assessment of learners.
8. End product
   The final product is the stage that the illustrated illustrated classroom image learning product for class X has been tested and validated by media experts and material experts, and assessed by students and economics teachers. The teaching materials are then revised and then checked again so that the material is considered feasible to use. The form of this product in the form of print module can be used as learning media of class X students, especially the students of class X MA Mu'allimin NW Kelayu.

D. Results

Research and development is done in the form of development of teaching materials, where research and development aims to determine the feasibility of Economic Image Based Image Image Illustration On Money Material Class X MA Mu'allimin NW Kelayu. In this study the product developed is an economic resource based on illustration, in teaching materials there is a word of motivation to provide motivation to students, containing 1 subject that is money, there is a glossary that aims to facilitate students to understand the existing term, Fun and

answer sheets that have been provided. The design of the material is interesting and accompanied by images that match the material money.

Prior to trial the teaching materials were first validated by a team of experts to find out whether the teaching material is valid or not, so it can be used in research. Expert validation results are the basis for determining whether or not a product is developed for use by students. Validation is done by 2 experts namely material experts (validator I) and expert view (validator II).

The overall score given by the experts on each aspect, then accumulated and averaged. Validation results by validator I by assessing 4 aspects, namely content quality aspect of 79% with good category, feasibility aspects of presentation of 70% with good category, language feasibility aspects of 75% with good category, and product attractiveness aspect of 81% with Category is very good, so obtained an average score of material expert validation of 76% indicating that the resulting product is feasible (valid). The value obtained from media experts is validator II by assessing 4 aspects, namely module size aspect is 75% with good category, cover aspect aspect is 88% with very good category, module content design aspect 89% with very good category, and content illustration aspect Of 75% with good category, so obtained the average score of media expert validation (view) of 85% indicating that the resulting product is feasible (valid).

The results of the assessment by experts I and II found that the resulting product feasible to be used by students of Class X MA Mu'allimin NW Kelayu. Expert validation results show that the resulting product can be tested on the subject that has been determined that the students of grade X MA Mu'allimin NW Kelayu. The trials were conducted in two stages: small group trials with 9 students as respondents and large group trials of 30 students. From the experimental activity, the data obtained is the result of the students' response to the economic materials based on illustration drawings.

Based on the results of teacher assessments of illustrated image-based teaching materials that is obtained percentage of 82% which indicates that the product is very well produced. Teacher assessment includes 4 aspects, namely the quality of contents of 87% with very good category, the aspect of presentation is 90% with very good category, the language feasibility aspect is 78% with good category, and the product attractiveness aspect is 75% good.

Based on the results of students' responses to the products tested on small group trials obtained the results of assessment of 3 aspects of the interest aspect of 100% with very good category, the material aspect of 81% with very good category, the language aspect of 96% with very good category, So as to obtain an average percentage of 93% in very good category. In the large group trial, it was found that the average percentage of 92% in the category was very good also with the evaluation of 3 aspects, namely the interest aspect of 98% with the category very good, the material aspect 80% with good category, and the language aspect of 95% very good. This is because the picture-based economic illustrations have been through the guidance and expert assessment stage. So the students responded very well.

From the results of validation by the expert, teacher response, and student's response to the illustration-based picture-based economic materials on the money material that has been developed in the research, the resulting product is Image-Based Economics Image Illustration

On Money Material Class X MA Mu'allimin NW Kelayu The 2017/2018 School Year is worthy of use in the learning process.

References

Amri, Sofan, dan Khoiru Ahmadi. (2010). *Konstruksi Pengembangan Pembelajaran.* Jakarta: PT. Prestasi Pustakarya.

Anitah, Sri. (2010). *Media Pembelajaran).* Surakarta: Sebelas Maret University Press.

Darmadi, Hamid. (2010). *Kemampuan Dasar Mengajar*. Bandung: Alfabeta.

Idawati. (2012). *Konsep Dan Jenis-jenis Media Pembelajaran.* Malang: UniversitasNegeri Malang.

Majid, Abdul. (2012). *Perencanaan Pembelajaran.* Bandung: PT. RemajaRosdakarya.

Sa'dun, Akbar. (2013). *Instrumen Perangkat Pembelajaran*. Bandung: PT. RemajaRosdakarya.

Maaruf, Zuhdi. 2009. Implementasi Pembelajaran Aktif Kreatif Efektif dan Menyenangkan (PAKEM) Untuk Pendidikan Sains Di Sekolah. *Jurnal Geliga Sains , vol. 2, hal. 19-28.*

Ulfah, Maulidya. 2013. Pengembanan Pembelajaran Aktif, Inovatif, Kreatif, Efektif dan Menyenangkan (PAIKEM) Di Sekolah Taman Kanak-kanak Full day. *Vol .XX, No.2.*

Susilawati, Made. 2012. Pengenalan Pembelajaran Aktif Kreatif Efektif dan Menyenangkan (PAKEM) Dalam Meningkatkan Pemaaman Konsep Matematika Di SMPN 4 Kubu tambahan Bulelng.

Improving University Students' Pronunciation of English Vowels /ɪ/ and /e/ through Quiz-Demonstration-Practice-Revision (QDPR)

Moedjito
HamzanwadiUniversity
mas.moedjito@gmail.com

Abstract

The current study aimed at investigating the effectiveness of Quiz-Demonstration-Practice-Revision (QDPR) in improving university students' pronunciation of the unrounded close-mid near-front English vowel /ɪ/ and the unrounded close-mid front English vowel /e/. To achieve the goal, the present researchers conducted a one-group pretest-posttest design. The experimental group was selected using a cluster random sampling. As the treatment, the group was taught using QDPR the second step of which the students were explained how to produce the target phonemes in Bahasa Indonesia as their national language. Before and after the treatment, the participants were given oral and written tests related to the target phonemes. Additionally, after the treatment, a questionnaire on QDPR was administered to the participants. The collected data were submitted to a paired-sample t-test to determine whether QDPR was significantly effective in improving students' pronunciation. Moreover, the data were submitted to simple regressions to examine the contribution of QDPR to students' pronunciation. The results of data analysis have revealed that (1) QDPR was significantly effective in improving students' knowledge of pronunciation, and (2) QDPR significantly helped the students to improve students' pronunciation. One of crucial pedagogical implications of the study is that QDPR can be an alternative model to English pronunciation instruction in EFL classrooms.

Keywords: *pronunciation, front English vowels, QDPR*

A. Introduction

One of the most prominent features of human language is the nature of language as a system, implying that a language is composed of two systems: a system of sounds and a system of meaning. The relationship between these two systems is very crucial because in normal human verbal communication message is conveyed or received primarily through sounds or vocal symbols. Additionally, another feature of human communication is that language is a cultural transmission. It denotes that a communication system must be discovered through communicative interaction with other users of the language. This suggests that not only features of a language can be totally acquired, but also some parts of the language should be learnt. Thus, language learning is also needed. The consequence of both features of human language above is

that in any language programmes, including English language education, pronunciation as a part of system of sounds should be propositionally treated as two other dominant components of language, grammar and vocabulary.

However, the current situation shows that most people who are involved directly or indirectly in English language teaching and learning programmes only concentrate on their attention to the last two components. This situation actually contrasts with the nature of language itself which requires a balanced deal of language system and meaning (Tudor, 2001). We shall, therefore, include pronunciation as a part of our language teaching programmes because paying no or less attention to pronunciation teaching does eventually affect students' language mastery and the process of the whole communication, particularly when they utilise the target language in real situations later. At the beginning level, the insufficient capability of pronunciation, of course, does not always have a significant impact on the process of communication but at higher levels it does.

The reappraisal of pronunciation teaching in EFL contexts is also in line with the globalisation which increases the role and status of English. Nowadays, English really becomes a global language. English is now one of the main languages for oral communication (Crystal, 1997; Jenkins, 2000; McKay, 2002). A pedagogical implication of the status of English as a global language, we need to reappraise pronunciation as a part of English teaching in EFL classrooms (Jenkins, 2000; McKay, 2002). In the process of re-examination of pronunciation teaching, as Cruttenden (2001) reminds us, we need to answer the following three questions: (1) What form of pronunciation is to be taken as a model?,

(2) What level of performance is to be aimed at?, and (3) What general principles should underlie the teaching of pronunciation?

The first question is the most crucial because we start teaching pronunciation from this point. In the earlier days, the answer may be simply the undifferentiated British English or American English. To be extended, beside the British Received Pronunciation and General American, it may be other possibilities such as those native varieties spoken in Australia, Canada, New Zealand, and South Africa. But now, as an impact of globalisation, it is more difficult to provide an appropriate answer because there are also foreign-language varieties such as Japanese English (Japlish), Singaporean English (Singlish), and many others. The appropriate candidate to answer the question may be English spoken by many people in the globe, either as a working language or as a daily life language. However, which model of pronunciation is still unclear. For this reason, it is necessary to address which type of English is appropriate as a model of pronunciation teaching in EFL classrooms.

In terms of the second question, traditionally the goal of pronunciation teaching has been to enable EFL learners to attain native-like pronunciation of English. However, as more and more people have come to use English as a means of wider communication across cultures, the focus of pronunciation teaching has shifted from how learners can attain native-like pronunciation to how learners can transact information effectively in oral communication. As a result, intelligibility rather than native-like pronunciation has become a legitimate goal of pronunciation teaching (Abercrombie, 1963; Celce-Murcia, Brinton, & Goodwin, 1996; Jenkins, 2000). This leads us to another crucial question in pronunciation teaching: What aspects of pronunciation constitute intelligibility? It is not so simple a question to answer since intelligibility is generally divided into three types: comfortable intelligibility (i.e., intelligibility non-native speakers should aim at when they try to talk to native speakers), mutual intelligibility (i.e., intelligibility non-native speakers should aim at when they try to talk to non-native speakers), and global intelligibility (i.e., intelligibility non-native speakers should aim at when they try to talk not only to native speakers but also to non-native speakers). Comfortable intelligibility is usually achieved by a successful manipulation of rhythm, intonation, and word and sentence stresses (Celce-Murcia et al., 1996; Cruttenden, 2001) while mutual intelligibility is usually achieved by a successful manipulation of segmental features (consonants and vowels) and sentences stress (Jenkins, 2000). Meanwhile, global intelligibility (Moedjito & Ito, 2008) is usually achieved by a successful manipulation of segmental accuracy, word stress, nuclear stress, and adjustments in connected speech.

The third question deal with the priority and techniques for teaching pronunciation. In terms of priority of pronunciation instruction, a survey conducted by Moedjito (2008) indicated that both Indonesian secondary school teachers of English and students perceived that both consonants and vowels were still the most preferable components to teach/learn rather than the others whereas phonetic transcription and rhythm should not be the main priority. A recent survey (Moedjito, 2016) also showed that segmental features should be regarded as more important for Indonesian EFL learners. Surprisingly, this finding was not in accordance with the current trend of pronunciation teaching which strongly recommends suprasegmental features. As the techniques for teaching pronunciation is concerned, the latest study has unveiled that EFL teachers should utilise a variety of techniques for teaching pronunciation as proposed by some applied linguists such as Celce-Murcia et al. (1996), Dalton and Seidlhofer (1994), Tudor (2001). However, there is one important technique found in the study, namely teacher explanation in students' L1. This point becomes a main difference from other applied linguists. Teacher explanation in students' own language make them easier to understand the procedural knowledge of language, particularly the system of English phonology.

Based on the above discussion, it is necessary for us to find a learning model of pronunciation teaching that is suitable to our goal, that is, global intelligibility (Moedjito & Ito, 2008). Regarding the priority and techniques for teaching pronunciation in EFL classrooms (Celce-Murcia et al., 1996; Dalton &Seidlhofer, 1994; Moedjito, 2016), the present researcher proposed a learning model of pronunciation teaching named Quiz-Demonstration-Practice-Revision (QDPR). Basically, the overall step of QDPR is similar to the step of common language learning, especially related to pre-activity, whilst-activity, and post-activity. However, compared with other models of pronunciation teaching, QDPR has distinctive steps, particularly in the whilst-activity. There are four prominent steps of QDPR briefly described as follows:

(1) *Quiz*. QDPR learning model of pronunciation began with Quiz. In this step, the teacher started with asking the students to pronounce the target sounds on the shown flashcards. He/she asked the students individually, in group, or classically. While asking the students to produce the target sounds, he/she paid attention to the target sounds produced by the students. In this way, he/she would decide whether the students produced the target sounds accurately or not. Thus, he/she could decide if all the students or some of them had difficulties in producing the target sounds. Whenever he/she found that the students, even only one student, had problems with pronunciation, he/she could proceed to the next step.

(2) *Demonstration*. Having identified the students' difficulties in pronouncing the target sounds, the teacher continued the learning process to the second step, namely Demonstration. First, he/she explained how to produce the target sounds in students' first language (L1), in this case Bahasa Indonesia. The medium of teachers' explanation in Bahasa Indonesia was the most prominent characteristic of QDPR learning model. The objective of using students' L1 is to make easier the students' to understand how to produce the target sounds. Secondly, as the name of this step, he/she demonstrated how to produce the target sounds. These two steps had to be done simultaneously so that not only did the students understand to produce the target sounds, but also they are able to produce them. By doing so, in the second step, the students were introduced to some knowledge of English pronunciation and encouraged to produce accurately the target sounds. This step ended with his/her confirmation on students' understanding of how to produce the target sounds. Whenever there was a positive confirmation from the students, the next step, namely Practice, could be done.

(3) *Practice*. By dividing the students into several small groups, the step of Practice began with providing an opportunity for the students to analysis and to identify the target sounds with their spelling. This step should be done because English is one of deep languages, meaning that the spellings do not correlate to their sounds:

difference spellings make the same sounds, the same spelling make different sounds. That is why it is crucial to do spellings-sounds analysis and identification. Following this step, the students were given a chance to do oral practices. The oral practice may be done individually, in group, or classically. The aim of this step is to provide the students with ample time to recognize and to produce the target sounds. While the students were practicing orally the target sounds, the teacher was identifying students' potential problems. Whenever he/she found the problems, both students and the teacher were at the step Revision.

(4) *Revision*. As explained above, the step of Revision occurred because of the identified problems faced by the students the step of Practice. This step can be done individually, in group, or classically, depending on how many students had problems. One or two students would be treated individually while some students would be treated in group, and most of the students would be classically revised. However, in some cases, the teacher could not detect the students' problems in oral practices. If this situation happened, the teacher provided some time to the students to ask questions or to give comments. If so, he/she might ask other students to answer or give comments on their friends' questions/comments.

Unfortunately, we do not have any information if QDPR is significantly effective as learning model in pronunciation teaching. We do not know if QDPR can improve EFL learners' knowledge of English pronunciation. Finally, we do not know of QDPR can improve EFL learners' oral performance. Thus we really need this information so that QDPR may become an alternative learning model in pronunciation teaching. To provide this missing information, the current researcher tried to examine the effectiveness of QDPR in improving university students' knowledge of English labiodental fricative consonants and their ability to produce these phonemes. The present researcher intentionally chose the similar English vowels, namely the unrounded close-mid near-front English vowel /ɪ/ and the unrounded close-mid front English vowel /e/, because they do not exist differently in the mother tongue of the present participants so that both of the phonemes were categorised as serious and common mispronunciations (Moedjito, 2008). The current research was aimed at answering the following questions:

(1) Is QDPR significantly effective in improving EFL learners' knowledge of the unrounded close-mid near-front English vowel /ɪ/ and the unrounded close-mid front English vowel /e/?
(2) Is QDPR significantly effective in improving EFL learners' ability to produce the unrounded close-mid near-front English vowel /ɪ/ and the unrounded close-mid front English vowel /e/?

(3) Does QDPR contribute significantly to EFL learners' knowledge of the unrounded close-mid near-front English vowel /ɪ/ and the unrounded close-mid front English vowel /e/?
(4) Does QDPR contribute significantly to EFL learners' ability to pronounce the unrounded close-mid near-front English vowel /ɪ/ and the unrounded close-mid front English vowel /e/?

B. Method

Participants

The participants of the present study were 31 Indonesian university students enrolling Department of English Language Education at a private university in the regency of Lombok Timur, the province of Nusa Tenggara Barat, Indonesia. The participants of the study were selected regarding the following inclusion criteria: (1) they had attended the course of English Pronunciation Practice offered by the Department of English Language Education, Hamzanwadi University, (2) they still had difficulties in English vowels and consonants, and (3) they participated voluntarily in the study which was designed for 11 sessions. Thus, if a participant was absent for one session or more, they would be excluded.

Data Collection

To solve the proposed research questions, the data of the study was collected by three different instruments: a questionnaire on QDPR learning model, an oral reading test, and a paper-and-pencil pronunciation test. The questionnaire was distributed to the participants to provide information on their opinion on QDPR learning model. The oral reading test was administered to measure the participants' oral performance while the paper-and-pencil pronunciation test was conducted to assess their knowledge of English labiodental fricative consonants.

The questionnaire was developed on the basis of the proposed research questions and a number of considerations, such as the theories of language and language learning, numerous previous research findings, the results of observations, and the author's self-experience as a senior lecturer of English Language Education Department, Hamzanwadi University. The questionnaire was developed to discover the participants' perceptions of implementation of QDPR Learning Model, including the participants' difficulty in pronunciation, the participants' involvement in QDPR program, steps of QDPR Learning Model, teaching media, the allotted time for QDPR Learning Model, and the participants' general perceptions of QDPR Learning Model.

As far as oral reading test, the participants were asked to read aloud a 405-word passage. Their utterances were recorded and then presented to the assessors. For the statistical analysis, we focused on the first 20 speech sounds of the content words (tokens, not index) for each target consonant. The assessors gave a score for each utterance using 3-point Likert scale (i.e. 3 = accurate, 2 = not so accurate, and 1 = not accurate). The accuracy level was on the basis of the Third Edition Cambridge Advanced Learner's Dictionary.

Concerning the paper-and-pencil pronunciation test, the participants completed the word-level pronunciation knowledge test, consisting of 100 questions for sound discrimination. Each question had four options (words). The participants were asked to examine if the underlined parts had the same pronunciation or not. If they thought that the underlined parts had the same pronunciation, they were asked to write '1' (one) in the provided space; otherwise, they had to write '0' (zero). The 400 words in the test were basically selected from the word lists of Moedjito's book (in press) entitled English Pronunciation Practice. In order to elicit their real time judgment as much as possible, the participants were required to spend only 15 seconds for each question.

Data Analysis

The data collected from the questionnaire and tests were quantitatively analysed. In addition to descriptive statistics, the data were submitted to paired-sample *t*-test to examine whether QDPR is significantly effective in improving EFL learners' knowledge of English similar vowels and their ability to produce them. Moreover, the Pearson's correlation coefficients were calculated for QDPR learning model to each dependent variables (i.e., EFL learners' knowledge of English pronunciation and their ability to pronounce English pronunciation of the target vowels). If the coefficient of each correlation had at least a modest correlation ($r \geq .40$), the data were then submitted to a simple regression analysis using IBM Statistics 22 for Windows.

C. Findings And Discussion

Descriptive Statistics

Table 1 depicts the summary of the descriptive statistics of the investigated variables in the current study, mean scores (*M*) and standard deviations (*SD*). Moreover, it shows the correlation coefficient of the independent variable (QDPR Learning Model) to each dependent variables (EFL learners' knowledge of English vowels /ɪ/ and /e/; and their ability to pronounce the target vowels).

Table 1. Descriptive statistics

Investigated Variables	*M*		*SD*	
	Pre	Post	Pre	Pos
QDPR		89.7		3.4
Knowledge	55.7	86.8	7.0	7.1
Oral	59.7	86.7	5.4	6.4

As shown in Table 1, the mean scores of the investigated variables are 89.71 for QDPR learning model, 83.39 for EFL learners' knowledge of English target vowels, and 83.26 for EFL learners' ability to pronounce English target vowels. Submitting the collected data to two-sample independent *t*-test, we found that there was no significant difference in the mean scores between these two variables, $t_{(df=30)}$ = .80 at p = .26, meaning that the mean score of EFL learners' knowledge of English vowels /ɪ/ and /e/ was relatively the same as that of EFL learners' ability to pronounce English vowels /ɪ/ and /e/.

After performing a series of paired-sample *t*-tests for the data of pre-test and post-test, the results have shown that there was a significant difference in the mean scores between the pre-test and the post-test for both of EFL learners' knowledge of English vowels /ɪ/ and /e/ and EFL learners' ability to produce these phonemes, $t_{(df =30)}$ = 40.47 at p< .01 and $t_{(df =30)}$ = 38.43 at p< .01 respectively. This implies that QDPR is significantly effective in improving EFL learners' knowledge of English vowels /ɪ/ and /e/ and EFL learners' ability to produce these phonemes.

Correlations Coefficients and Contribution of QDPR to the Investigated Variables

Regarding the association between the independent variable and the dependent variables, the results of the study have disclosed that the correlation coefficient between QDRP learning model and EFL learners' knowledge of English vowels /ɪ/ and /e/ was .62 at p< .01 while the correlation between QDPR learning model and EFL learners' ability to pronounce English vowels /ɪ/ and /e/ was .58 at p< .01. This implies that QDPR was highly correlated to EFL learners' knowledge of English vowels /ɪ/ and /e/ and their ability to pronounce the investigated English vowels /ɪ/ and /e/ respectively.

Although these correlation coefficients show the relationship between QDPR Learning Model to each dependent variables, they cannot tell us much about the predictive power of the independent variable, namely QDPR to the dependent variables. In order to show the causal-effect relationship between QDPR learning

model and their dependent variables, simple regression tests were subsequently performed to each set of data because the results of Pearson's correlation have disclosed that both correlation coefficients were significantly at moderate level as they were more than .40. So, we could perform simple regression tests to examine the contribution of QDPR learning model to the investigated dependent variables. The results of the simple regression test can be seen in Table 2.

Table 2. Summary of simple regression analyses of QDPR learning model for students' knowledge of English vowels /ɪ/ and /e/ and their ability to produce the target vowels

Dependent Variables	B	SE B	*β*	R^2
Knowledge of English vowels /ɪ/ and /e/	-29.27	0.30	.63	.39**
Oral Performance of English vowels /ɪ/ and /e/	-10.98	0.29	.58	.33**

Note: * $p < .05$: ** $p < .01$

As displayed in Table 2, the results of the data analyses have disclosed that 39% of EFL learners' knowledge of English pronunciation can be explained by the implementation of QDPR learning model. Meanwhile, 61% can be predicted by other factors that were not investigated in the current study. Similarly, 33% of EFL learners' ability to pronounce the investigated English vowels /ɪ/ and /e/ might be explained by the existence of QDPR learning model whereas 61% can be predicted by other factors that were not investigated in the current study.

As stated in Introduction section, we proposed four research questions. The first two research questions are related to the effectiveness of QDPR learning model in improving EFL learners' knowledge of English vowels /ɪ/ and /e/ and their ability to produce the vowels. Meanwhile, the last two research questions are related to the contribution of QDPR learning model to EFL learners' knowledge of English vowels /ɪ/ and /e/ and their ability to produce the vowels. The results of data analyses have discovered that QDPR is significantly effective in improving EFL learners' knowledge of vowels /ɪ/ and /e/ and their ability to produce the vowels. Additionally, the results have disclosed that QDPR contribute significantly to EFL learners' knowledge of English vowels /ɪ/ and /e/ and their ability to produce the vowels. Thus, the findings are consonant with the previous study conducted by Moedjito (2016) unveiled that the step of Demonstration in QDPR gives a positive effect on students' knowledge of

English pronunciation, especially the English vowels /ɪ/ and /e/, and their ability to produce them. This is due to the use of students' national language, in this case Bahasa Indonesia, as the medium of instruction. After demonstrating how to produce the speech sounds, the teacher explained how to produce them in Bahasa Indonesia. This process makes them easy to understand how to produce them and finally they can produce themselves. Thus, although both vowels /ɪ/ and /e/ do not exist differently in their mother tongue, namely Sasak language, they can produce easily.

D. Conclusions

The current study aimed at investigating the effectiveness of QDPR as an alternative technique for teaching pronunciation, especially English vowels /ɪ/ and /e/, in EFL classrooms. The result of the study has disclosed that there was a significant difference in the mean score of students' achievement before and after the treatment. This implies that QDPR may become an effective technique for improving students' performance and knowledge of English vowels /ɪ/ and /e/.

E. References

Abercrombie, D. (1956). *Problems and principles in language study* (2nd ed.). London: Longmans, Green and Co. Ltd.

Celce-Murcia, M., Brinton, D. M., & Goodwin, J. M. (1996). *Teaching pronunciation: A reference for teachers of English to speakers of other languages*. Cambridge: Cambridge University Press.

Cruttenden, A. (2001). *Gimson's pronunciation of English* (6th ed.). London: Arnold Publisher.

Crystal, D. (1997). *English as a global language*. Cambridge: Cambridge University Press.

Dalton, C., &Seidlhofer, B. (1994). *Pronunciation*. Oxford: Oxford University Press.

Jenkins, J. (2000). *The phonology of English as an international language*. Oxford: Oxford University Press.

McKay, S. L. (2002). *Teaching English as an international language*. Oxford: Oxford University Press.

Moedjito. (in press). *English pronunciation practice*. Selong, Hamzanwadi University Press.

Moedjito. (2016). The teaching of English Pronunciation: Perceptions of Indonesian school teachers and university students. *English Language Teaching, 9*(6), 1-12.

Moedjito, & Ito, H. (2008). Perceptions of the seriousness of mispronunciations of English speech sounds. *Teaching English as a Foreign Language in Indonesia (TEFLIN) Journal 19*(1), 70-91.

Moedjito. (2008). A search for factors determining global intelligibility of EFL learners' oral communication. *Annual Review of English Language Education in Japan (ARELE) 19*, 51-60.

Tudor, I. (2001). *The dynamics of the language classroom*. Cambridge: Cambridge University Press.

Walker, R. (2001). Pronunciation for international intelligibility. *English Teaching Professional, 21*. Retrieved May 24, 2005, from http://www3.telus.netlinguisticsissues/internationallyintelligibility.html

The Implementation of Scientific Approach in The Early Childhood Learning

Mulianah Khaironi
Hamzanwadi University
guru.anah@gmail.com

Abstracte

This article is written to provide information related to the implementation of scientific approach in the early childhood learning. This article is written by reviewing some literature. The results of the literature review are: (1) scientific approach is one of the learning approaches in the 2013 curriculum; (2) the application of scientific approach in the learning process is designed in order that early childhood can actively construct their knowledge through meaningful learning; (3) the learning stages the scientific approach include: activities of observing as meaningful learning process, questioning for developing the curiosity of early childhood, trying to develop skills and attitudes, reasoning to cultivate informations, and communicate to develop honest attitude, language skills, and critical thinking; (4) the learning consists of three main activities, namely preliminary activities, core activities, and closing activities. Preliminary activities are conducted to create an effective atmosphere in early learning that enables early childhood to follow the learning process enjoyable. The core activities are the main activity in the learning process that are carried out by following and completing the main activities prepared by the teacher. In the core activities there are process of mastery learning experience of early childhood. The core activities in learning process become a stimulation for the formation of experience and ability of early childhood. The core activities had programmed within certain time duration. The closing activities are carried out through the recalling process to strengthen the memory about the learning process that has been done from beginning to ending.

Keywords*: scientific approach, early childhood learning*

A. Introduction

Early childhood is a child who is in the age range 0-6 years. Early childhood experienced a very rapid growth in its growth and development. Dewi (2015: 334) early childhood is a very fundamental time for the development of children. At this time, the child has a very sensitive to accept the development of all the potential that is in him. The potential in the child relates to every aspect of development that has been brought in since the child in the womb. Every aspect of development in early childhood can be stimulated through learning. Rocmah (2012: 174) reveals that today's problematics of early childhood education that occurred in Indonesia one of them is the process of teaching and learning given in the classroom, generally only put forward the concepts

in a material. The learning process that many do is a lecture learning model by way of one way communication (teaching directed), where the active 90% are teachers.

Based on the above explanation, it is known that early age is crucial because it is a critical period in human development. Therefore, early childhood needs optimal stimulus through learning process which is implemented in early childhood education. Application of a scientific approach is needed to help optimize child development early on.

B. Literature Review

Early Childhood Learning

Marli'ah (2015: 15) reveals that essentially every child was born with a talent for being a scientist. He was born with have of curiosity or find out about what he saw, heard and felt in the neighborhood.

Early age is golden age. At an early age, the child has a high curiosity, enthusiasm for everything, and explorations. This causes early childhood to require a learning process that can help children are able to build the knowledge gained in the learning process that is done through play activities. Therefore, Rocmah (2012: 173) explains that learning given to early childhood is not oriented to academic side but focuses on laying the foundation toward growth and development of physical, language, intellectual, social-emotional and all intelligences. Cahyani, et al. (2015: 2) early childhood education requires the participation of the environment to optimize the growth and development of children, in order to generate an interesting and fun learning atmosphere in accordance with the principles of preschool education, namely: "Learn while playing and playing while learning" in accordance with the characteristics of early childhood.

Wartini, et al. (2014: 2) reveals one of the principles to be considered in addressing meaningful education is to provide education as a process of culture and empowerment of lifelong learners, where in the process there must be educators who provide exemplary and able to build the will, and developing the potential and creativity of learners. The implication of this principle is the paradigm shift in the educational process, namely from the paradigm of teaching to the learning paradigm.

Kemdikbud (2015: 17) the learning is the process of interaction between educators and learners through play activities in a safe and fun learning environment using various learning resources. Early childhood learning is child-centered. The learning approach used is a scientific approach that includes a series of processes of observing, questioning, gathering information, reasoning, and communicating. The

whole process is done by using all the senses as well as various sources and learning media. Yuliana (2015: 191) the process of the learning in early childhood should be done with the aim of providing basic concepts that have meaningfulness for children through real experiences that enable the child to demonstrate activity and curiosity optimally. Farihah (2015: 169) approach to learning that developed today empirically has given birth to a new discipline in the learning process. It not only focuses on what students can find, but comes to how to explore science.

Rochanah (2015: 238) early childhood is very fond of concrete things, because in accordance with its development, especially their mindset. Exciting learning allows children to more easily capture learning materials while playing according to the principles of early childhood education. Rochanah (2012: 176-174) reveals early childhood learning is a process of interaction between children, parents, or other adults in an environment to achieve developmental tasks. Interaction is built is a factor that affects the achievement of learning objectives to be achieved. This is because the interaction reflects a relationship between the children will gain meaningful experience, so that the learning process can take place smoothly. Early childhood learning is not only academically oriented but focuses on the basic laying of growth and development of physical, linguistic, intellectual, social-emotional and all intelligence (multiple Intelligence). Thus, early childhood education should be able to accommodate all aspects of child development in a fun atmosphere and generate interest in children.

According to Sujiono (Putri, 2015: 153), the learning activities in early childhood is essentially a concrete learning in the form of a number of learning experiences through play given to early childhood based on the potential and developmental tasks that must be mastered. So, the main element in the development of learning programs for early childhood is to play. The learning approach to early childhood education should be: (1) oriented to the child's for get education service, health and nutrition what do integrative and holistic. (2) child-centered development by enriching the playing environment, (3) early childhood learning through play because they can develop various aspects of their intelligence, (4) active, creative, effective, and fun learning activities, and (5) the integrated learning in which children can explore their knowledge in various fields.

Implementation of the Scientific Approach in Early Childhood Learning

Machin (Persada, et al., 2016: 224) the application of scientific approach in the learning process is one way that can create meaningful learning for learners. Meaningful learning of course material presented begins from around students, as well as learning begins from easy material to complex material, from material that tedekat with learners to the far material with learners. Anastasiou, et al. (2015: 262) are

explained "...children should simply participate in interesting activities or in activities that in general enrich their experiential background, needs to be reconsidered. Given that the construction of scientific knowledge involves the construction of relationships among concepts and ideas, and presupposes curiosity and affective imagination, science stories with a science content that captures the imagination of the child, and activities involving the movement of objects appear to be more pedagogically appropriate than other activities."

Persada (2016: 223) understanding of scientific approach is the process of constructing their own knowledge obtained by learners based on the scientific way by activating the five senses through the stages of observing, questioning, gathering information, associating/reasoning and communicate the results of knowledge found. Based on the explanation, it is expected that the learning process becomes meaningful for the learners.

Ine (2015: 271-272) scientific approach is an approach in the learning process that integrates the science skills of finding out the facts and knowledge associated with the learning materials. Scientific learning is a learning that adopts the steps of scientists in building knowledge through scientific methods. The scientific approach emphasizes the learner as a learning subject that must be actively involved. Su'udiah, et al. (2016: 243-244) explains that in approach of scientific approach, student is center of learning which is expected ability of thinking and motivation increase in learning. Students are also given the opportunity to practice communication skills to avoid the danger of verbalism. Learning by scientific approach involves observing, questioning, trying, reasoning and communicating. Exposure of Wakil Menteri Pendidikan dan Kebudayaan R.I Bidang Pendidikan (2014: 17-43) these steps become a scientific approach in learning and become the learning steps based Curriculum 2013. Each learning uses a scientific approach to enhance the creativity of learners, including: observing, questioning, trying, reasoning, creating, communicating. In the Curriculum 2013, the scientific approach becomes a process of strengthening in the learning process.

Ine (2015: 271-272) scientific approach is an approach in the learning process that integrates the science skills of finding out the facts and knowledge associated with the learning materials. Scientific learning is a learning that adopts the steps of scientists in building knowledge through scientific methods. The scientific approach emphasizes the learner as a learning subject that must be actively involved. Su'udiah, et al. (2016: 243-244) explains that in approach of scientific approach, student is center of learning which is expected ability of thinking and motivation increase in learning. Students are also given the opportunity to practice communication skills to avoid the danger of verbalism. Learning by scientific approach involves observing, questioning, trying,

reasoning and communicating. Exposure of Wakil Menteri Pendidikan dan Kebudayaan R.I Bidang Pendidikan (2014: 17-43) these steps become a scientific approach in learning and become the learning steps based Curriculum 2013. Each learning uses a scientific approach to enhance the creativity of learners, including: observing, questioning, trying, reasoning, creating, communicating. In the Curriculum 2013, the scientific approach becomes a process of strengthening in the learning process.

Basically since early childhood, humans have had the tendency and ability to think critically. This is explained by Brewer (Farihah, 2015: 164), that as a rational creature and a giver of meaning, humans are always compelled to think about the things around him. The human tendency to give meaning to various things and events around it is an indication of his ability to think. This tendency can be found in a child who looked at various objects around him with curiosity.

Sumayasa, et al. (2015: 4) reveals the application of a scientific approach to learning involves process skills such as observing, classifying, measuring, predicting, explaining, and concluding. In carrying out these processes, teacher assistance is needed. However, the teacher's assistance should decrease as the students grow older or the higher the class of students. Learning by scientific method has the following characteristics: (1) student-centered; (2) involves the skills of the process of science in constructing concepts, laws or principles; (3) involves cognitive processes which potential in stimulating the development of the intellect, especially the students' high-order thinking; (4) can develop student character.

Lazim (2013: 4-8) try to explain the steps of learning scientific approach on Curriculum 2013, namely: (1) Observing which prioritizing meaningfull learning. This method has certain advantages, such as presenting a real object media, learners happy and challenged, and easy implementation. Observation method is very useful for increase the curiosity of the students. Activities observed in the learning carried out through activities: viewing, listening, and reading. (2) Teachers need to guide learners to be able to ask questions about information which getting from the object observation. Through questioning activities developed curiosity of learners. The expected competence in the questioning is to develop creativity, curiosity, the ability to formulate questions to form the critical thinking necessary for smart life and lifelong learning. (3) Processing of information who is collected have the quality breadth and depth, seeking solutions from various of literatures which have different opinions up to the contrary. The expected competencies are to develop an honest, thorough, disciplined, obedient, hard-working attitude, the ability to apply procedures and inductive and deductive thinking skills when summarize. (4) Experimenting is intended to develop various aspects of learning objectives, namely attitude, skills, and

knowledge (5) In the scientific approach the teacher is expected to give the learner the opportunity to communicate what they have learned. This activity can be done through writing or telling what is found in information seeking activities, associating and finding patterns. The expected competence in this activity is to develop honest attitude, thoroughness, tolerance, systematic thinking ability, expressing opinions briefly and clearly, and develop good and correct language skills.

Sujiono (Putri, 2015: 153) reveals early childhood learning have two types of models: teacher-centered and child-centered learning. Teacher-centered learning was initiated by Povdov, Skinner, and other behaviorist figures. While child-centered learning was initiated by Piaget, Erikson, and Isaacs. Child-centered learning process and applying the principle of play one of them is the learning Sentra model. Kemdikbud (2015: 20-27) One of the learning approaches used in the Curriculum 2013 is an integrated thematic approach. The learning of integrated thematic is do on the opening, core and closing stages. The opening is done to prepare the child psychologically and physically to follow the learning process. This activity is related to discussion about sub theme that will be implemented. Some activities that can be done include: Playing (motoric rough), marching, saying hello, praying, and telling stories or sharing experiences. The core activity is an activity of play which provides a direct learning experience to the child as a basis for forming attitudes, acquiring knowledge and skills. The core activities provide enough space for the child to take initiative, creatively, and independently in accordance with the talents, interests and needs of the child. The core activities carried out with a scientific approach include observing, questioning, gathering information, reasoning, and communicating. (1) Observing is done to know the object in between by using the senses such as seeing, hearing, inhaling, feeling, and touching. (2) The child is encouraged to ask questions about both the observed object and the other things to be known. (3) Collecting information is done through various ways, for example: by doing, trying, discussing and summarizing the results from various sources. (4) Reasoning is the ability to connect information already possessed with newly acquired information so as to gain a better understanding of a matter. (5) Communicating is an activity to convey the things that have been learned in various forms, for example through stories, movements, and by showing the work in the form of drawings, various forms of dough, dolls from the pulp, the crafts of recycled materials, and the results Webbing. Closing activity is a calming activity. Some things that can be done in closing activities include: (1) Make a simple conclusion of the activities that have been done, including the moral message to be conveyed; (2) Advices that support good behaviour in life; (3) Reflection and feedback on activities that have been implemented; (4) Establish calming activities such as singing, poetry and exhilarating storytelling; and, (5) Informing the lesson plan for the next meeting.

Lazim (2013: 8-9) the learning activities include three main activities, namely preliminary activities, core activities, and closing activities. 1) Preliminary activity, aims to create an atmosphere of effective learning since beginning that allows students to follow the learning process well. For example when starting the lesson, the teacher greets the child with a passionate and joyful tone (greeting), checks the attendance of the students and questioning for the absence if student is absence. In scientific method, the main purpose of preliminary activity is to strengthen students' understanding of the concepts that have been mastered related to new subject matter that will be studied by the students. In this activity the teacher should strive for students who have not understood a concept can understand the concept, while students who experience a concept mistake, the error can be eliminated. 2) The core activity, is the main activity in the learning process or in the process of mastering the learning experience (learning experience) students. The core activity in learning is a process of formation of experience and the ability of students programmed in a certain time duration. The core activity in the scientific method is aimed at constructing concepts, laws or principles by students with the help of the teacher through the steps of the activities given in advance. 3) Closing activity, aimed at two main things. First, validation of concepts, laws or principles that have been constructed by students. Second, enrichment of subject matter controlled by students.

C. Conclusion

Based on the results of literature review in this article, it can be concluded that early childhood is a child who is in the age range 0-6 years, which experienced a very rapid development. Early childhood learn through play activities by applying a scientific approach to building children's knowledge. The scientific approach is one of the learning approaches in the 2013 curriculum, including: observing, questioning, experimenting, associating, and networking. The scientific approach is carried out in the learning steps: preliminary activities, core activities, and closing activities.

D. Refrences

Anastasiou, L., et al. (2015). The Construction of Scientific Knowledge at an Early Age: Two Crucial Factors. *http://www.scirp.org/journal/ce*, http://dx.doi.org/10.4236/ce.2015.62025.

Cahyani, K. Anggun, et al. (2015). Penerapan Metode Demonstrasi dalam Pengenalan Sains untuk Meningkatkan Perkembangan Kognitif Anak. *E-Journal* PG-PAUD Universitas Pendidikan Ganesha Jurusan Pendidikan Guru Pendidikan Anak Usia Dini Volume 3 No. 1.

Dewi, Mutiara Sari. (2015). Penerapan Model Pembelajaran Sentra Pasar sebagai Upaya Meningkatkan Perkembangan Kognitif dan Sosial Anak TK Kelompok

B. *Prosiding Seminar Nasional* Pendidikan Anak Usia Dini PPS PAUD UNESA.

Farihah, Himmatul. (2015). Penggunaan Metode Proyek Terhadap Aktivitas Eksploratif Dan Sikap Kooperatif Anak Kelompok B Di Taman Kanak-kanak. *Prosiding Seminar Nasional* Pendidikan Anak Usia Dini PPS PAUD UNESA.

Ine, Maria Emanuela. (2015). Penerapan Pendekatan Scientific untuk Meningkatkan Prestasi Belajar Siswa pada Mata Pelajaran Ekonomi Pokok Bahasan Pasar. Prosiding Seminar Nasional 9 Mei 2015 p. 269-285.

Kemdikbud. (2015). *NSPK (Norma, Standar, Prosedur, Dan Kriteria) Petunjuk Teknis Penyelenggaraan Taman Kanak-kanak.* Jakarta: Direktorat Pembinaan Pendidikan Anak Usia Dini.

Lazim, M. (2013). *Penerapan Pendekatan Saintifik Dalam Pembelajaran Kurikulum 2013*. http://p4tksb-jogja.com.

Marli'ah, Siti. (2015). Penerapan Permainan Eksplorasi untuk Meningkatkan Kemampuan Sains dan Sosial Emosional Anak Usia Dini. *Prosiding Seminar Nasional* Pendidikan Anak Usia Dini PPS PAUD UNESA.

Persada, Yuris Indria, et al. (2016). Pendekatan Scientific Dalam Pembelajaran Tematik Kurikulum 2013. *Prosiding Seminar Nasional* Pendidikan Dasar "Peningkatan Kualitas Pendidikan Dasar dalam Menghadapi Daya Saing Regional (ASEAN)" ISBN: 978-602-1150-16-0 p. 222-229.

Putri, Gesa Kharisma. (2015). Pengenalan Konsep Uang untuk Anak Taman Kanak-kanak Melalui Pembelajaran Sentra. *Prosiding Seminar Nasional* Pendidikan Anak Usia Dini PPS PAUD UNESA.

Rocmah, Luluk Iffatur. (2012). Model Pembelajaran Outbound Untuk Anak Usia Dini. *Pedagogia* Vol. 1, No. 2, Juni P. 173-188.

Rochanah, Luluk. (2015). Pemanfaatan Media Berbasis Komputer Untuk Meningkatkan Kemampuan Mengenal Huruf Pada Anak Usia Dini. *Prosiding Seminar Nasional* Pendidikan Anak Usia Dini PPS PAUD UNESA.

Sumayasa, I Nyoman, et al. (2015). Pengaruh Implementasi Pendekatan Saintifik Terhadap Motivasi Belajar dan Hasil Belajar Bahasa Indonesia Pada Siswa Kelas VI Di Sekolah Dasar Se Gugus VI Kecamatan AbangKarangasem. *E-Journal* Program Pascasarjana Universitas Pendidikan Ganesha Program Studi Pendidikan Dasar Volume 5 p. 1-11.

Su'udiah, Firdaus, et al. (2016). Pembelajaran Kontekstual Dan Pendekatan Saintifik Di Sekolah Dasar. *Prosiding Seminar Nasional* Pendidikan Dasar,

"Peningkatan Kualitas Pendidikan Dasar dalam Menghadapi Daya Saing Regional (ASEAN)" ISBN: 978-602-1150-16-0 p. 239-248. Paparan Wakil Menteri Pendidikan dan Kebudayaan R.I Bidang Pendidikan. (2014). *Konsep dan Implementasi Kurikulum 2013*. Jakarta: Kementerian Pendidikan dan Kebudayaan.

Wakil Menteri Pendidikan dan Kebudayaan R.I Bidang Pendidikan. (2014). *Konsep dan Implementasi Kurikulum 2013*. Jakarta: Kementerian Pendidikan dan Kebudayaan.

Wartini, Ida Ayu Km Mirah, et al. (2014). Pengaruh Implementasi Pendekatan Saintifik Terhadap Sikap Sosial dan Hasil Belajar PKn Di Kelas VI SD Jembatan Budaya, Kuta. *e-Journal* Program Pascasarjana Universitas Pendidikan Ganesha Program Studi Pendidikan Dasar Volume 4 p. 1-11.

Yuliana, Indah. (2015). Meningkatkan Perkembangan Sosial Emosional dan Kognitif Anak Melalui Metode Sosiodrama Di Kelompok A TKIT Al-Uswah Bangil. *Prosiding Seminar Nasional* Pendidikan Anak Usia Dini PPS PAUD UNESA.

WRITER

Mulianah Khaironi was born in Borok at 24 August 1990. Now actively teaches in majors of early childhood education.

Enhancing Student Activeness of Primary Students on Science Learning Process Through Lesson Study

Yuyun Febriani[1], Rohini[2]
Hamzanwadi University[1], Hamzanwadi University[2]
yuyunfebriani89@hamzanwadi.ac.id[1], rohinisadar@hamzanwadi.ac.id[2]

Abstract

This research aims to enhance student activeness on science learning process by using lesson study in primary students. The characteristic of science learning process and lesson study will be focused in this research. Lesson study as one of models or instruments for improving learning process and learning community become an important way. Due to the less comprehensive knowledge in science concepts and its application, the characteristic of primary students in learning, the limited time in teaching, and student's misconception on science concepts. A total of 75 fourth and fifth-grade students in three schools in sukamulia district (MI NW Jantuk, MI NW Aik Anyar, and MI NW Dasan Lekong) were participated in this research. This lesson study was implemented in three cycles with three meetings and data was collected through observation and sheet of student's activeness. Based on the analysis data, this research demonstrated an enhancing of student's activeness during learning process and highly recommended to be used in science learning process of primary education for improving quality in teaching and learning.

Keywords: *student's activeness, science learning process, lesson study*

A. Introduction

In learning process, quality of learning is influenced by quality of teaching. There are more methods, models, and strategies in teaching for improving learning quality. It can be reached only by the capability of teacher in handling classes or selecting the appropriated methods that certain subject matter (Duque, 2003).

In teaching science, there are many methods and strategies which can be used such as initial gaming, cooperative learning, discovery, experiments, demonstration, and role playing (Silberman,1991); Mastery Learning, Laboratory Approach, Concept Mapping Approach, Task-based, Science-Tech-Society Approach, Audio-Visual/Tutorial Approach, Demonstration Method, Project bond Expository Method, Discovery/Inductive Strategy, Discovery/Deductive Strategy (Fung & Howe, 2014). In spite of the wide range of methods, models, and strategies in teaching, the lower knowledge-input and analytical skills among high school and elementary students are influenced by the lack of methodelogy in teaching (Lardizabal,1977).

Further, a teacher should not only have the ability of teaching but should also have the ability for using the different available resources (Pambid, 2014). Based on the explaination above, lesson study as the way for improving quality of learning.

In science learning, observation and experiment are the way to get the comprehensive knowledge, so that learning is not by read or recognize some concepts based on common theories (Abruscato, 1997). The comprehensive knowledge is not only mean cognitive aspects but also activeness and skill aspects. Therefore, it must be integrated to student selves and their environment. In learning process, science has a role in explaining the comprehensive knowledge and must appropriate with science fundamental such as science as the way of thinking, the way of investigating, and as body knowledge (Ann & Jones,1993).

In learning process, a comprehensive activity that include not only cognitive aspects but also social and ethical apects was concerned (Cazden, 2001). So that, teachers must known their student deeply and understood the model or instrument for improving learning process, Therefore science learning process must be integrated to student environments. The model or instrument for improving leraning process and learning communities are highly needed.

In science learning process of primary education, students have difficulties in learning such us: 1) science consists more abstract concepts, especially in highly grade student; 2) less comprehensive knowledge of scientific applications in their environment; 3) student's misconception of scientific concept; and 4) less activeness of student for delivering their arguments and thinking of some concepts and thier applications. Students do not really understand the fundamental ideas or concepts in science learning. Even though some of the students give the right answer but are only using the correctly memorized words and do not know how and why. They fail to understand the whole of some scientific concepts. Many researches show that in memorized questions and problem-solving skills, students give better performance but on conceptual questions they performed poorly (Simsek et al, 2013; Akcay & Doymus, 2012, Karafkan & Aghazadeh, 2015). Therefore, to explain the whole concept and concept generalizations teacher must show the reasoning process to students. Teacher must also show some of the applications in student's environment. So, the learning communities give the highly important in learning process.

Further, to get better understanding and the appropriate method of teaching and learning many studies and researches were conducted. Mayer (1987) reports that research on student's conceptual misunderstanding of natural phenomenon indicated that new concepts cannot be learned if alternative models that explain a phenomenon already exist in teacher's mind. This must be connected to student's mind, so they can imagine and describe that phenomenon. So, the direct experinces of students were needed in learning process Therefore, active learning models or methods and

techniques, based on student-centered are very important and truly needed for thoroughly understanding in science concepts. One of them is lesson study.

Lesson study as one of the way for improving learning quality prosess. As the way in learning process, lesson study emphasize in development of professional teacher based on collaborative, continuity, collegality, and mutual learning for building learning communities. Lesson study is widely used in Japan and has been used as a based element for improving mathematics and science education (Stigler & Hibert, 1999). In a classroom during learning process, lesson study same as other methode or models or strategies in learning, are actual classroom lessons with students but typically has five characteristics such as: 1) in learning process, teacher model (as teacher in research lesson) are observed by other teachers (observer during learning process); 2) in designing a learning process, they are planned for a long time and collaboratively; 3) they are designed to bring student's life and environment in a lesson as a goal of learning process and also recorded dr uring leraning process; 4) they are discussed by all participants (teacher model and observer) while a learning process or reflection for analyzing the learning process and make revisions accordingly (Lewis, 2000).

Lesson study will help teacher in design and redisigning curriculum based on their class and students. Teachers can share and learn from each others (collaboratively characteristic) during learning process to reach their goals (Lieberman, 2009). In the end of this process, learning will focus not only in cognitive aspects but also in social and ethical aspects as in this research.

The purpose of this research is to enhancing student activeness on science learning process through lesson study in primary students. The specific research question posed is: Are there any significant anhancement in student activeness throug lesson study in learning process?

B. Methods

In analyzing the enhancing of activeness in science learning process of primary students, it were used quantitative descriptive methode. The observation sheet of student activeness were used for collecting data. This methode were used for determining a criteria of the student activeness level afte implmentation of LS. Observation sheet that prepared Guttamen scale form by "yes and no" category options with level of percentage. The percentage was included of good categories if the score is more than 50; enough categories if the score equal to 50, and less categories if the score is less than 50 (Sugiyono, 2012).

The participants consisted of three schools, such as MI NW Aik Anyar, MI NW Dasan Lekong, and MI NW Jantuk with 75 fourth and fifth grade student of elementary school while each schools are 20-25 students in odd semester 2016/2017. These schools were included in one district, Sukamulia. This research did during three months, on October to Desember. The implemantation of LS in these schools were done by 3 cycles

while each cycle was included the activities of plan, do, and see. The observation test was given at the end of each cycle, as well as the observation sheet. Before the beginning of LS, samples were given prior information about LS included the method, learning objectives, the instruction process, and assessments.

In the first step, it was the plan phase. In this phase all teachers included teacher models and observers, were involved in the lesson study discussing. This discussing were done for identifying the learning problems, designing a learning which included lesson plan, student worksheet and the observation sheet. The observation sheet was used to observe the student learning activeness. Then the second phase was the do phase. In this phase, the teacher models did their learning while observers observed the learning process. For this research the observers emphasized their process for observing the student learning activeness. The last step was see phase. In this step all teachers involved in this research gathered for reflecting the implementation of the learning process and the observation of student activeness during the process. The result of this phase was used as based of planning phase in the next cycles.

C. Findings and Discussion

In order to determine the student activeness, samples in three schools were observed during the learning process. The observers used the observation sheet for observing the student activeness. The results of these observation were analyzed by quantitative descriptive methode. The results of the data analysis of student learning activeness in theree schools were shown below :

Table 1: Enhancing of Student Learning Activeness in MI NW Aik Anyar:

No.	Activeness of Student	Average Activeness (Percentage)		
		Cycle 1	Cycle 2	Cycle 3
1.	Enthusiastic students in learning process	50	75	90
2.	Students interaction with students (Student-Student Interaction)	40	85	85
3.	Students interaction with teacher (Student-Teacher Interaction)	25	50	80

4.	Student's cooperation in the group learning	65	75	85
5.	Student's activeness within group learning	60	80	80
6.	Student participation in the group discussion	25	75	75
7.	Student participation in the presentation of their group result	30	50	60
8.	Student participation in the concluded learning	40	50	60
	Average	**41, 88**	**67, 5**	**76, 88**

Table 2: Enhancing of Student Learning Activeness in MI NW Dasan Lekong:

No.	Activeness of Student	Average Activeness (Percentage)		
		Cycle 1	Cycle 2	Cycle 3
1.	Enthusiastic students in learning process	56, 52	86, 96	86, 96
2.	Students interaction with students (Student-Student Interaction)	43, 48	65, 21	78, 26
3.	Students interaction with teacher (Student-Teacher Interaction)	34, 78	43, 48	65, 21
4.	Student's cooperation in the group learning	34, 78	43, 48	73, 91
5.	Student's activeness within group learning	39, 13	69, 57	78, 26
6.	Student participation in the group discussion	43, 48	78, 26	65, 21
7.	Student participation in the presentation of their group result	26, 09	34, 78	65, 21
8.	Student participation in the concluded learning	30, 43	43, 48	69, 56
	Average	**38, 59**	**55, 43**	**72. 83**

Table 3: Enhancing of Student Learning Activeness in MI NW Jantuk:

No.	Activeness of Student	Average Activeness (Percentage)		
		Cycle 1	Cycle 2	Cycle 3
1.	Enthusiastic students in learning process	65, 21	65, 21	86, 96
2.	Students interaction with students (Student-Student Interaction)	43, 48	47, 83	73, 91
3.	Students interaction with teacher (Student-Teacher Interaction)	30, 43	34, 78	65, 22
4.	Student's cooperation in the group learning	34, 78	34, 78	69, 56
5.	Student's activeness within group learning	30, 43	43, 48	65, 21
6.	Student participation in the group discussion	26, 09	34, 78	69, 56
7.	Student participation in the presentation of their group result	34, 78	34, 78	65, 21
8.	Student participation in the concluded learning	34, 78	39, 13	56, 52
	Average	**37, 5**	**41, 85**	**69, 02**

Based on those tables above, enhancing activeness was shown in all aspects. This enhancing of student activeness was analyzed in all samples. It was demonstrated in all cycle continouesly. Student activeness both in individual and grouping learning process were described in a good percentage, while students interaction with others (with other students, teachers) and their participants in communicating (arguments, ideas, or result discussion) in a lower percentage. This condition were caused by inconfidence of students and the difference of learning environment through LS. For learning process in this research used cooperative learning methode (use discussion in the do phase).

Based on Johnson & Jhonson (2009), Group work is highly influenced by whether or not group members reflect on their work. Group processing occurs when group members think about what they are must do whether cooperative and

uncooperative and decide which actions should be continued or changed. Providing time for individual and group reflection will increase the quality of learning process by strengthening intrapersonal and interpersonal competencies (Jones & Jones, 2008).

Based on the previous research in learning process with inquiry method and cooperative learning method, researcher found the ineffectiveness learning process in discussion steps with the bigger member of groups and lower responsibility of every student when they are work together also shown. Therefore, using a smaller member of groups was highly recommended. Indeed, Cooperative learning methode increased students self-confidence as individuals, develop communication skills and participate actively (Doymuş, Şimşek & Şimşek, 2005), Students that are involved in cooperative learning achieve many social, psychology and academic benefits (Lazarowitz, 1995; Slavin, 1995).

In this research, it shown a good behaviour in learning process. all participant (teacher, observer, and student) shown their responsibility in every phase of LS process. For first phase, plan phase, need teacher creativity and responsibility to prepare a lesson. In the next phase, do phase, need a good effort for teaching model to carry out the lesson in a class, while a observer give attention and importants note objectively during a learning process. For last phase, see phase, need the corporation between all participant for reflecting the implementation of the learning process and the observation of student activeness during the process. In this phase also need open-minded for improving quality of teaching and learning. The result of this phase was used as based of planning phase in the next cycles.

D. Conclusion

In this section are discussed taking into account the results of lesson study for enhancing student activeness in science learning process and also the recommendations developed for applicators of lesson study implementation in teaching and learning.

Implementation of lesson study in science learning process in this research was shown: 1) lesson study give the postively effect to enhance student activeness; 2) lesson study give a good behaviour such as creativitiy, responsibility, collegality, and cooperatively for improving quality in teaching and learning process. Therefore lesson study highly recommended to be used in science learning process of primary education.

E. References

Abruscato, J. (1997). *Teaching Childern in Science*. London: Allyn & Bacon.Ann & Jones,1993

Ann, C. Howe & Jones. (1993). *Engaging Children in Science*. California State University Noryhridhe.

Cazden C (2001). *Classroom Discourse*. Portsmouth: Heinemann

Doymuş, Şimşek & Şimşek, 2005. Doymuş, K., Şimşek, Ü., & Bayrakçeken, S. (2004). The effect of cooperative learning method on academic success and attitude in science classes. *Journal of Turkish Science Education*, 1(2), 103-115.

Duque, R. E. (2003). *"Towards Quality Education via Mathematics Teaching" The Modern Teacher. Vol. XLVIII, No.3*. Manila, Phil.

Fung, Dennis; Howe, Christine. (2014). Group Work and the Learning of Critical Thinking in the Hong Kong Secondary Liberal Studies Curriculum. *Cambridge Journal of Education*

Johnson & Johnson, 2009 Johnson, D. W., & Johnson, F. P. (2000). *Joining together: Group theory and group skills. (7 ed.)* Boston, MA: Allyn and Bacon.

Jones & Jones, 2008. Jones, R. M., & Steinbrink, J. E. (1991). Home teams: Cooperative learning in elementary science. *School Science and Mathematics*, 91, 139–143.

Lardizabal, A. S. (1977). *Principles and Methods of Teaching*. Phoenix Pub. Inc. Quezon City.

Lazarowitz, R., Hertzlazarowitz, R., & Baird,J. H.(1994). Learning science in a cooperative setting: Academic achievement and affective outcomes. *Journal of Research in Science Teaching*, 31, 1121-1131.

Lewis, C. 2002. *Lesson study: A handbook of teacher-led instructional change*. Philadelphia: Research for Better Schools.

Lieberman, Joanne. (2009). *Task in Primary Mathematucs Teacher Education: Purpose, Use, and Exemplars, Mathematics Teacher Education 4*. Springer Science & Business Media LLC.

Pambid, Raquel C. (2015). Pre-Service Teachers Methods of Teaching Science. *Asia Pacific Journal of Multidisciplinary Reaseach, Vol.3, No.1*. 73-79.

Silberman, Mel. (1991). *Active Learning: 101 Strategies to teach any Subject.* Temple University.

Stigler, J., & Hiebert, J. (1997). Understanding and improving mathematics instruction: An overview of the TIMSS Video Study. *Phi Delta Kappan, 79*(1), 14–21.

Sugiyono. 2012. *Metode Penelitian kuantitatif dan kualitatif dan R&D*. Jakarta: Alfabeta.

Literate Generation Through Collaborative Learning

Nurul Mu'minin MZ[1], Atiaturrahmaniah[2]
Hamzanwadi University
mzmuminin@gmail.com, rahmaniafahmi80@gmail.com

Abstract

Collaborative learning model provides a positive impact on the literacy skills of students. This learning model directed students to start to acquire knowledge independently through scientific sources and collaborated with past experiences, then shared with the learning environment. During the process of sharing the knowledge, each student will gain new knowledge that could be different from the knowledge that has been obtained previously, or it can strengthen the knowledge acquired. Collaborative learning models got a positive response from students. Results of research which applied survey method showed 88% students found and assessed independently the first material obtained before sharing it in the lecture, and there was a very strong relationship between application the collaborative learning model to literacy skills of students with a coefficient of 0. 82 was obtained.

A. Introduction

According to Pramoedya Ananta Toer's " start to write from primary school, anything written from elementary school would be done". One can be a top student, but as long as he does not write, he will be disappear in society and from history. " taht is to signify the importance of writing activity that it becomes a special attention among language skills. Writing skill is considered as the most complex language skills. Someone could not be a good writer if she/he does not master other language skills.

Writing has close relation to literacy. Literacy comes from the Latin littera meaning letters or alphabets. We know the term the "ability to read and write", in which the term is also similar with the meaning of literacy. In general scope, literacy can be interpreted as the abiiity to read and write. The ability to read and write involves cognitive process, linguistic, and social activities. Kern (2000;20) defines the term literacy as "the use of social situation, historical,and cultural practices in creating and interpreting meaning through text.

Interpretation of meaning obtained through social and cultural practices was integrated by the ability of linguistic and qualified cognitive proceses will result a holistic meaning. interpretation through text can be done by written and oral.

The collaborative learning model is implemented with the following steps;

1. Determining the material to be discussed during lectures. This can be done by referring lecture materials to lesson plan.
2. Creating a lottery that contains the students' presence number.
3. Students are directed to search and review the material independentlyl to discuss at the upcoming meeting.
4. The material that has been searched and studied by each student is then taken at the time of lecturing.
5. Shortly before the discussion takes place the lottery is revoked to determine the which student will act as the presenter.
6. The student group who act as the presenter is responsible for holding the discussion with a theme similar to the material that has been formulated.
7. Discussion topics obtained through a summary of lesson which was brought by each student.
8. Students who acted as audiences could use their lesson summary as a comparative topic with the lesson presented by the presenter.
9. The lecturer plays role to observe and direct the process of discussion while there are conflicting opinions.

B. Method

This research uses quantitative approach with survey method. Sugiyono (2009;13) states that " the survey method is used to obtain data from a particular natural place (not artificial). Students as research subjects are a natural subject.

Survey method was chosen because it is considered to match the purpose of research that is to know any activities done by people who became the target of research in solving the problem. As a material preparation plan and decision making in the future. The type of survey used is an explanatory survey.

Survey is a research method that uses questionnaires as an instruument of data collection with the aim to obtain information about a number of respondents who are considered to represent. Questionnaires are written to obtain data on how often the students search, read, and review the lesson references before being taken in the lecturing class.

Data collection in this research applied census method. The census method invloves the whole population in the research process. All 168 students are divided into 6 groups in a semester given are the questionnaire.

The reason why the census method is used because the researcher thoughts it was not too difficult to reach the whole study population. The data obtained also can be used automatically to infer the condition of the research population.

C. Results and Conclusions

Having administered questionnaires to 168 research subjects then data analysis was performed with tabulation technique and data was obtained that 88% of students claimed to search and review the lesson independently before sharing it to the lectures.

Furthermore, the linear regression test was done to find out the level of relationship of application of collaborative learning model to the students' literacy ability. Coefficient interval 0. 82 with very strong category was gained. Therefore, it can be concluded that the application of collaborative learning model is very influential on the ability of students' literacy.

D. References

Kern, Richard. (2000). *Literacy and Language Teaching.* New York: Oxfort University Press.

Sugiyono, 2009, Metode Penelitian Kuantitatif, Kualitatif dan R&D, Bandung : Alfabeta.

Effectiveness of Inquiry Learning Through Lesson Study to The Students' Ability Analysis

Baiq Aryani Novianti[1], Ayu Rosalina[2]
[1,2]Hamzanwadi University
[1]aryani.novi@ymail.com, [2]ayunasan95@gmail.com

Abstract

This experimental research aimed at finding out find out how the effectiveness of inquiry learning through lesson study to the students' ability analysis on elasticity and law material Hooke class XI ofSMA Negeri 1 Suralagain the school year 2017/2018. The research design used was posttest-only control design. The population was all students of class XI IPA SMA Negeri 1 Suralaga Lessonin the schoolYear 2017/2018 which was consisted two classes ofXI IPA 1 and XI IPA 2class. Sampling technique using saturated samples, Where class XI IPA 1 which was consisted of 22 students as experimental class and XI IPA 2 was consisted of 22 students as control class. The data anlysis technique used for prerequisite test was the normality test with lillifors test and homogeneity test with F test. The data analysis technique used to test the hypothesis was t-test. From the analysis results obtained t-test> t-table was (2.00> 1.68). This means that inquiry learning through the pattern of effective lesson study on student's thinking ability analysis on elasticity and law Hooke class XI SMA Negeri 1 Suralaga in the school year 2017/2018.

Keywords:*inquiry learning, lesson study, analysisability.*

A. Introduction

Education is a very valuable asset in everyday life. Without education, a man will find it difficult to develop his potential. Through the educational container, both formal and informal, able to train and develop the ability to have to become a better person and quality. The learning process needs to be evaluated to find the best alternative that can be realized, so that the expected learning objectives can be achieved maximally and effectively. Teachers as educators are required to actively develop the learning process that will be implemented, so that classroom learning takes place effectively.

The effectiveness of learning can be achieved if all elements and components contained in the learning system functions in accordance with the goals and objectives set. The effectiveness of learning can be achieved if the design on preparation, implementation and evaluation can be run according to procedures and in accordance with their respective functions. Physics is a universal science underlying the development of modern technology and has an important role in various disciplines

and advance the human mind. Physical learning meets the basic knowledge that all humans have of reading, writing, and arithmetic. It happens if the students only have the ability to read and write in physics learning without accompanied by numeracy skills so students are not maximized to work on physics problems that use systematic calculations. Therefore, the effectiveness of learning in physics is necessary to achieve the expected goal of learning.

The ability to think about learner analysis is equally important to train and develop the ability of learners in physics learning. The ability to think own analysis included in Bloom's taxonomy that has been held as a guide in determining the sphere of thinking in learning at various levels and for various lessons (Djiwandono, 2015). The act of analyzing as an act of splitting a data into parts, then linking those parts in a meaningful and useful relationship to problem solving. The role of teachers in this case is very important to create learning activities that are able to train and develop the potential of learners to be a good person, active, and able to think analysis in learning activities.

Teachers should always look for alternatives to the learning process can continue to be developed, so as to achieve educational goals. Learners are also required to be active, creative and analytical in following the learning process facilitated by the teacher. Learning is designed to create learning activities within the individual, in this context the educator directs students to acquire and process knowledge, skills, and attitudes. Educators are an important component in the success of the educational process. Therefore, efforts to improve the quality of education should start from improving the ability of educators. One of them is that educators must be able to create learning process activities with models and learning methods in accordance with the goals or competencies to be achieved. One effort that is believed to increase the competence of teachers, in addition through professional education, is lesson study activities. Lesson study is a collaborative activity undertaken by a group of teachers in order to improve the performance and quality of learning which in the end can improve teacher competence and profesioalisme. Lesson study is seen as an alternative to overcome the problem of educational process that has been considered less effective (Ali Mahmudi, 2009).

Teachers should always look for alternatives to the learning process can continue to be developed, so as to achieve educational goals. Learners are also required to be active, creative and analytical in following the learning process facilitated by the teacher. Learning is designed to create learning activities within the individual, in this context the educator directs students to acquire and process knowledge, skills, and attitudes. Educators are an important component in the success of the educational process. Therefore, efforts to improve the quality of education should start from improving the ability of educators. One of them is that educators must be able to create

learning process activities with models and learning methods in accordance with the goals or competencies to be achieved.

One effort that is believed to increase the competence of teachers, in addition through professional education, is lesson study activities. Lesson study is a collaborative activity undertaken by a group of teachers in order to improve the performance and quality of learning which in the end can improve teacher competence and profesioalisme. Lesson study is seen as an alternative to overcome the problem of educational process that has been considered less effective (Ali Mahmudi, 2009).

The learning process with the pattern of lesson study is a collaborative learning activity and continuous learning to improve learning. Lesson study is carried out in three stages: Plan (Plan), Do (implement), and See (reflect) which is done cyclically and continuously. In the Plan stage (plan) peer teachers design learning that can membelajarkan learners, how students participate actively in the learning process. The next stage of Do (implementation) or implementation of learning in the classroom to apply the design of learning that has been formulated in the planning and determine the model teacher who will realize the design of the learning. Last is the stage of see (reflection), at this stage of discussion between teachers and observers who are guided by the appointed Facilitator to discuss and evaluate the learning that has been going on.

One other alternative that can be implemented in learning to train and improve analytical thinking skills is by using inquiry methods. This method is one of the ways in learning that is used in science education that emphasizes the process of learners in discovering the concept of physics. This method has a broader process compared to other learning methods and further improves students' scientific thinking process skills. It is believed that students' conceptual understanding is the result of this process of scientific thinking.

Inquiry learning is done to formulate problems, formulate hypotheses, collect data, analyze and conclude. This lesson emphasizes the development of cognitive, affective and psychomotor aspects in a balanced way. Inquiry that requires the active involvement of learners has been shown to improve learning achievement and child's attitude toward Science (Haury, 1993).

B. Research Method

The research method used was descriptive quantitative method with experimental type using lesson study pattern. The execution took 2 cycles. Each cycle was consisted of 3 activities, namely: Planning (plan); Implementation (do); Reflection (see). Population in this research that was all class *XI Science SMA Negeri 1 Suralaga* year of learning 2017/2018 which only consisted of 2 class. The sample was determined by sampling technique saturated, so the sample in this research was all class of XI Science *SMA Negeri 1 Suralaga*. Data collection techniques used was the test method

to measure students' thinking ability. After the data collected and analyzed using the t-test.

C. Results And Discussion

There were two groups in this research that were experiment group and control group. Both groups were given different treatment, the experimental group was treated using inquiry method with the pattern of lesson study, while in the control group was treated by conventional method of learning. Based on research conducted in class XI *SMA Negeri 1 Suralaga* obtained data post-test results as seen in the table below**.**

Table 1. Data of Post-Test Group Experiment and Control

Class	Total	Higher Score	Low Score	Mean Score
Experimental	22	95	58	78.23
Control	22	86	54	72.45

Hypothesis testing using t test and after the test obtained t-test = 2.00 and t-table at 5% significant level of 1.68. t-test> t-table which means the proposed hypothesis WAS accepted or Ho was rejected. This means learning inquiry through the pattern of effective lesson study of analytical skills.Therefore, inquiry learning through the pattern of effective lesson study on students' thinking ability analysis. This is seen when students start from formulating the problem, guiding the experiment, making the hypothesis, presenting the analysis to make a conclusion. These activities make learners focus on what they learn. The participation of learners in group activities is highly controlled and goes according to what is expected according to the learning objectives, so that all group members work together to solve the problems given by the teacher.

D. Conclusion and Suggestion

Conclusion

Based on the results of research and discussion, it can be concluded that inquiry learning through the pattern was effective lesson study of students' ability analysis.

Suggestion:

- It is desirable for educators to be able to choose the right method in the learning activities in the school so that it is not only the students' preferred achievement, but their analytical thinking skills are also worth noting in order to improve their future life.

- It is hoped that the use of lesson study pattern can be continuously used in teaching and learning activities to train and improve communication skills, social, and express student opinions.
- Expected to the next researcher to be better and can complete deficiencies in preparing this thesis. Because the author realizes that, "Perfection belongs only to the Almighty", the author is only His creature who is not free from wrong and sin.

E. Reference

Mahmudi, A. 2009. *Mengembangkan Kompetensi Guru Melalui Lesson Study*. Jurnal Forum Kependidikan FKIP UNSRI, Vol.28, No. 2, ISSN 0215-9392.

Djiwandono, P.I. (2015). *Kemampuan Berpikir Analisis Sebagai Bekal Berpikir Kritis.* Diunduh di http://ibn.adreach.co/interstitialwww.academia.edu tanggal 12 Februari 2017.

Sanjaya, W. (2011). *Strategi Pembelajaran Berorientasi Standar Proses* Pendidikan. Jakarta: Kencana.

Sugiyono. 2014. *Statistik Untuk Penelitian*. Bandung: Alfabeta.

The Influence of Peer Tutoring and Group Discussion on The Students' Physics Achievement and Motivation

Kholida Ismatulloh
Hamzanwadi University
kholida.ebtaryadi@gmail.com

Abstract

This study is to determine the influence of the use of peer tutoring and group discussion on the students' achievement and motivation. The type of this research is experimental research. The population of this research is all the students of the second semester of Informatics Education Study Program at Hamzanwadi University in the academic year 2016-2017 which consisted of 52 people in 2 classes: II A and II B. The sample of research is determined by using Saturated Sampling where all members of the population will be sample. The research design used is Post Test Only Control Design. Data collection techniques is done using achievement test in the form of essays. The result shows that the mean scores from the achievement tests and learning motivations derived from the Peer Tutoring class is 70.08 and from the Group Discussion class was 68.88. The result of the achievement analysis and student physics learning motivation states that the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted with a significant level of 5%, in which the Ha is "There is a difference of influence between the use of cooperative peer tutoring and group discussion on the students' achievement and motivation in learning physics of the second semester of Informatics Education of Hamzanwadi University in the academic year 2016-2017.

Keywords: *peer tutoring, group discussion, learning achievement, motivation of learning, mulberry and unit*

A. Introduction

Education is a part of the process of nation and state life, in which the vision of national education is contained in the national education law system to bring about a peaceful, intelligent, democratic, competent, competitive, advanced, developing and prosperous Indonesia Unity of the Republic Indonesia is pious, technological master, has a high work ethic and discipline. The success key of a nation is the human resources that a nation has, especially its young generation. One effort to improve the quality of human resources is to improve the quality of education because it is a foundation of the build of character, mental, and spiritual human beings so that can be used as a benchmark of the quality of the nation.

The main problem of learning in formal education today is the low absorption of learners. This is evident from the average learning outcomes of students who are always still very apprehensive. This achievement is certainly the result of learning conditions that are still conventional and not touch the level of the learner's dimension itself –that

is how to actually learn it. In a more substantial sense, that learning process to the present day still provides teacher dominance and does not provide access for students to develop independently through discovery in the process of thinking.

B. Methods

Peer Tutor Sebaya Learning Model

Peer tutor sebaya learning model in a small group is learning by optimizing the ability of students who excel in one class to teach or transmit to their peers who are underachievers can overcome the backwardness. Peer tutors are one source of learning besides teachers. Peer tutors are meant here is the provision of learning assistance conducted by students appointed by the teacher's class. These peers are usually chosen by the teacher on the basis of various considerations such as students who have good academic performance and adequate social relationships. Many studies show that learning with peers (peer teaching) is more effective than teacher teaching (Lie, 2002:12). In this learning the role of the teacher is only as a facilitator or mentor, meaning that teachers only intervene when really needed learners and motivation of learners to actively learning. According to Mudyaarjo (1994: 241) a peer group is composed of an aggregate of individuals whose average age is almost the same. So the notion of peer is a child whose average age is almost the same or a class. Peer tutors sebaya do not have to be the most intelligent students in the class, but of course the student is already mastery (master) the material or subject matter to be delivered.

Grup Discussion Learning Model

In a general sense the discussion is a process that involves two or more individuals who integrate verbally and face-to-face the aims or objectives that are certain through the exchange of information, defending opinions and problem solving. In the process of teaching and learning in discussion education is a way of presenting/delivering educational materials that are all submitted to learners groups of learners to hold a scientific discussion to collect opinions, make conclusions, or arrange various solutions to solve a problem. Discussion learning models are not just casual conversations or debates, but discussions arise because there are problems that require different answers or opinions. In this method of discussion the role of teachers is very important in order to revive the enthusiasm of students to discuss. In the discussion group the students exchange information about the issues being discussed. Disagreements often occur the more different opinions, more the discussion will be.

The researcher hopes that the use of peer tutor sebaya and group discussion learning models of physics learning achievement of second semester student of Informatics Education at Hamzanwadi University Selong can increase, especially on the subject of quantity and unit.

C. Results and Discussion

Distribution data frequency of learning achievement and motivation by using peer Tutor Sebaya learning model. The variable of student achievement in this research is measured by the learning prestige test with the essay form of 5 items. The data collected obtained value of learning achievement ranged between 30 until 85. The average value (χ) learning achievement of 70.08 and standard deviation (SD) amount 17.25. The following will show the distribution of the frequency of data and graphs that show student achievement achieved on the table 1.1:

Table 1.1 The frequency distribution of student achievement data taught by using Peer Tutor Sebaya learning model.

No	Interval	Absolute Frequency
1.	30 – 39	3
2.	40 – 49	3
3.	50 – 59	6
4.	60 – 69	4
5.	70 – 79	6
6.	80 – 89	3
	Sum	**26**

For more details the frequency distribution of data in table 1.1 above can be seen in the form of histrogram graphs as shown in the following figure:

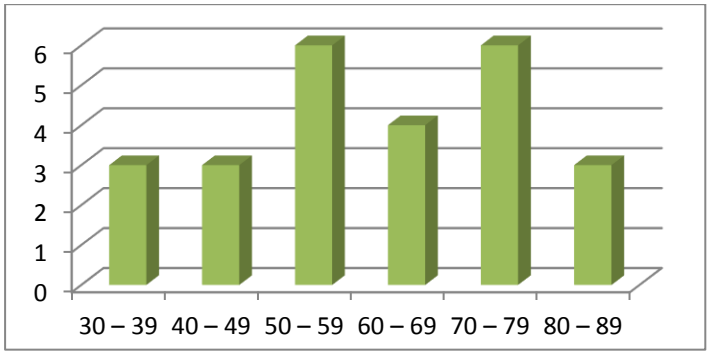


Figure 1.1 Frequency Distribution of Student Achievement Learning With Peer Tutor Sebaya Learning Model.

The frequency distribution of student achievement data taught by using the Group discussion learning model. The data collected obtained the value of learning achievement ranged between 30 until 85. The average value (χ) learning achievement of 68,88 and standard deviation (SD) amount 16,56. The following will show the distribution of the frequency of data and graphs that show student achievement achieved on the table 1.2:

Table 1.2 The frequency distribution of student achievement data taught by using Discusion grup learning model.

No	Interval	Absolute Frequecy
1.	30 – 39	3
2.	40 – 49	6
3.	50 – 59	6
4.	60 – 69	4
5.	70 – 79	4
6.	80 – 89	3
	Sum	**26**

For more details the frequency distribution of data in table 1.2 above can be seen in form the histogram graph as shown in figure 1.2 below:

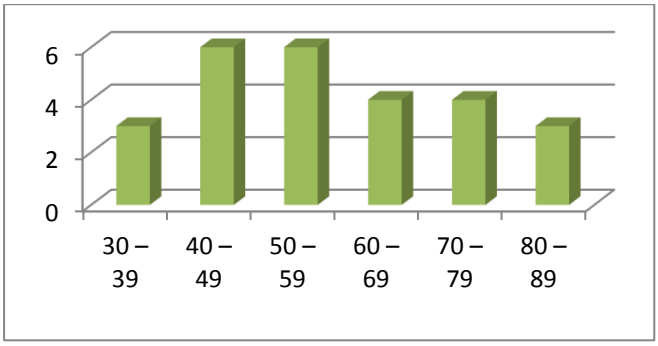


Figure 1.2 Frequency Distribution of Student Learning Achievement by Group Discussion Learning Models.

D. Prerequisite Analysis System

Normalitas System

From analysis value or that calculation used, then it can value from others class *chi kuadrat*, grup, and sel. Analysis value can show in resume table 1.3 this below.

Table1.3 Decision Chi Kuadrat

Class	Number of Respondent	x^2_{hitung}	x^2_{tabel}	Decision
Tutor Sebaya	26	-29,87	11,07	Distributed Normally
Grup Discusion	26	-19,73	11,07	Distributed Normally

Hypothesis Testing

Having met the requirements of the analysis, it can be tested hypothesis to meet whether the hypothesis that has been submitted accepted or rejected. From the calculation data obtained as in the table 1.4 below:

Table 1.4 Hypothesis Test Results Data Learning Student of Physics.

No	Class	N (sample)	(SD)	t_{hitung}	t_{tabel}
1.	Tutor Sebaya	26	17,63	2,054	1.876
2.	Grup Discusion	26	14,52		

From the table above can be known value t_{hitung} = 2,054 while t_{hitung}= 1.876 from the calculation result of hypothesis test result learn physics student got value t_{hitung} > t_{table}, then H_a which reads "There are differences in the influence of peer tutor type learning and group discussion on student achievement and motivation second semester student of Informatics Education at Hamzanwadi University Selong" be accepted. This means that the alternative hypothesis (H_0) which reads "There is no influence of Peer Tutor Sebaya and Group Discussion learning models on the achievement and

motivation learning second semester student of Informatics Education at Hamzanwadi University Selong" ***rejected***.

E. Conclution

Based on the results of research that took place using the method of Peer Tutor Sebaya and Group Discussion learning models can be described class activities during the learning process are as follows; (1) All members of the group are given LKS / similar issue items, both in the Peer Tutor class as well as the Group Discussion class. (2) In the Tutor Sebaya class the lecturer gives a 15 minute time limit to answer all questions on the LKS / item, 10 minutes for the stage of the tutor explains the members of the group, and afterwards the students prepare to present the results of the group discussion to the next class (share) alternately. (3) The best groups will be rewarded by lecturers and congratulations from each group. The role of Grup Discusion learning model, (1) Group Discussion Classes are also given 15 minutes to complete the LKS / item questions that have been distributed to each group. Determination of group members is done by taking into account the level of academic ability of the different students (heterogeneous). (2) At the time of workmanship LKS / item about each member of the group must come to think and answer together so that the group members can master and accountable the material that is done especially during the competition. During the competition, representatives of all members of the same group (homogeneous) are placed on the same table, if the number of students in the class is divisible by 3 then the first table is filled by smart students, the second table of moderate students, and then until all students get the tournament table evenly. (3) And more importantly, when the competition begins each group strives to be the best in challege of discussion and accountable for what they have answered when fighting with other groups. "There is a difference in the influence of peer tutor type model and group discussion type model on student physics achievement and motivation". The final result of this research stated that the result of the two models of learning that used to be the type of peer tutor is more desirable and more improve the achievement and motivation of learning in the second student semester of Informatics Education at Hamzanwadi University because the Tutor / teacher of same age causes the students to feel more motivated in their academic field and races want to be the best in the class. With this second learner model teaches students to be able problem solving together from what experienced and got the students in the matter of becoming something very meaningful and satisfaction in student self, it will always be remembered and remembered by the student. Giving rewards to those who excel will stimulate their instincts and patterns of thought to be the winner (best), they are competing to get the highest prizes and scores in each competition. It all aims to incrase the motivation of students in receiving the lessons, especially physics .

F. Reference

Abdullah, Mikrajuddin. 2007. *IPA Terpadu SMP/ MTs untuk Kelas IX Semester 1*. Jakarta: Esis.

Arikunto, Suharsimi. 2009. *Dasar-dasar dan Evaluasi Pendidikan*. Jakarta: Bumi Aksara.

Arikunto, Suharsimi. 2010. *Prosedur Penelitian Suatu Pendekatan Praktik*. Jakarta: Rineka Cipta.

Hakim, Lukmanul. 2008. *Perencanaan Pembelajaran*. Bandung: CV Wacana Prima.

Hamalik, Oemar. 2009. *Proses Belajar-Mengajar*. Bandung: Bumi Aksara.

Lie. 20002. *Penerapan Model Pembelajaran Tutor Sebaya*. Bandung: Bumi Aksara.

Mudyaharjo. *Aturan Penerapan Model Pembelajaran Tutor Sebaya*. Yogyakarta: Pustaka Belajar.

Slavin, Robert E. 2005. *Cooperative Learning Teori, Riset dan Praktik*. Bandung: Nusa Media.

Sudjana, 2005. *Metoda Statistika*. Bandung: Tarsito.

Sugiyono. 2011. *Statistika untuk Penelitian*. Bandung: Alfabeta

Suprijono, Agus. 2010. *Cooperative Learning Teori dan Aplikasi Paikem*. Yogyakarta: Pustaka Belajar.

Tarno, dkk. 2002. *Panduan Lembar Kerja Siswa Simpati SLTP/MTs*. Surakarta: CV Grahadi.

Trianto. 2010. *Mendesain Model Pembelajaran Inovatif- Progresif*. Jakarta: Kencana Prenada Media Group.

The Effectiveness of Group Consolidated Services With A Transactional Analysis Approach to Improve Students' Communication Skills

Muhammad Ripli[1],Teni Olivia Hartanti[2]
Hamzanwadi University
[1]riplimuhammad@gmail.com

Abstract

This study aims at determining the effectiveness of group counseling services with transactional analysis approach to improve the students' communication skills of class X TKJ SMK Negeri 3 Selong. The type of research is experimental research with Pre-Experiment design research design applying One Group Pre-test and Post-test Design. The population of this study is the students of class X TKJ SMKNegeri 3 Selong with the number of students 56 people. Sampling technique used in this research is Purposive Sampling technique in which the sample is class X TKJconsisted of 10 students. Data collection method applied interval scale valid and reliable questionnaire instrument. The data were analyzed by using t-test statistic to test the hypothesis. The results showed that group counseling service with Transactional Analysis approach was effective to improve the students' communication skill, it can be seen from the t-test analysis. It showed that the t-count> t-table (4.135> 1.833), N = 10 and dk = 9 in level 5% significance. Through this research, counseling teachers are expected to utilize group counseling services with transactional analysis approach in improving their students' communication skills.

Keywords:*students' communication skills, group counseling services with transactional analysis approach*

A. Intriduction

In essence humans are social beings who need the presence of other individuals in the process of life in order to carry out activities of his life and his descendants. In establishing relationships with others, every human being requires the ability to communicate. Every person who lives in society, since waking up to sleep again by nature naturally involved in communication both verbal and non verbal.

Students are part of the community is required to communicate with others in the environment where students interact. The environment in question is the school environment. School is one of the formal educational institutions created by the government and the community as a medium of education in particular to provide skills and skills as a provision of life in the future (Fatima, 2010).

Communication knowledge and skills are among the most useful. Through intrapersonal communication students are able to talk to themselves, get to know themselves, evaluate themselves, convince themselves, consider decisions and prepare messages to be conveyed to others (parents, friends, teachers, community). While

through interpersonal communication students are able to interact with others, know others and yourself, and reveal themselves to others (new people, parents, friends, teachers, community).

As revealed by Surya Online, Malang (2013) "the ability to communicate was far more important controlled students than academic ability. One of the motivators, Faizal Surplus MBA said, there are three types of communication that must be controlled by someone that is personal communication, inter personal and public speaking "(Surabaya.tribunnews.com).

Relation to it, then students who have good communication skills will be easy to socialize and gain an understanding of teachers and learning resources in school. Learning to communicate and socialize with the environment is an unrelenting process in the life of students, it is because it is not a capability gained from birth. Motley (in Anwar 2010: 2) states that about 85% of individuals experience unpleasant anxiety regarding public speaking. It also occurs in 15% to 20% of American students.

Apart from that at the level of senior secondary education especially SMK / MAK ability to communicate is very important it can be seen in the Act No. 23 of 2006 on passing standards at the level of primary and secondary education said that one of the competency standards SMK/MAK graduates are have the ability communicate spoken and written effectively and courteously. As revealed by Rahma (2010: 9) "Vocational High School (SMK) has the purpose to prepare students in entering the next life world (work) with the fulfillment of competencies in various developments".

Based on preliminary information from guidance and counseling teachers at SMKN 3 Selong on February 24, 2017 at 10.00 Wita, it was found that from 252 students in grade X, 20% of students had low communication skills, 70% of students had enough communication skills and 10% of students have good communication skills. This can be seen from students who are still timid (lacking confidence) when advancing or asking in the classroom, less attention to teachers in the class, inactive during discussions, not understanding the lesson, talking behind themselves, aloof at rest and so forth.

Seeing the phenomenon there is a gap between hope and reality, students should be able to adjust and communicate well, either to teachers, friends or other communities. If the above problem is left then the communication skills of students will be far behind from what should be. In education service units in schools, skills development or competence depends not only on subject and management services but also on psychopedagogic special services through counseling and guidance.

Through counseling and counseling services or role of counselor in overcoming the phenomena that occur as described above is very important. One of them is by providing group counseling services using transactional analysis approach. The purpose of this service is that the counselee becomes aware of all the barriers he or she

creates in communicating with others, and then develops a pattern of social interaction appropriate to situations and conditions, by placing oneself in the self-awareness that enables the process healthy communication (Winkel and Hastuti, 2010: 455). In other words that is to help students to obtain optimal development and have good communication skills in accordance with the stages of its development.

According to Big Indonesian Dictionary (2003: 1180) "skill is a skill to complete the task. While communicating is to communicate (related) ". So the understanding of communication skills is the ability to communicate (related).

Communication skills are a very important skill. This is because communication skills are needed in life for easy interaction with others. As revealed by Ibtisam (in youthmanual.com) mentions that "there are seven characteristics of communication skills:

1. A good listener. Being a good listener should be placed first in the characteristics of a good communicator. This is because speaking without the willingness and ability to listen is called solo performance. So giving others the opportunity to talk / convey something and pay attention to what it says is absolutely necessary. In addition, it is also important to listen to feedback or responses from others.
2. Deliver ideas and messages clearly and uncomplicated. A good communicator can communicate his ideas with simplicity. Things like this certainly need to be trained. Because many people who turned out not good in conveying the message / idea. Which is the result, the contents of the message / idea can not be understood. Unclear message submission can also lead to misunderstanding.
3. Good language skills. Language strongly supports the ability to communicate, both spoken and written. Minimal language skills can be disruptive in the process of communicating. In addition good communicators understand ethics and politeness.
4. The style of communication in accordance with the other person and in accordance with the condition. A good communicator has the understanding to put yourself by communicating according to the person, the situation, and the condition.
5. Can use social media appropriately. Someone who has communication skills knows how to use appropriate and wise social media. Because not all things need to be shared on social media.
6. Knowing about gestures (non-verbal) yourself and others. Communication is not just about verbal and written, but also non-verbal. The most common is gestures when talking to others. The view should be focused, and should not

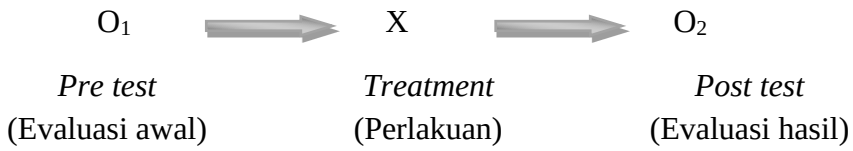
move too much. Trigger-pointing is also not good, because it gives the impression of mastering.

7. Friendly (Friendly). People who are clever to communicate have a friendly character, which is able to make other people feel comfortable to communicate with him. The trick, among others, is by being respectful, not feeling higher or lower than others, open to discussion, and making positive communication.

B. Research Method

The research method used in this research is pre-experimental research This research uses pre-test and post-test one group design. In this design there is a pre-test before treatment (O1) and post test (evaluation of results) after being treated (O2). Thus the treatment results can be known more accurately because it can compare with the situation before and after treatment. In this case there is only one experimental group. The design can be described as follows:

Figure 1. Design Research Chart



The population of this study is class X TKJ SMK Negeri 3 Selong 56 students consisting of 2 classes. Because the student population class X TKJ consists of two classes or groups, then to get the sample researchers using the technique of sampling sampling, so determined 10 people as a sample of research.

The method used for the questionnaire is questionnaire or questionnaire using closed questionnaire consisting of 20 items with 5 (five) kinds of options, namely: very suitable (SS), corresponding (S), doubt (R), not appropriate (TS), and very inappropriate (STS). Thus, there are 5 (five) types of student scores, namely 5 (very appropriate), 4 (appropriate), and 3 (doubt), 2 (not appropriate), 1 (very inappropriate).

Determining ideal maximum score (SMax Ideal) and minimum score ideal (Ideal SMin)

Smax ideal = 20 X 5 = 100
Smin ideal = 20 X 1 = 20
Determining ideal ideal and ideal deviation standard.

$$\text{Mean Ideal (Mi)} = \frac{1}{2}(\text{SMax Ideal} + \text{SMin Ideal})$$

$$= \frac{1}{2}(100 + 20)$$

$$= 60$$

$$\text{Standar deviasi ideal (SDi)} = \frac{1}{6}(\text{SMax Ideal} - \text{SMin Ideal})$$

$$= \frac{1}{6}(100 - 20)$$

$$= 13{,}33$$

MI = 60
SDi = 13,33

The data has been collected, then described with three categories, namely high, medium and low:

Mi + 1SDi → Mi + 3 SDi	High category
Mi-1SDi s/d< Mi + 1SDi	Medium category
Mi-3SDi s/d< Mi-1Sdi	Low category

If the data variance is homogeneous, The formula used to calculate the effectiveness of treatment is the t-test formula One Group Samples as for the formula as follows(Arikunto, 2010:349):$\frac{Md}{\sqrt{\frac{\sum X^2 d}{N(N-1)}}}$.

Information :

t : Nilai t
Md : Mean dari perbedaan *pre test* dengan *post test*
xd : Deviasi masing-masing subyek (d-Md)
$\sum X^2 d$: Jumlah kuadrat deviasi
N : Subyek pada sampel
d.b. : Ditentukan dengan N-1

Under the condition:

Pada taraf kesalahan 5%, bila harga $t_{hitung} \leq t_{table}$ maka Ho diterima dan Ha ditolak, dan apabila $t_{hitung} \geq t_{table}$ maka Ha diterima dan Ho ditolak. (Sugiyono, 2010 : 197)

C. Results And Discussion

This research was conducted from April 5, 2017 until May 20, 2017. The research location is at SMKN 3 Selong. Group counseling services are conducted for 1 month. Group counseling service with transactional analysis approach was conducted on 10 students of class X TKJ which was subjected to research conducted 5 times meeting with the topic of discussion as follows: "increase the confidence in communicate, establish good communication with peers, foster good communication with parents, how to deal with parents in different opinions, and the characteristics of communication skills ".

From the result of research that has been done in SMKN 3 Selong about effectiveness of group counseling service with transactional analysis approach to improve communication skill of class X TKJ student, after collecting data got pre-test and post-test result as follows:

Table 1. Desk Data Pre-Test

Variabel	Deskprisi Data Pre Test				
	Skor Max	Skor Min	Mean	SD	∑
Communication skills	92	53	72,2	14,2	722

Tabel 2. Desk Data Post-Test

Variabel	Pos tes				
	Skor Max	Skor Min	Mean	SD	∑
Communication skills	94	64	79,9	9,7	799

For idealization purposes, the ideal ideal score, ideal ideal score (Mi) and ideal deviation standard (SDi), for Mi = ½ (ideal ideal min-score min score) and for SDi = 1/6 (score max ideal-ideal min score). Thus the categories that can be made for data components pre-test ability komunasi is ideal max score = 100, and ideal min score = 20

Mi = ½ (100 + 20) = 60 and SDi = 1/6 (100-20) = 13.33, so categories can be made for communication skills before treatment is done. The categories are

1. Mi +1 SDi s/d Mi + 3 SDi = High category
   60 + 13,33 s/d 60 + 40

	73,33	s/d	100
2.	Mi - 1 SDi	s/d	Mi + 1 SD1 = Medium category
	60 – 13,33	s/d	60 + 13,33
	46,67	s/d	73,33
3.	Mi - 3 SDi	s/d	Mi - 1 SDi = Low category
	60 – 40	s/d	60 – 13,33
	20	s/d	46,67

So from the above categorization results for students' communication skills before being given treatment in the form of group counseling services with the approach of transactional analysis of students classified as moderate. While the students' communication skills after being given the treatment in the form of group counseling services with transactional analysis approaches increased to high category.

Before performing the hypothesis test then performed the prerequisite test both normality and homogeneity based on calculations using computer tool program SPSS version 24.0 year 2016, the results of normality and homogeneity of the data are in Table 3.

Table 3 Normality test results

Tests of Normality				Information
Kolmogorov-Smirnov[a]				
	Statistic	Df	Sig.	Normal
Pretes	0, 217	10	0,199	
Postes	0,125	10	0, 200*	
**. This is a lower bound of the true significance.*				
a. Lilliefors Significance Correction				

Table 4 Homogeneity Test Results

Test of Homogeneity of Variances			
Communication Skills			
Levene Statistic	df1	df2	Sig.
4,079	1	18	0,059

To test the hypothesis the researcher used the t-test formula of One Sample Group with significance level of 0.5%, Hypothesis Ha accepted if t-arithmetic> t-table, and hypothesis Ha rejected if t-count <t-table, then got:

$$t = \frac{Md}{\sqrt{\frac{\sum X^2 d}{N(N-1)}}}$$

$$\text{t-count} = \frac{7,7}{\sqrt{\frac{312,1}{10(10-1)}}}$$

$$= \frac{7,7}{\sqrt{\frac{312,1}{10.9}}}$$

$$= \frac{7,7}{\sqrt{\frac{312,1}{90}}}$$

$$= \frac{7,7}{\sqrt{3,468}}$$

$$= \frac{7,7}{1,862}$$

$$t = 4,135$$

To determine the value of t table:
Value dk = N-1 = 10-1 = 9
T-table value = 1.833 at significance level of 5%
Compare the value of t arithmetic and t table:
Obtained that t arithmetic = 4.135 and t table = 1.833

Based on pro tan t_hit = 4,135 with t_tab = 1,833. So, it can be concluded t_hit> t_tab, then Ho is rejected and Ha accepted so it can be concluded that the provision of group counseling services with transactional analysis approach can improve the communication skills of X class students in SMKN 3 Selong.

Based on the objectives and results of the research, it will be discussed clearly about the description of students' communication skill of class X TKJ SMKN 3 Selong before being given group counseling service with transactional analysis approach, description of communication skill of class X TKJ SMKN 3 Selong after being given group counseling service with approach transactional analysis, and description of communication skills skill of class X TKJ SMKN 3 Selong before and after being given group counseling service with transactional analysis approach.

The description of students' communication skills before being given treatment in the form of group counseling service with transactional analysis approach (pre test /

preliminary evaluation) is known that 5 students in high category and 5 students are in lower category.

Based on the calculation of pre-test (preliminary evaluation), it can be obtained that the average communication skills of students before being given group counseling services with transactional analysis approach in the category of being. This shows that the characteristics of students' communication skills that include being good listeners, conveying ideas and messages clear and uncomplicated, have good language skills, have a communication style appropriate to the other person and according to the conditions, can use social media appropriately, know about gestures (non-verbal) self and others, and have friends owned by students, but still not good.

After the treatment of group counseling with the transactional analysis approach, the students then carry out the post-test (evaluation of outcome). The purpose of post-test (evaluation of outcomes) is to determine the success rate of the implementation of treatment and improvement of students' communication skills. The description of students' communication skills after being given group counseling service with transactional analysis approach can be seen that 7 students in high category, and 3 students in medium category and no students for low category.

Thus, the students' average communication skill can be obtained after group counseling service with transactional analysis approach is in high category, so there is an increase from medium category to high category. This is seen during the process of observation made when students follow group counseling services with transactional analysis approach that students begin to dare to express opinions, students are able to commit and understand to foster self-confidence and connect with other people either with parents, teachers or peers, as well as students begin to have the courage to communicate with new people and learn to eradicate problems or problems of others.

Based on the above description shows that there are differences in communication skills before and after students are given group counseling services with transactional analysis approach. Student communication skills after being given treatment (treatment) to be higher than before given treatment (treatment). In other words, after being given counseling services group with a transactional analysis approach (post-test / evaluation of results), overall students have good communication skills.

D. Conclusion

Based on the above description, it can be concluded that the provision of group counseling services with effectual transactional analysis approach improves students' communication skills. This can be seen from the significant differences in results before and after service delivery on the sample. The description of students 'communication skills before being given treatment in the form of group counseling service with

transactional analysis approach (pre-test / preliminary evaluation) found that from 10 students there are 5 students in high category, 5 lower category students and the description of students' communication skill after given group counseling services with transactional analysis approach can be seen that from 10 students terdpat 7 students in high category, 3 students in medium category.

The result of research data analysis using t-test of one sample shows Ha accepted and Ho is rejected with the conclusion of this research that is giving group counseling service with effecttive transactional analysis approach to improve communication skill of class X SMKN 3 Selong student.

E. Suggestion

Based on the results of research that has been done in class X TKJ SMKN 3 Selong, then suggestions that can be given are:

1. To the managers of educational institutions, especially the principals in order to utilize the results of this study to serve as a guide in the educational process, especially in an effort to improve students' communication skills through group counseling services with transactional analysis approach.
2. To the school counselor, should have a clock in the classroom to provide counseling and counseling services, especially group counseling services, one group counseling services with transactional analysis approach to assist students in improving students' communication skills with process and dynamics within the group. So that students are able to learn and teach to others.
3. To the students, expected to always find and multiply information related to communication to support the ability and its development in the future so that when out of SMK has good communication ability to other people, either new person, parents or peers.
4. To the next researcher, the results of this study are expected to be used as a reference in conducting more in-depth research and trying to uncover new problems that have not been fully resolved in this study.

F. References

Anwar, Ahmad. 2010.Meningkatkan Keterampilan Berkomunikasi di SMP Negeri 3 Sindu.Jurnal Online Jurusan Psikologi. *Jurnal.ugm.ac.id/jpsi/article/*. Diunduh pada 27 Maret 2017.

Anam, Khaerul. 2016. Kontribusi Kemampuan Penyesuain Diri dan Keterampilan Berkomunikasi terhadap Kemampuan Memecahkan Masalah pada Siswa SMA NW Tebaban. Pancor: Skripsi STKIP Hamzanwadi Selong.

Arikunto, Suharsimi. 2010. *Prosedur Penelitian Suatu Pendekatan Praktik*. Jakarta: Rineka Cipta

Atmoko, Adi. 2012. *Bahan Ajar Mata Kuliah Desain dan Analisis Data.* Malang : Universitas Negeri Malang Program Pascasarjana.

Bungin, Burhan. 2011. *Sosiologi Komunikasi Teori, Paradigma, dan Diskursus Teknologi Komunikasi di Masyarakat*. Jakarta: Kencana Prenada Media Group.

Cangara, Hafied. 2012. *Pengantar Ilmu Komunikasi*. Jakarta : PT Raja Grafindo Persada.

Corey, Gerald. 2010. *Teori dan Praktik Konseling dan Psikoterapi* (Terjemahan oleh E. Koeswara). Bandung: PT Refika Aditama

Devito, Joseph A. 2011. *Komunikasi Antarmanusia Edisi Kelima* (Terjemahan oleh Agus Maulana). Tangerang Selatan: Karisma Publishing Group.

Djamarah, Syaiful Bahri. 2004. *Pola Komunikasi Orang Tua dan Anak dalam Keluarga*. Jakarta : PT Rineka Putra.

Fatimah, Enung. 2010. *Psikologi Perkembangan (Perkembangan Peserta Didik)*. Bandung: CV. Pustaka Setia.

Hartinah, Siti. 2009. *Konsep Dasar Bimbingan Kelompok*. Bandung: PT Refika Aditama.

Ibtisam, Fatimah. 2017. http:// www.youthmanual.com/ post/ dunia-kerja/ persiapan-kerja/keterampilan-berkomunikasi-kamu-tergolong-canggih-kalau-memiliki-7-hal-ini. Diunduh tanggal 8 Maret 2017

Komalasari, Gantina, dkk. 2011. *Teori dan Teknik Konseling*. Jakarta: PT Indeks.

Kurnanto, Edi. 2014. *Konseling Kelompok*. Bandung: Alfabeta.

Kurniadi, Saputra. 2015. Efektifitas Layanan Konseling Kelompok dalam Meningkatkan Rendahnya Kecerdasan Emosional Siswa SMA Al-Hamzar Tembeng Putik. Pancor: Skripsi STKIP Hamzanwadi Selong.

Nurmala, Siti. 2015. Pengaruh Layanan Konseling Kelompok terhadap Perubahan Rasa Takut Berkomunikasi Antar Pribadi Siswa Kelas VII MTs Jamaluddin Toya Kecamatan Aikmel. Pancor: Skripsi STKIP Hamzanwadi Selong.

Mappiare, Andi. 2011. *Pengantar Konseling dan Psikoterapi Edisi Kedua*. Jakarta : PT Rajagrafindo Persada.

Mulyana, Dedi. 2005. *Komunikasi Efektif*. Bandung: PT Remaja Rosdakarya.

Permendikbud. 2016. Panduan Operasional Penyelenggaraan Bimbingan dan Konseling Sekolah Menengah Kejuruan.

Permendiknas RI. 2006. Permen Diknas RI No 23 Tahun 2006 tentang Standar Kompetensi Lulusan untuk Satuan Pendidikan Dasar dan Menengah.

Purwanto. 2010. Metodologi *Penelitian Kuantitatif Untuk Psikologi Dan Pendidikan*. Yogyakarta: Pustaka Pelajar.

Pusat Bahasa. 2003. *Kamus Besar Bahasa Indonesia Edisi Ketiga*. Jakata : Balai Pustaka.

Rahma,Ulifa. 2010. *Bimbingan Karier Siswa*. Malang: UIN-Maliki Press (Anggota IKAPI).

Rakhmat, Jalaluddin. 2012. Psikologi Komunikasi. Bandung: PT Remaja Rosdakarya.

Sugiyono. 2012. Metode Penelitian Kombinasi (Mixed Methods). Bandung: Alfabeta.

Sugiartawan, dkk. 2014.Efektivitas Konseling Analisis Transaksional dengan Teknik Kursi Kosong untuk Meningkatkan Kemandirian dalam Mengambil Keputusan Siswa kelas XI IB1 SMA Negeri 1 Sawan.Jurnal Online Jurusan Bimbingan Konseling Volume: Vol : 2 No : 1. Ejournal.undiksha.ac.id. Diunduh pada 15 Maret 2017.

Surya Online. 2013. Kemampuan Komunikasi Penting Bagi Siswa. http://surabaya.tribunnews.com/2013/01/27/kemampuan-komunikasi-penting-bagi-siswa. Malang. Diunduh pada 21 Maret 2017.

Winkel, WS dan Hastuti, Sri. 2010. *Bimbingan dan Konseling di Institusi Pendidikan*. Yogyakarta: Media Abadi.

Learning Cooperative *Talking Stick* Through *Lesson Study* To Improve Critical Student Capabilities About At The Vertebrata Zoology Eyes (Lesson Study In Vertebrate Zoology Courses)

Wawan Muliawan[1], Danang Prio Utomo[2]
Hamzanwadi University
wawanmuliawan840@yahoo.co.id
danang_irenk@yahoo.com

Abstract

This study aims ae improving students' critical thinking skills in improving the quality of learning through Lesson Study, namely through the implementation of cooperative learning model Talking Stick type. In Lesson Study activities conducted in four cycles. Each cycle consists of three stages, namely the Plan stage (Planning), Do (Implementation), and See (Reflection). The data obtained in the form of data implementation of Lesson Study, data critical thinking skills of students and questionnaire data on learning that has been done. Data of Lesson Study implementation is analyzed descriptively qualitative. The students' critical thinking skills are measured using tests that refer to SOLO Taxonomy. Based on the result of the research, the data of students' critical thinking ability is at the preliminary stage 75,5%, and the unructural stage is 15,5%. It can be concluded that there is an increase of 8.6% to students' critical thinking ability after applied Talking Stick learning model. While the questionnaire results data on the learning is performed in percentage. The conclusion obtained is 100% of students give an opinion that the implementation of learning interesting and make students motivated but 60% of students questioned the instrument that is not understood.
Keywords: Cooperative Talking Stick, Critical Thinking, Vertebrate Zoology

A. Introduction

Achievement of quality in learning is the professional responsibility of a lecturer, while at the macro level, LPTK as an institution is very responsible for the formation of qualified teachers, which can contribute to the intellectual development, attitude and morale of each individual learners as members of the community (Depdiknas Ditjen Dikti, 2005). Referring to the statement, universities such as the College of Teacher Training and Education have a very important role in building a quality system of learning because through this institution will be formed prospective educators who will be plunged into schools in various levels of education. One of the steps taken to improve the quality of learning is by designing the curriculum or developing learning tools in accordance with the potential of the region through *Lesson Study* (LS).

Lesson Study is an effective way to improve the quality of lecturers teaching and student learning activities, because the development of learning study is conducted and based on the result of "sharing" professional knowledge based on the practice and the teaching result implemented by the lecturers. The fundamental emphasis is on the quality of student learning, the learning objectives being the focus and the main point of interest in classroom learning, because based on real experience in the classroom and able to become the foundation for the development of learning, and the role of lecturers are placed as learning researchers.

The result of observation in Biology education program, learning still tends to focus on lecturers as a source of information (Lecture Centered), but also learning using lecture method, discussion, questioning, practicum and assignment. During the learning activity, the students' motivation motivation is still low, this can be seen when the students follow the lectures are: 1) there are students who do not pay attention to the explanation of the lecturer in front of the class, 2) when there are students who answer the question the other students do not want to listen but talk With his own friends, 3) students are less actively asked so that student participation in learning activities is still lacking. This may be due to the use of static learning methods, so that students are not interested in the learning that followed. Therefore, it is needed a learning model that can make students 'critical thinking ability increase, one of learning model that can make students' critical thinking ability increase is Talking Stick learning model through *Lesson Study*.

The quality of this education can be influenced by the quality of a learning. Learning is the process of interaction of learners with educators and learning resources in a learning environment. In other words, learning is a process to help learners to learn well. The learning process is experienced throughout the life of a human being and can be applicable wherever and whenever. Law No. 20 of 2003 on National Education System Article 3 states that national education functions to develop the ability and form the character and civilization of dignified nation in the framework of intellectual life of the nation, aims to the development of potential students to be a human being who believes and cautious to God Almighty, Be noble, healthy, knowledgeable, capable, creative, independent, and become a democratic and responsible citizen. From the content of article 3 above shows that education in Indonesia also wants to develop a capable human being, have critical thinking ability not only on academic ability but on all the potential that exist in him, so that the output of education in Indonesia can produce qualified human resources. Ibrohim and Syamsuri (2010), *Lesson Study* or study is not a method of learning, but is a model of professional education through collaborative learning and continuous learning based on the principles of Collaboration and Mutual Learning to build learning communities. Susilo et al. (2011), when examined in the *Lesson Study* definition can be found seven keywords, namely

professional coaching, learning assessment, collaborative, sustainable, kolegalitas, mutual learning, and learning community. The *Lesson Study* aims to conduct continuous education professional development so as to improve the professionalism of educators continuously.

According to Sugihharto (2009) suggests that the learning model Talking Stick included in cooperative learning because it has characteristics in accordance with cooperative learning are: (1) Students work in groups cooperatively to finish learning materials, (2) Group formed from students who have (3) Group members come from different races, cultures, tribes, genders, and (4) Rewards are more group-oriented than individuals. As for

B. Method

This research is a qualitative research that is used to examine the natural object where the researcher as the key instrument, the sampling is done purposively, the collecting technique is combined (triangulation) and the result of the research emphasizes the meaning of generalization (Sugiyono, 2010). In this case conducted learning study (*Lesson Study*) which implemented consist of 4 (four) cycles or 4 (four) times Open Lesson. Each cycle consists of 3 stages, namely the stage of Planning (Plan), Implementation (Do) and Reflection (See). Study study study conducted aims to improve students' Critical Thinking skills implemented through the Talking Stick learning model.

The instruments used consist of observation sheets, questionnaires and critical thinking skills tests. The observation sheet was used to find out the student activity during the learning process while the questionnaire was used to know the opinion of the students about the learning process that has been going on, including the learning tools that have been developed through *Lesson Study*. Data analysis used is descriptive statistic technique. The data obtained in the form of quantitative data and qualitative data. Descriptive statistical techniques are used to describe the data collected from each research variable. Data analysis results are described in the form of tables and graphs. Qualitative Descriptive analysis techniques used to analyze the implementation of learning through *Lesson Study*. Meanwhile, to know the use of learning model Talking Stick on critical thinking ability, used Quantitative Descriptive statistics

C. Findings and Discussion

Lesson Study in Vertebrate Zoology is conducted by a team consisting of 8 people, including: Wawan Muliawan, M.Pd. As (Model Lecturer), and as Observer is: Dra. Hj. Hartini Haritani, M. Pd, Nurul Fajri, M.Pd., Husnayati Hartini, M.Si., Indra Himayatul Asri, M.Pd, Nunung Ariandani, M. Pd., Nur'aini, M.Pd., Sarwati, M.Pd. And Dr. Baiq.

Fatmawati M.Pd. *Lesson Study* implementation consists of 4 (four) cycles and each cycle consists of Plan, Do and See stages. The design model can be seen in Figure 1

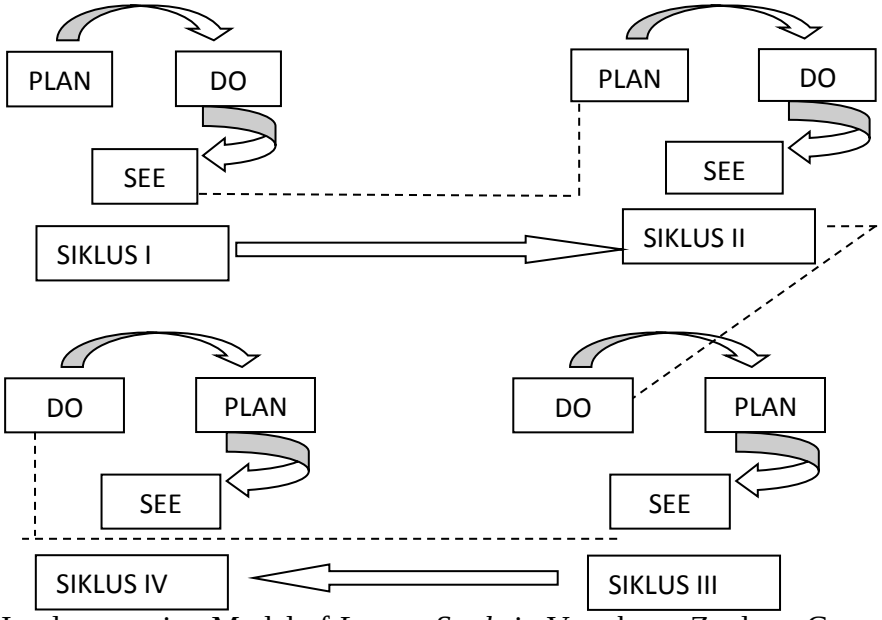


Figure 4.1. Implementation Model of *Lesson Study* in Vertebrate Zoology Course

Cycle I *Lesson Study*.

The details of each stage can be described as follows.

Plan I (Planning) was held on Thursday, March 26, 2015, at 10:30 to 12:30 pm at the Secretariat Prodi. Biology Education. Implementation of Plan I from the stages of *Lesson Study* started from the introduction delivered by the Coordinator of Biology Education Study Program, Ibu Nurul Fajri, M.Pd. And continued by moderator to open Plan event. The first Plan discusses the syllabus, RPS, and Competency Standards, from the results of the PLAN obtained Competence Standards is Analyze the Concepts and Principles of Vertebrate Zoology and apply it in everyday life. As well as basic competence: Analyzing the characteristics, development of classification system and nomenclature of Chordata subfilum animal While the competence indicator is: (1) Analyzing the topography of internal organs in Pisces class animal through surgical activities, (2) Identify the development of classification system and nomenclature of Chordata subfilum

. Exposure of Lecturer Model on Syllabus, SAP and Rubric Assessment followed by discussion with Team *Lesson Study*. The Questions of each observer are: a) Adjustment of Competency Standards contained in the syllabus, in order to be tailored to the expected. B) Indicators of each super class are improved, because the indicator is a derivative of the Competency Standards and Basic Competencies. C) In SAP when using the Talking Stick learning model in the teaching process, it will result in a shortage of time. D) on learning objectives, needs to be improved. The inputs from the

Monevin Team related to Syllabus, SAP and Rubric of the Assessment are: "In the pre-test assessment does not need to be assessed in a classical or group manner as critical thinking is assessed throughout the Implementation of the Critical Thinking Assessment Rubric."

Do (execution). The first stage of the class (Open Class) was held on Tuesday, April 14, 2015. Based on the results of the implementation there are some students who are not active in the learning process and are still confused in the material The development of Chordata subdilum classification and nomenclature system,

See I (reflection). The reflection stage I was held on Wednesday, April 14, 2015, at 13.00 - 15.00, located in Class A Room 216. During the implementation of See (Reflection) in Open First Class was led by moderator, Nurul Fajri, M.Pd, where the moderator invited lecturer Model to convey messages and impressions and experiences during learning melakasanakan. The thing that is delivered by the model lecturer is the Implementation at the time of learning in accordance with what is desired by the model lecturer, where the students become motivated in the learning process because students play Talking Stick, but in the learning process takes time, where in SAP time is 80 minutes Which has been allocated more than expected.

After the model lecturer presented the results during the learning process, the moderator gave the observer a chance to present his observation result during the observation during the learning process done by the model lecturer. The opinion of the observer is: 1. Nuraini, M. Pd, a) the learning process has Because the class can live, b) In the beginning and core activities, do not refer to SAP, because the model lecturer ask directly to the students, c) students are still confused in the learning process but the business model lecturer to direct students to make students not become confused, d) In the core activities: common mistakes, because the student does not perform the plan as a whole, e) On the stick should be included in the syntax of learning, g) In the final stage, the model lecturer does not draw the conclusions directly. 2. Husnayati Hartini, M. Si, a) At the time of the learning process, there are students who are not active before the lecturer modeled the music, including endang rudati, wedi, and rizal, b) not enough time in the learning process. 3. Nurul Fajri, M. Pd, a) Overall students are active in the learning process, but learning time is delayed, or over time, b) The core activities, students do not formulate the problem. 4. Dra. Hj. Hartini Haritani, M. Pd, a) Measurements, and questions raised, not fit, so it can not be compared with other materials, b) Student interaction with students is given by the model lecturer before giving the question, as the note can not be given long before so Learning is not maximal.5. Indra Himayatul Asri, M. Pd, a) Implementation of learning is good and students are active, b) Discussion materials, done when the activity is finished and students do not do that, and students ignore the discussion materials. Dr. Baiq. Fatmawati, M. Pd, a) Technical problem: there is confusion of students in conducting

learning activities, but the model lecturer informs the students so that students are not confused, b) Talking Stick, should give judgment to who answer, and model lecturer bring assessment sheet . 7. Padlurrahman, M. Pd (Monev), a) No need to correct the rubric, b) Very good activity, c) Input for the next PLAN, so the assessment is necessary for assessment, d) Talking Stick, on a square formation, Leter U, so as not to disturb the observer in observing

Cycle II *Lesson Study*

The description of the implementation of *Lesson Study* in cycle two is as follows.

Plan II (Planning) was held on Thursday, April 23, 2015, at 10:30 to 12:30 pm at the Secretariat Prodi. Biology Education. Implementation of the plan from the stages of *Lesson Study* started from the introduction delivered by the Coordinator of Biology Education Studies Program, namely Nurul Fajri, M.Pd. And continued by moderator to open Plan event. The first Plan discusses about, RPS, MFI, and Competency Standards, from PLAN result obtained Competence Standards is Analyze the Concepts and Principles of Vertebrate Zoology and apply it in everyday life. As well as basic competence: Analyzing the characteristics, and various systems in the amphibian class, While the indicators of competence are: (1) Medeskripsikan about characteristics, and reproductive system, digestive system, respiratory system, the amphibious class

The presentation of model lecturers on SAP, MFI and Rubric Assessment followed by discussion with Team *Lesson Study*, which was guided by moderator who also became the coordinator of Team *Lesson Study*. The Questions from each observer are: 1. Nuraini, M. Pd, A) the learning objectives need to be corrected, 2. Husnayati Hartini, M. Si, a) On Apersepsi Activity in SAP, Video is replaced with Picture on learning activity.3. Nurul Fajri, M. Pd, a) In SAP, which in core activities, which is distinguished between the class of pisces with amphibious classes do not need frogs and toads, b) The observed need not observe integument, nervous system and blood circulation, c) Yang Observed the outer morphology, reproductive system and digestive system. D) Preferably Talking Stick learning model after students do practicum 4. Dra. Hj. Hartini Haritani, M. Pd, a) Emphasizing the characteristics of the Amphibian class, b) Correcting the Frog's difference with the Frog, c) The nervous system does not need to be observed, d) Delivering structured tasks outside the learning, e) Material can enter from the indicator. F). Time needs to be added to the process of using the Talking Stick model. 5. Indra Himayatul Asri, M. Pd, a) In the MFI in observing the anatomy of the Amphibian Class, in order for the meching to reach its objectives, b) In the MFI, Formalin material is not listed, d) If one group observes 2 specimens, Then time will not be enough, and the use of Talking Stick learning model should be noted, whether the time is not excessive. 6. Padlurrahman, M. Pd (Monev), a) In SAP, Indicator must be based on Basic Competency and refer to Competency Standards, b) What kind of toads with frog if studied from integument side, so that he can be differentiated, d). The

use of learning model Talking Stick is very interesting, because it will motivate students in answering the problem, should be done after the lab process ends.

Do the second (Implementation). The second stage of Open Class 2 is held on Monday April 27, 2015. Based on the results of the learning process it is known that there are still some students who are absent, and some students are less active in the learning process, and there are some still less learned concepts By students

See II (reflection). Stage II reflection was held Monday, April 27, 2015, at 10.15 - completed, located at the Secretariat Prodi. Pend. Biology. During the implementation of See (Reflection) on Open First Class is led by moderator, that is Nurul Fajri, M.Pd, where moderator invite model lecturer to convey message and impression and experience during melakasanakan learning, As a matter which delivered by model lecturer is at The second Open Class, model lecturers do the learning in the Lab. Prodi Biology Education, where afterm students do practicum students formation and students become the spirit and very happy in the learning process but in this learning process many students who do not master the concept of learning on this day, on the learning process. But there are some students who are not active and there are some students who are not present in the learning or Open Class. The model lecturer realizes that, every activity must have deficiencies, and the model lecturer realizes that the model lecturer expects input, and advice to the observers, for learning better. But overall the learning process in accordance with the desired by the model lecturer. In the implementation of this learning the model lecturer displayed a picture of the difference between a frog and a frog

After the lecturer presents the results of the model during the learning process, then the moderator provides the opportunity for observers in submitting observations conducted by lecturers models, while the opinion of the observer is: 1. Nuraini, M. Pd, a) at the time of the observation specimen, a very active student , In addition to the lecturer model is also very active in guiding students in the process of observation, when Talking Stick implemented students look very excited and motivated in the implementation of learning. 2. Husnayati Hartini, M. Si, a) The learning process of the course has run smoothly, b) through the cooperative model Talking Stick students can combine existing in theory and the original specimen in the lab and in answering the problem, .3. Himayatul Indra Asri, M. Pd, a) learning model used by lecturers determine the model of learning objectives are achieved, the student spirit in the learning process, 4. Sarwati, M. Pd, a) Students active in working on MFIs but with a better understanding of About the tools and materials are still lacking for that the importance of emphasis to the students to understand the work procedures, and students the spirit and cheerfully in the learning where students pass the Stick which then given the problem, and the students are very motivated in the implementation of learning today.

Cycle III *Lesson Study*

Cycle III The *Lesson Study* consists of the Plan, Do and See phases described as follows.

Plan I (Planning) was held on Wednesday, May 6, 2015, at the Secretariat of Prodi. Biology Education. Implementation of the first Plan discusses about RPS, MFI and Competency Standards, from the results obtained PLAN Competence Standards is Analyze the Concepts and Principles of Vertebrate Zoology and apply it in everyday life. As well as basic competence: Analyze characteristics, and various systems in the reptilian class. While the indicators of competence are: (1) Find the general characteristics of the reptile class, (2) Describe the reproduction system of the reptile class. (3) Describe the digestive system of the reptile class. (4) Describe the respiratory system of the reptile class

The presentation of model lecturers on SAP, MFI, followed by discussion with Team *Lesson Study*, which was guided by moderator who also became the coordinator of Team *Lesson Study*. The presentation of lecturer of the model is; In the implementation of this third *Lesson Study* I presented a video about the reptile class, the lizard and the lizard, and the time allocation offered by the model lecturer was 10 minutes in the initial activity, 85 minutes of core activity and 5 minutes of final activity, after the model lecturer presented SAP And the next MFI The questions of each observer are: 1. Nuraini, M. Pd, a) my suggestion, In Indicator: 1, Finding General Characteristics of Reptile Class, 2. Describe Reproduction System, and 3. Describe the digestive system And breathing. Nurul Fajri, M. Pd, a) SAP and MFI are good .. 3. Husnayati Hartini, M. Si, a) Indicators adjusted to SK and KD

Do III (Implementation). Phase Do III was held on Friday, May 8, 2015. Based on observations it is known that 95% of students have been really active in the learning process although there are still some people who are not present in the learning process

See III (reflection). Reflection stage III was held Friday, May 8, 2015, at 10:00 to 12:00, held at the Secretariat Prodi. Pend. Biology. During the implementation of See (reflection) on the Open Class Third is led by the moderator, namely Nurul Fajri, M.Pd, where the moderator invited the model lecturer to convey the message and the impression and experience during the learning melakasanakan. The thing that is delivered by the lecturer model is the Implementation at the time of learning in accordance with what is desired by the model lecturer, where the students become motivated in the learning process, the process of learning time is very precise with the allocation of time contained in SAP, and students active in the learning process .

After the model lecturer presented the results during the learning process, the moderator gave the observer an opportunity to convey his observations during the observation during the learning process, as for the opinion of the observer are: 1.Nunung Ariandani, M. Pd, a) In the student apperception activity making hypothesis

formulation And the time at the end of the learning process is very precise and corresponds to the time allocation in SAP. 2. Husnayati Hartini, M. Si, a) The learning process runs smoothly, and the time management need to be reminded continuously to the students so that the allocation of time agreed with the *Lesson Study* Team, in accordance with SAP, b) Lecturer interaction model with the student very Active so that students learn well. 3. Nurul Fajri, M. Pd, a) as a whole students are involved in the learning process, b) interactive students and cooperate in completing the practicum, c) interesting learning where students are motivated and active in the learning process. 4. Dra. Hj. Hartini Haritani, M. Pd, a) Time planning greatly determines the activity of students during the learning process and lecturers active models in motivating students to complete the learning steps. Indra Himayatul Asri, M. Pd, a) Talking Stick learning model is in accordance with the characteristics of the material taught will certainly support the achievement of learning objectives to be achieved, b) students active in the process of practicum and learning. 6.Dr.Baiq. Fatmawati, M. Pd, a) the learning process is very effective and the student is active, it is because of the active and good Team *Lesson Study* teamwork, b) Lecturer active model in guiding the students in the learning process. 7. Sarwati, M. Pd, a) Proper management of time determines the success of learning, b) motivated students and enthusiasm in the learning process.

Cycle IV *Lesson Study*

Cycle IV *Lesson Study* can be described as follows.

Plan IV (Planning) was held on Thursday, May 21, 2015, located at Secretariat Prodi. Biology Education. Implementation of the first Plan discusses the MFI, RPS, SAP and Competency Standards, from the results obtained PLAN Competence Standards is Analyze the Concepts and Principles of Vertebrate Zoology and apply it in everyday life. As well as basic competence: Analyze characteristics, and various systems on the class of aves. While the indicators of competence are: (1) Find the general characteristics of the class Aves. (2) Describe the reproduction system of the Aves class. (3) Describe the digestive system of the Aves class. (4) Describe the respiratory system of the Aves class. (5) Distinguish morphologically and anatomically between aves that can fly with Aves that can not fly

The presentation of model lecturers on SAP, MFI and Rubric Assessment followed by discussion with Team *Lesson Study*, which was guided by moderator who also became the coordinator of *Lesson Study* Team. The result of the lecturer's presentation is on this lecture, model lecturer displaying video between Aves class Which can fly high and Aves class that can not fly high, while the type of Aves is birds Lathe and birds Kecial, because Kecial is a class Aves much favored by the sasak community. Further Questions from each observer are: 1. Nuraini, M. Pd, a) on learning objectives need to be corrected, 2. Husnayati Hartini, M. Si, a). In Apperception Activities in SAP, Video is replaced with Drawing on learning activities. 3. Indra Himayatul Asri, M. Pd,

a) For the specimen practicum, kecial is replaced by pigeon because the cecial is too small, c) In Apperception Activity, do not show Vidio but show a picture between the difference of quail / quail with Pigeon. Dra. Hj. Hartini Haritani, M. Pd, a) On the Learning Model, more likely to Discovery Learning, b) Plus on the discussion, which is in the MFI, Is there a difference in the type of feathers on the lathe with the dove. 5. Dr. Baiq atmawati, M. Pd, a) Learning method is changed to Discovery Learning because in this lab, find the existing, c) In the MFI is not too detailed, use the image on the Theoretical Basis

Do IV (Implementation). Phase Do IV held on Monday, May 25, 2015. Based on the observation, it is known that all students are active in the learning process.

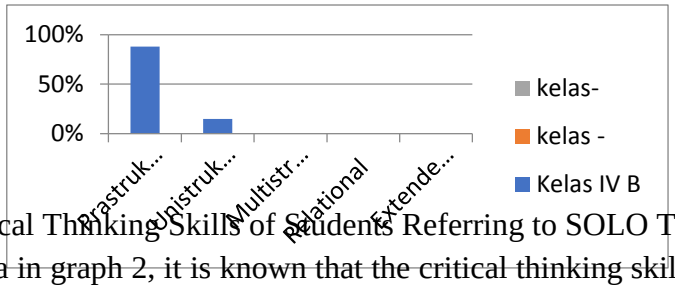
See IV (reflection). The reflection stage IV was held on Monday, May 25, 2015, at Mikroteaching 2. During the implementation of See (reflection) on the First Open Class it was led by the moderator, Nurul Fajri, M.Pd, where the moderator invited the model lecturer to convey the message and the impression Experience during learning melakasanakan. The thing that is delivered by the lecturer model is the Implementation at the time of learning in accordance with what is desired by the model lecturer and Team Lesoon Study, and students are active in the learning process and time according to SAP which has been prepared.

After the model lecturer presented the results during the learning process, the moderator then gave the observer a chance to present his observations during his observation during the learning process by the model lecturer. Good in Open Class activities, b) On practicum activities are all active and Mufidatul Hasanah just write it, c) The valuable experience on this day is, on very good lab work.2. Husnayati Hartini, M. Si, a) Overall group 5 members active, b) Students critical in answering the problem one of them is an active student in the process of answering questions or problems. 3. Nunung Ariandani, M. Pd, a) From my observation, in this 4th Do, an increase from the first DO, b) Students are accustomed to differentiating and obstacles in the laboratory where the problem is the lack of practicum tools. 4. Indra Himayatul Asri, M. Pd, a) On the implementation of the practice in the timing management of the lecturers model is good and on the learning process Taking Stick time is very appropriate, b) Learning objectives are in accordance with the wishes of the *Lesson Study* Study Team. Biology,

Based on the implementation of *Lesson Study* that has been implemented created collaboration between the teams. Furthermore, from observations that have been implemented on learning, lecturers who become observers can learn from the observed learning process. This is in line with Lewis's (2002) assertion that the ideas contained in *Lesson Study* are actually short and simple, ie if a teacher wants to improve learning, one of the most obvious means is to collaborate with other teachers to design, observe and reflect on learning which is conducted.

Results of Critical Thinking Ability

Based on the learning that has been done, the data of students' critical thinking ability (Graph 2) are described. Below this

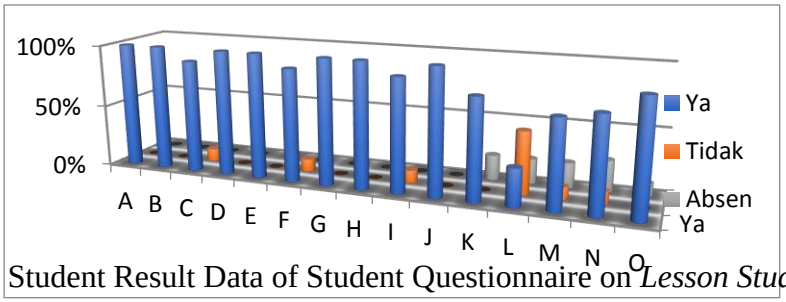


Graph 2. Data Critical Thinking Skills of Students Referring to SOLO Taxonomy

Based on the data in graph 2, it is known that the critical thinking skills of 75,5% students are in the prastructural stage, 15.5% are in the unstructural stage and no one has reached the multistructural, relational and extended abstract stages. This is most likely caused by the lack of understanding of early concepts of students that are unable to link between one concept with another in argumentation, formulating problems, analyzing problems and providing solutions to the problems given, and lack of students getting information or finding out Information from a problem. Nevertheless, there is an increase from the pre-structural stage to the un-structural stage of 86%.

Result of Questionnaire to *Lesson Study* through *Lesson Study*.

Based on lessons learned through *Lesson Study* obtained data about student opinions on the learning process and tools that have been developed. The data can be seen in Graphic 3



Graph 3. Student Result Data of Student Questionnaire on *Lesson Study*

Information:

A = Learning that has been done interesting.
B = Fun learning
C = Learning is easy to understand
D = Students are motivated to learn
E = Learning encourages students to work with friends
F = Learning encourages students in learning independence.
G = The media used is interesting
H = The media used can help students to understand the material learned

I = The teaching materials written in the MFI help in learning
J = The teaching materials written in the MFI are easy to understand.
K = The tasks in the MFI present learning challenges.
L = Assessment and evaluation is done transparently
M = Assessment in accordance with the material learned.
N = Assessment instrument is easy to understand.
O = Problems in tests in accordance with the competencies demanded.

Based on the data in graph 3 above it is known that the learning that has been done by the lecturers using cooperative learning model Talking Stick through *Lesson Study* which is carried out interesting, fun, easy to understand, make the students motivated, create cooperation and encourage learning independence. While the assessment used by most students is still poorly understood, so many students are less clear about the assessment, even from the questionnaire filled by students, there are still many students who do not understand or do not understand the concept of the assessment, where after questionnaire collected by students , Many students are asking about the assessment.

D. Conclusions

Based on the result of research and discussion, it can be concluded that the application of learning model of cooperative learning Talking Stick can improve students' critical thinking ability by 8.6%. Contextual learning process involving students in real problems will make learning more meaningful and more motivating students in learning.

It is suggested that the lecturers, especially the *Lesson Study* team, can apply contextual learning in other subjects so that the learning is more meaningful for the students, especially the students who can train students' critical thinking skills

Reference

Arnyana I.B., 2004. ***Pengembangan Perangkat Model Belajar Berdasarkan Masalah Dipandu Strategi Kooperatif Serta Pengaruh Implementasinya Terhadap kemampuan Berfikir Kritis Dan Hasil Belajar Siswa Sekolah Menengah Atas Pada Pelajaran Ekosistem***. Disertasi tidak diterbitkan. Malang: PPs UM.

Corebima A.D., 2006.***Pembelajaran Biologi yang Memberdayakan Kemam-puan Berpikir Siswa.***Makalah disajikan pada Pelatihan Strategi Metakognitif pada Pembelajaran Biologi untuk Guru-guru Biologi SMA di Kota Palangkaraya, 23 Agustus 2006.

Corebima A.D., 2010. ***Optimalisasi Sains untuk Memberdayakan Manusia*.** Makalah disajikan pada Seminar Nasional Sains, Universitas Negeri Surabaya, Surabaya, 16 Januari 2010.

Depdiknas, Dirjen Dikti, 2005. ***Peningkatan Kualitas Pembelajaran***. Jakarta: Direktur Pembinaan Tenaga Kependidikan dan Ketenagaan Perguruan Tinggi.

Lewis C., 2002. ***Lesson Study: A Handbook of Teacher-Led Instructional Change***. Philadelphia: Published by Research for Better Schools Inc.

Masek A. & Yamin S., 2011. The Effect of Problem Based Learning on Critical Thinking Ability: A Theoretical and Empirical Review.***International Review of Social Sciences and Humanities***Vol.2, No.1 (2011), pp. 215-221. www.irssh.com. ISSN 2248-9010 (Online), ISSN 2250-0715 (Print), diakses 5 Pebruari 2012.

Nurhadi, Yasin B., dan Senduk A.G. 2004. ***Pembelajaran Kontekstual dan Penerapannya dalam KBK***. Malang: Penerbit Universitas Negeri Malang.

Slavin, 2005. ***Cooperative Learning***. Terjemahan Yusron N. Bandung: Penerbit Nusa Indah.

Sugiyono, 2012. ***Metode Penelitian Kuantitatif, Kualitatif dan R & D***. Bandung: Penerbit Alfabeta.

Syamsuri & Ibrohim, 2008. ***Lesson Study (Studi Pembelajaran)***. Malang: Penerbit Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Negeri Malang.

Tiwari, A., Chan, S., Sulliva, P.l., Dixon, A.S., & Tang, C., 1999.Enhancing Students' Critical Thinking Through Problem Bassed Learning. In J. Marsh (Ed). Implementing Problem Based Leraning Project*: **Proceedings of the First Asia Pasicic Conference on Problem Based Learning*** (pp. 75-86). Hong Kong: The University Grants Committee of Hong Kong. Teaching Development Project.

Improving The Students' Learning Activities on Methods of Assessment Class By Applying Group Discussions Through Lesson Study

Nila Hayati
Hamzanwadi University
hayatisyahdani@gmail.com

Abstract

This study aims at describing the application of Group Discussions in increasing students' learning activities on Methods of Assessment class at grade VIIA Mathematics Education Study Program of Hamzanwadi University in the academic year 2016-2017. This research is classroom action research through Lesson Study which consisted of three cycles and each cycle consisted of three stages, namely planning (Plan), implementation (Do), and reflection (See). The data collection was done using observation and question form. The data analysis was done descriptive qualitatively. The subject was 28 students. The results showed that the students' learning activities category in Cycle I was quite active with an average of 3.33. In Cycle II and cycle III, the learning activities of students has increased by an average of 3.67 and 4.19 with active and very active category. This shows that the implementation of the activities of Group Discussion method of Lesson Study successfully improved the students' learning activities of the semester VIIA in Method of Assessment class.

Keywords*: group discussion method, learning activities, lesson study*

A. Introduction

Variousefforts have been undertaken by the Government to bring about development in the field of education such as formulating the various pillars of development education, equitable access, improved quality, accountability, and relevance. Special aspects of educational enhancement, through the Ministry of national education has implemented various forms of training to educators and educational power of curriculum and educational management.

Lesson study is one manifestation of the development of quality education and the teaching given to the school/college. Lesson study was conducted with the process and results-oriented learning. Lesson Study is conducted based on the principles of mutual learning and collaboration to build a learning community. It can be said that the Lesson Study was carried out to improve the competence of professors who in the end was able to improve the quality of the process and the results of learning to learners.

Lesson study more fully defined as a collaborative process of a group of teachers together: (1) identify the learning problems felt by the lecturer/teacher (one or a group of teachers) (2) plan steps of learning (as an identified problem-solving efforts), (3) implement the instructions which is conducted by one of the selected teacher (agreed), the other teacher observes the process of learning, (4) evaluating the process of

instruction which has been done (5) improve the planning of learning based on the evaluation result (6) implement the learning again, (7) re-evaluating the instruction have been implemented, and (8) divide (disseminate) experience and findings in the evaluation results to other teachers.

In the process of learning in the classroom, planning and implementation study hasn't been fullest conducted by Professor especifically conceived on courses student assessment, so that the learning process is not so meaningful for students. It is realized that the study used tend to be centered on lecturer (lecturer centered). Students are still ashamed of asking and issue opinions so that the student may follow the learning has not yet appeared. Interaction and communication between students with other students or with the lecturer yet intertwined during the learning process because *Group Discussions* rarely do. Lecturer are supposed to use the model of learning that invites students to learn in groups so that students will be accustomed to asking questions and actively argue.

To overcome the problem of passive voice students in the learning process of courses student assessment then required an effort of increased student learning activities, because it is indispensable existence in learning activities. Without the activity of the teaching and learning activities are not likely to take place properly. Sardiman (2004) in an Anonimus (2010) argues that the activity in the process of teaching and learning is a series of activities that includes the liveliness of students in following lessons, ask things unclear, noted, hear, think, read, all activities that support the achievement of learning. Further Sutikno (2007) in Suyuti (2011) said that in order to achieve optimal learning outcome encouraged educators get used to using many communication direction or communication as a communication, i.e. transactions not only dynamic interaction between educators involved with the students but also the dynamic interaction between students with each other.

The methods Group Discussion can be an alternative for improving learning activities of students on courses student assessment. Through this method the student mutual respect and understanding among students in order to build works the same. Students communicate with each other and each other's Guide by using the more familiar language, which ultimately may increase the activity of learning and the learning achievements of students. Therefore the purpose of doing research is to know the improvement of learning activities of students on courses student assessment with application of Group Discussion through Lesson Study.

B. Research Methods

This type of research is the research action class with a descriptive qualitative approach. To achieve the expected goal namely improve learning activities of students, then learning activities implemented with *Lesson Study* in three cycles with three

stages, namely planning (*Plan*), implementation (*Do*), and reflection (*See*). This research was carried out in November 2016 at grade VIIA of Mathematics Education Study Program of Hamzanwadi University in the academic year 2016-2017. To obtain empirical evidence against the focus of the study subjects are studied as a source of data was the lecturer and students involved in the activities of Lesson Study. The lecturer involved is Lalu Muhammad Fauzi, M.Pd.Si, Shahibul Ahyan, M.Pd, Muhammad Ghazali, M.Pd, and Fahrurrozi, M.Pd, while students involved in the study and be subject in this study are students of the grade VII A year academic 2016-2017 that 28 people.

Lesson study on subject student assessment designed in 3 cycles. Each cycle is carried out in three phases, namely:

1. On the stages of the planning (Plan*)*, conducted the study together the same against teaching plan and teaching materials that have been planned which include syllabus subject, the material to be taught, student activity sheets and instrument evaluations as needed. The results of the study are used to repair required against which the study compiled implementation stage action(do*)*.
2. On the stages of implementation (Do) learning model of lecturer carry out in accordance with the plan of learning that is already getting the study together and repairs (revised) in accordance with the advice and input. Meanwhile a team of subject acting as observer (besides model lecturer). The observation is based on the standardized observation sheets prepared. Observational learning activities directed against students during the lectures. To strengthen the results of observations are also carried out the documentation through photos and video footage of (audio-visual). This documentation is carried out against behavior and General or specific events during the learning process and valuable as evidence authentic events over learning to strengthen the activities of reflection.
3. At this stage of Reflection (See) immediately after the learning process ends, do post-class discussion or reflection. Reflection followed by all members of the Group/observer who examines observations purpose for each Member of the Group and record the results of the learning process, at this stage of this reflection is to jointly find a solution to the problem appear in order for subsequent learning can be prepared and executed better.

The technique of data collection was done through observation to know student learning activities by implementing Methods Group Discussion through Lesson Study. While the data analysis techniques using qualitative descriptive. All the data acquired and processed through data category, data validation, and interpretation of data. The steps to classify the data and presentation of data so that the data is clearly visible.

The data on student learning activities known from observations against the behavior of the student during the learning process takes place. All activity is recorded

on a sheet of observation in accordance with the descriptors appear. Observation of student activity data with granting score on each indicator. Each indicator has four (4) descriptors which became a reference for the assessment of the activity of the students in the learning process. As for the manual scoring of student activity as follows:
Score 1: given if no descriptors has been reached.
Score 2: given if 1 the descriptor given achieved
Score 3: given if 2 descriptors has been reached.
Score 4: given if 3descriptors has been reached.
Score 5: given if 4 descriptors has been reached.
By using the formula:

$$rata - rataskor\ (N) = \frac{jumlahskoryangdiperoleh\ (\sum x)}{ban琍aknyaitempenillaian\ (n)}$$

As for the student activity using the conversion criteria score five-tiered as follows:

Table 1: Conversion Score five-Tiered

Interval	Value	Criteria
N ≥ Mi + 1,5 SDi	N ≥ 4,005	Veri Active
Mi + 0,5 SDi ≤ N ≤ Mi + 1.5 SDi	3,335 ≤ N ≤ 4,005	Active
Mi – 0,5 SDi ≤ N ≤ Mi + 0,5 SDi	2,665 ≤ N ≤ 3,335	Active Enough
Mi – 1,5 SDi ≤ N ≤ Mi – 0,5 SDi	1,995 ≤ N ≤ 2,665	Kurang Aktif
N ≤ Mi – 1,5 SDi	N ≤ 1,995	Very Less Active

C. Results and Discussion

The stages of planning (Plan)

Stages of the *Plan* on a cycle I was held on November 2, 2016, cycle II is carried out on the date. Cycle I was done on November 7, 2016, and cycle III executed on November 10, 2016. On cycle I lecturer learning scenarios devised model inquiry form heterogeneous ability groups with members who each composed of 3-4 people, preparing learning materials i.e. the form of the test objective and subjective tests. Learning scenarios presented publicly before the open class to get feedback, critique, and suggestions from other professors as observer. Such measures are also carried out on the next cycle is simply a different material. Cycle II material about the preparation and development of test instruments, cycle III of the analysis of the grain problem.

The stages of Implementation (Do)

On cycle I lecturer models carry out open class with indicators describing the learning forms the subjective test and objective test, mentioning the advantages disadvantages the subjective test, and mention the advantages and disadvantages of objective tests. The learning step is performed according the method of Group Discussions. Cycle II lecturers implement learning model with indicators designed instrument test and non-test, test instruments and developing non-test. The learning

step is performed according to the model of inquiry learning as in cycle I. In cycle III of execute model lecturer learning in accordance with the steps in the method of Group Discussions such as cycle I and cycle II. The lesson that is determining the indicators index of difficulty level power question, different grains, distractor effectiveness, validity, and reliability. Determines the index of difficulty level power question, different grains, distractor effectiveness, validity, and reliability by using the computer application.

Stages of Reflection (See)

Reflections on cycle I, II, and III were conducted to discuss the learning process that has been going on and seek improved quality for the next cycle in accordance with the issues raised focus on courses student assessment through Lesson Study. Implementation process of reflection led by a moderator and assisted by the Secretary of the Council. A lecturer or teacher model given the opportunity in advance to convey its perception during the learning process, then the observer was asked to convey the results of his observation, and lecturer of the model required to provide responses back against comments that given by the observer. In this reflection are discussed and re-examined on the achievement of the target of learning as being focused on the implementation of the results of the evaluation of the courses through Lesson Study.

The data results of the Student Learning activities and Discussion

The results of the learning activities of students each cycle with getting the score on each of the indicators is presented in Table 2.

Table 2: Students' Learning Activities in Cycle I

No	Indicator	The Average Score
1	Readiness of student in receiving lessons	4,00
2	Enthusiasm of student in following Group Discussion	2,67
3	Activity of students in activities Group Discussion Activity	3,00
4	Activity of students in Group Discussions	3,67
5	Activity of students in problem solving	3,00
6	Activity of students in matter of exercise	3,33
7	participation of students in draw conclusions/closing activity learning	3,67
	Average	3,33
	Criteria	Active Enough

Table 2: Students' Learning Activities in Cycle II

No	Indicator	The Average Score
1	Readiness of student in receiving lessons	4,60
2	Enthusiasm of student in following Group Discussion	3,33
3	Activity of students in activities Group Discussion Activity	3,33
4	Activity of students in Group Discussions	3,67
5	Activity of students in problem solving	3,33
6	Activity of students in matter of exercise	3,33
7	participation of students in draw conclusions/closing activity learning	4,00
	Average	3,67
	Criteria	Active

Table 2: Students' Learning Activities in Cycle III

No	Indicator	The Average Score
1	Readiness of student in receiving lessons	5,00
2	Enthusiasm of student in following Group Discussion	367
3	Activity of students in activities Group Discussion Activity	4,00
4	Activity of students in Group Discussions	4,33
5	Activity of students in problem solving	4,00
6	Activity of students in matter of exercise	3,33
7	participation of students in draw conclusions/closing activity learning	4,33
	Average	4,19
	Criteria	Very Active

Based on table 2, 3, and 4 Note that student learning activities for the first indicator, namely the readiness of students receiving lessons tend to experience increased with an average score of 4.00 to cycle I, Cycle II 4,6, and cycle III 5.00. For both indicators, namely, the enthusiasm of the students followed the Group Discussions has increased from cycle I, II cycle, and cycle III i.e. each of 2, 3.33, 67, and 5.00. The third indicator, i.e. the activity of student activities in a group discussion of each cycle has increased with the average score for the cycle I of 3, 00, cycle II 3, 33, and cycle III of 3, 67. The fourth indicator, on the activity of students in Group Discussions, on cycle I and cycle II the average score obtained in the same $3, 67 and the increase in cycle III of 4.00. The fifth indicator, activity students solve problems has increased from each cycle as the previous indicators, in cycle I, the average score of 3.00, cycle II amounted to 3.33, and cycle III of 4.33. On cycle I and cycle II at the sixth student,

the activity indicator in the work on the question of the exercise of the same average score of 3.33 and experiencing an increase in the average score on a cycle III of 4.00. On the seventh, Student Participation indicators in drawing conclusions/closing activity learning score average on the cycle I of 3. 67 has been improved on cycle II and cycle III into 4.00.

Based on the results of observation that is done then the learning activities of students in cycle I obtained at a picture that in the material form of the test objective and subjective tests, student learning activities consisting of 28 people belong to fairly active with an average amounted to 3.33. Next on cycle II on the material preparation and the development of instruments, student learning activities has increased an average of cycle I of 3.67 with active criteria. Cycle III in the material analysis of the grain problem, learning activities of students classified as very active with an average increase of cycle I and cycle II i.e. of 4.19.

D. Conclusion and Suggestion

Conclusions

Based on the results of the implementation of the *Lesson Study* using the method of *Group Discussion* on student assessment courses Semester VII A in Mathematics Education courses can enhance student learning activities.

Suggestions

a. Methods *Group Discussion* can be a model for alternative learning to increase student learning activities on other subjects.
b. With respect to the benefits that can be gained from the implementation of model Learning *Lesson Study* on student assessment coursework in order to prepare prospective teachers need to continue to be developed then professional implementation for subject science others.

E. Bibliography

Anaonimus. (2010). *Cara meningkatkan Aktivitas Belajar*. Diakses darihttp://aktivitasbelajarsiswa.html pada hari Kamis 30 Agustus 2017 jam 13.15

Arikunto,Suharsimi.(2002).*ProsedurPenelitianSuatu Pendekatan Praktek*.Jakarta: PT Rineka Cipta

Nasution,S. (1995). *Berbagai pendekatan Dalam Proses Belajar dan Mengajar*. Jakarta:Bumi Aksara

Slameto.2003. *Belajar dan Faktor-Faktor yang Mempengaruhinya*. Jakarta : PT Rineka Cipta

Susilo, H.dkk. (2009). *Lesson Study Berbasis Sekolah (Guru Konservatif Menuju Guru Inovatif).* Malang: Bayumedia Publishing

Sparks, Dannis (1999) *Overview of Lesson Study*. [Online]. Tersedia: http://www.nwrel.org/msec/lessonstudy/overview.html. [27 Juni 2006]

Sudjana,Nana. (2000). *Dasar-Dasar Proses Belajar Mengajar*. Bandung : Sinar Baru

Developing PBL-Based Instructional Kit on Open Ended Problem Oriented to The Students' Achievement and Belief

Ristu Haiban Hirzi[1], Nusuki[2]
[1, 2]Hamzanwadi University
[1]ristuastalavista@gmail.com, [2]nusukirian@yahoo.com

Abstract

The aim of this research was to develop mathematics instructional kit using problem based learning based on open ended problem oriented which valid, practical, and effective to students' achievement and belief of Mathematics Education Study Program. The developed instructional kit consists of lesson plans using problem based learning based on open ended problem and students' worksheets that is oriented to the students' achievement and belief toward mathematics. This study was research and development that used ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). The subjects were 76 students from two classes of Senior High School 2 Selong, Lombok Timur, NTB. The research instruments were validation sheets, observation sheets, observation sheets for learning implementation, teachers' assessment sheets, students' assessment sheets, achievement test, and students' belief of mathematics education questionnaire. The result showed that learning kit that has been developed was valid shown by the validation results of lesson plan and student worksheet in category "very good". Learning kit that has been developed was practical shown by results of practicality votes by teachers in category "very good", and it was practical shown by the results of practicality votes by teachers in category "good". Learning kit have been developed in terms of students' achievement and belief toward mathematics.

Keywords:*development, instructional kit, problem based learning, open ended problem, achievement, students' belief*

A. Introduction

Mathematics learning is a medium to increase education quality. However, mathematic learning is still considered as higher difficulty degree in which not all of the people is able to learn it recently. Mathematics is only studied by several students. The assumption above could influence their learning achievement. Schoenfold states that the success in mathematics learning is influenced by students' belief themselves as mathematics learner. Low conviction in mathematics learning can be seen from pre-survey's result in the field that it is more than 50% students of 73 respondents are tested, the perspective that mathematics drill the ability of computing only and mathematics

just study about formulas. The pre-survey result indicates that students' belief in mathematics term was not optimal yet and it needs to be made as object of research.

One of the mathematics learning approach which could increase students' belief in mathematics is *problem based learning* based on *open ended.* Lockhart & Le Doux declares that "*A key to the success of PBL is that the problem must be open ended and not strictly defined* ". The statement means key success of PBL has to use *open-ended* and it cannot solved directly. *Problem based learning* based on *open-ended problem* help student to find mathematics concept base on the real cases and it does not refer to a strategy or singles solution.

B. Method

This research is developmental by using model of ADDIE which consist of four step: (1) *analysis,* it includes requirement analysis, student analysis, and material analysis; (2) *design,* as developing design product which is expanded; (3) *development,* as product development and expert validates; (4) *implementation,* as product test in the field; and (5) *evaluation,* such as practicability analysis and product effectiveness base on the test result in field. This research is executed on month of April May 2016 at SMAN 2 Selong. The subject research is teacher and student of X *IPA* 1 and XI IPA 4 *SMAN* 2 Selong.

C. Result and Discussion

The first step is taken by the researcher makes lesson plan and work sheet. The characteristic of lesson plan which is developed: (1) lesson plan load learning activity steps with approach of *problem based learning* based on *open ended problem* , (2) the purpose of learning aim to students achievement development and belief in mathematics study, and (3) there is a trigger question activities of teacher that lead student on developmental their problem solving.

Work sheet that is developed has characteristic: (1) completing of work sheet steps load procedure *problem based learning,* and (2) there is activity that lead student to develop the abilityof problem solving and conviction mathematics learning.

Product Test Result

The data validity of instructional kit that is developed is acquired base on expert assessment (*expert judgement).* This estimation did by four comprise of expert three

mathematics education lecturers UNY and one mathematics teachers. Usufruct estimation proing to developed learning kit as lesson plan is presented on Table 1.

Table1.Validity of lesson plan Recapitulation

No	Aspek	Averages Score	Category
1	LESSON PLAN's Component	5,00	Very Good
2	LESSON PLAN's Identity	5,00	Very Good
3	Interest Fundamental	5,00	Very Good
4	Base interest and interest attainment indicator	4,22	Very Good
5	Learnings Purpose	4,33	Very Good
6	Learnings material	4,08	Good
7	Learnings Method	4,00	Good
8	Learnings Source	4,33	Very Good
9	Learnings Media	4,47	Very Good
10	Learnings Activity	4,19	Very Good
11	Learnings yielding Estimation	4,67	Very Good
12	Lingual Aspect	4,42	Very Good
	Average	4.47	

Based on Table 1, it can be seen that validity's score average learning kit lies on pretty good category. Somehow, there are some aspects of learning kit that lie on good category which is learning material aspects and learning method aspects and learning sources. Thus, thelesson plan quality which is developed is valid with pretty good category. The experts result assessment through lesson plan is developed like worksheet table 2.

Table2.Validity of work sheet Recapitulation

No	Aspek	Rata-rata skor	Kategori
1	Content	4.27	Very Good
2	Appearance	4.61	Very Good

No	Aspek	Rata-rata skor	Kategori
3	Language	4.33	Very Good
Rata-rata		4.41	

Based on Table 2, it can be seen that average of validities score learning kit lies on pretty good category. Thus, the work sheet quality is valid. Product quality assessment that is developed is based on teacher worksheet assessment and student worksheet assessment. Teacher worksheet assessment contains teacher assessment to lesson plan and work sheet. Teacher assessment result toward developmental product to be presented on Table3.

Table 3. Result of Teacher Estimation

No	Kit	Average s score	Category
1	Lesson Plan	4,20	Very Good
2	Work Sheet	4,25	Very Good
	Rata-rata	4,23	Very Good

Based on Table 3, it can be seen that lesson plan which is developed in very good category so that it also can be said practical. Student assessment result toward developmental worksheet to be presented on Table 4.

Table 4. Result of Student Estimation

No	Class	Averages Score	Category
1	X IPA 1	3,50	Good
2	XI IPA 4	3,70	Good

Based on table 4, it can be seen that score average student assessment is in good category so its developing can be said practical.

The effectiveness of data is got from achievement test result, ability test to think creative, and student belief questionnaire to mathematics learning. The data result Achievements test of student mathematics is presented on Table 5.

Table 5. The Result of Achievement Test

No	Information	Material	
		1	2
1	Total of student	39	34
2	Highest Score	90	95
3	Lowest Score	60	60
4	Averages Score	76.53	77.94
5	Pass	32	28
6	Not Pass	7	6
7	% Thoroughness	82,05	82,35

*1 = equation and quadratic function, 2 = enumeration rule

Based on Table 5, it can be seen that many of students' percentage reach KKM ≥ 75%

Hereafter, base on the proportion quiz result by significant level 5% is acquired that percentage of student who reaches KKM≥ 75%. Thus, learning kit can be said effective being sighted through mathematics student achievement.

The effectiveness of assessment quality is based on belief questionnaire result student to mathematics learning before and after learning. The recapitulation result of questionnaires student belief to mathematics learning is presented on Table 6.

Table 6.Questionnaire result of Student belief to Mathematics Learning

Kategori	Before		After	
	F	%	F	%
Very High	4	11,43	8	22,86
High	25	71,43	25	71,43
Average	26	17,14	2	5,71
Low	0	0	0	0
Very Low	0	0	0	0

Base on table 10, it can be seen that the early condition before learning, many of student which have very high mathematics belief learning is 11.43% and a large part

student still having beliefs to mathematics learning category is on average. After processes yielding acquired learning that as much 94.29% student have minimal beliefs lie on high category.

Hereafter, base proportion quiz result with significant level 5% acquired that percentage a lot of student which have belief to minimal mathematics study lies on tall category≥ 75%. Thus, effective learning kit sighted by student belief to mathematics study.

D. Conclusion and Recommendation

Conclusion

Developmental product as kit of mathematics learning on equation and quadratic function with *problem based learning basedopen ended problem* which oriented on achievement and student beliefin mathematics learning that consists of lesson plan and work sheet have valid category in very good category. It can be seen base on assessment score average oflesson plan is 4.47 by very good categories and average work sheets assessment score is 4.41 by very good categories. The kit learning was practical with very good category base on teacher assessment and good category base on student assessment result.

Learning kit with problem based learning basis *open ended problem* in material equation and quadratic, the function of enumeration rule that orienting on achievement, ability to thinks creative, and students inquiring taste which consist of lesson plan and work sheet has accomplished effective criterion to be sighted of student achievement and student belief to mathematics learning. The percentage of students number in mathematics learning achievement which reach KKM on equation material and quadratic function also counter quadrate is 82.05% and 82.35%. Base on hypothesis by significant level 5%, proportion student amount that reaches KKM more than 75%. Hereafter, sighted from student belief result in mathematics learning base to hypothesis test with significant level 5% is acquired that proportion foots up students' belief score in mathematic. The category was more than 75%.

Recommendation

Learning kit with *problem based learning based open ended problem* on equation and quadratic function and enumeration rule that oriented on achievement and student belief in mathematics learning that consist of lesson plan and work sheet is tested by its feasibility, which fullfil the valid criterion, practical, and effective so it is suggested to the teacher tries to utilize this kit as one of effort to increase mathematics learning achievement and student belief in mathematics learning. In developing student belief

in mathematics learning, teacher needs to accustom the student to be able to represent their work out as a good.

E. References

NCTM. (2000). *Principles and standards for school mathematics.* Reston, VA: NCTM.

Rolka, K., & Bulmer, M. (2005). Picturing student belief in statistics. *ZDM* ,37 (5), 412- 417.

Hill, D. S. (2008). *Similar but different: The complexities of students's mathematical identities*. Diambilpadatanggal 9 September 2015, Diambildarihttp://scholarsarchive.byu.edu/etd.

Widjajanti, D. B. (2009). *Mengembangkankeyakinan (belief siswa) terhadapmatematikamelaluipembelajaranberbasismasalah*. Diambilpadatanggal 4 September 2015, darihttp://staff.uny.ac.id/sites/default/files /131569335/Makalah%20Medan-2.pdf

Lockhart, A., & Le Doux, J. (2005). A partnership for problem based learning : challenging students to consider open-ended problems involving gene therapy. *The Science Teacher,* 72 (9), 29-33.

Branch, R. M. (2009). *Instructional design: The ADDIE approach*. New York: SpingerScience+Business Media.

Students' Improvement Through Time Management Module of MA NW Ketangga Suela in The Academic Year 2016-2017

Marfuatun [1], Azizurrahman [2]
[1,2] *Hamzanwadi University*
[1]*marfuatun.bkhamzanwadi@yahoo.ac.id*

Abstract

This research aims at producing a guidance product that is learning guidance module. This research is a research and development (R & D). This development research uses Borg and Gall development model. This development model consists of 10 cycles, but in the implementation is simplified into 5 stages/cycles of research and data collection, design, production, field try out and revisions. The results of the review of the expert view and material experts indicate that the developed product in the form of learning guidance module is feasible to be used with the average expert view 4 and material experts with an average 4.1. Additionally, the results of the student response questionnaire reached 98%. Based on the results of field research obtained pre-test data experimental group with the total score 1156 with an average of 39.9. The control group with the number of scores 1188 with an average of 41. After the treatment given by the learning guidance module, the result of the post-test measurement of the experimental group was 2151 with an average of 74.2, while the control group gained 1671 with an average of 57.6. Based on data analysis, the t-value was 1.729 while the t-table 1.684, hence t-count value was higher than the t-table (10.158> 1.684). The conclusion that through the tutoring module can improve the student time management at MA NW Ketangga Suela in the academic 2016-2017.

Keywords: *student time management, learning tutoring module, guidance products*

A. Preliminary

Improving the quality of education is one of the national development programs. National development as included in the 1945 Constitution is essentially the development of the Indonesian people as a whole and the development of society as a whole. Education is the activity and effort of man to improve his personality by fostering his personal potentials like (mind, taste, creed, mind and norm) and body (the five senses and skills).

Education is the result or potential achieved by human development in achieving its goals, education is also defined as a conscious effort to explain learners through the activities of guidance, teaching and or training for its role in the future.

One way to implement above mentioned educational objectives in high school students is through time management because it is directly related to managing the main activities / schools and activities around / extracurricular in everyday life, as mentioned in some verses in the Qur'an: "and he (also) makes night and day one after the other for the one who takes the lesson or the one who wants to give thanks" (Surah Al-Furqan / 25: 62). Time management has benefits for someone who has goals to be implemented, both small and large in life. Logically, one can not do two or more things, which are in different places and times pass by different things at the same time.

The result of interview with the teacher of BK MA NW Ketangga conducted on 09 April 2016 in BK room, revealed that so far has not been used the data needs analysis as the basis of providing guidance and counseling services. In addition, in school students are never given classical guidance services about time management. That is, the BK program in MA NW Ketangga has not been directed to the fulfillment of developmental tasks, especially for aspects of the development of student insight, about knowledge and understanding of time management. According to the observation the authors see that students in MA NW Ketangga, have difficulty in the meantime set such as: school, home study, doing homework, with extruded activities such as extracurricular, watching TV, playing soccer, in everyday life. Although they have made a schedule of activities but to run it does not fit with the existing schedule, for that students need a good management or planning in order to run smoothly. Thus, it appears that the problem is on the aspect of the fulfillment of the task of development of insight and understanding of students about time management that is still in the category very low than that should be achieved by the students MA NW Ketangga, then there is no BK program and the material shown to meet the achievement of these developmental tasks .

Problem formulation in this research: 1. How is the student time management profile in MA NW Ketangga academic year 2016/2017 ?; 2. Will the provision of learning guidance module improve students' management capability in MA NW Ketangga academic year 2016/2017 ?. Based on the above problem formulation, the purpose of this study are: 1. For how time management profile of students in MA NW Ketangga lesson year 2016/2017; 2. To improve students time management capability, through learning guidance module in grade XI students MA NW Ketangga lesson year 2016/2017. The product produced in the development research is the learning guidance module. This module has a specific set of materials on learning guidance.

Management by Indonesian dictionary means to use resources effectively to achieve goals. According to B. Suryobroto in Concern (2011: 1) management is an effective use of human resources and non-material and other materials in order to achieve the intended purpose. Time is a non-renewable resource and can not be saved,

if time has passed no one can return it. Among the signs of God's hatred is wasting time, the scholars say "time is a sword, if you do not wear it properly and properly, it will cut you off" (Qardhawa 2014: 35). So Time Management is a way to make time to be controlled so as to ensure the creation of an effectiveness, efficiency, and productivity.

Modules borrowed from the world of technology, which is a complete measuring instrument and is a unified program that can measure goals. Modules can also be interpreted as a package of program arranged in the form of certain units for learning purposes (Wijaya, 1992: 86). The Department of National Education in his book (2002: 5) defines the module as a unity of learning material presented in the form of "Self-Intruction", meaning that the learning materials arranged in the module can be studied independently with limited assistance from teachers and others. According to Wijaya (1992: 96), the module is one unit of the smallest teaching-learning program in detail outlines: (1) general intraxional goals, (2) Specific intraksional goals, (3) Topics to be the base of the process Teaching and learning, (4) subject matter that will be learned and taught.

Tutoring is a learning assistance activity to students or learners aiming for students to achieve learning achievement optimally. This activity is also a school guidance that is an aspect of educational programs regarding the assistance of students in order to adapt to their situation and to plan their future according to their interests, abilities and social needs whose purpose is to assist student achievement.

Tutoring is also an activity in terms of finding appropriate ways of learning, choosing appropriate study programs and overcoming difficulties that arise in relation to educational demands (Winkel 1997: 140). Tutoring can also be interpreted as one of the important forms of counseling services held in school, experience shows that the failures that students experience in learning are not always caused by ignorance or low intelligence. Often the failure occurs because they do not get adequate counseling services (Prayitno, 2004: 279).

The purpose of the module in teaching and learning process according to Suryosubroto (1983: 18), is that: (a) The goal of education can be achieved efficiently and effectively; (B) Students may attend the education program at their own pace and capability; (c) Students may live as much as possible and conduct their own learning activities, either under the guidance or without the guidance of a teacher; (D) Students may assess and know their own learning outcomes on an ongoing basis; (E) Students really become the center of teaching and learning activities; (F) Student's ability to be of higher frequency through evaluation performed on each module expires; (G) The

module is structured on the basis of "Mastery Learning" a concept which emphasizes that the student must optimally master the material.

Thus, from the above understanding it can be concluded that the learning guidance module is a programmed learning material that is arranged in such a way and presented in an integrated, systematic, and detailed. By studying the module materials, students are directed to the search for a goal through certain learning steps, because the module is a program package for learning purposes. And a module program package, consisting of components that contain learning objectives, learning materials, learning methods, tools and learning resources, and evaluation systems. The learning guidance module is an individual guidance that gives each student the opportunity to achieve a desired goal at the speed of each individual.

Discipline is a mental attitude that contains the willingness to comply with all provisions, rules and norms applicable in performing duties and responsibilities. Before doing the learning activities, there are several things that need to be prepared, among others, as follows: a. Self-discipline; b. discipline in the place of study; Learning materials; D. Discipline in learning time. Selection of inappropriate learning time will only result in fatigue without being able to produce the expected performance. Timing tips written by jeanny shay schumm (2003): 1. set priorities; 2. do not overload yourself with excessive schedules; 3. take time to get used to being organized; 4. take time for refreshing; 5. Do not procrastinate

The service of classical guidance is rooted in the pioneering guiding movement pioneered by Frank Parsons. After the parsons declared their conception of the guidance of office, in some schools began to manage the program (Winkel and Hastuti, 2006: 545). By utilizing groups formed in class units, schools include a series of position guidance into the school curriculum. The classroom that received the lesson was seen as an intructional group and applied the techniques commonly used in the field of teaching. Therefore there is a direct link between the activities of guidance and teaching in the classroom. Furthermore, Brewer in Winkel and Hastuti (2006: 545) uses classical guidance as a means of preparing students to manage their various areas of life in order to be meaningful and satisfying, such as health, work, family life, community life and recreation.

Todays classical guidance services as one of the basic services used to provide learning, career, personal and social information (MoNE, 2007: 207-209). Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 111 Year 2014 Article 7 states the strategy of Guidance and Counseling services based on the number of individuals served as referred to in paragraph (1) letter a carried out through individual services, group services, classical services or large classes. The

classical goal according to Sugandi (2008: 207) is to help students to fulfill developmental tasks that include personal, social, educational, and career aspects.

From the various understanding above, it is concluded that the definition of classical guidance is the basic service for students who amounted to between 30-40 people through classical activities presented systematically, scheduled, preventive and provide self-understanding and understanding of other people oriented in the field of learning , Personal, social and career with the purpose of providing accurate information and can help individuals to plan decision-making in their lives and develop their potential optimally.

The steps of providing classical format services that need to be considered as follows: 1. Understanding learners and discovering the trend of service needs; 2. choose appropriate methods and techniques for the provision of services of classical format based on service materials. The chosen strategy should be that the service is centered on active learners learning to discover the learning experience; 3. prepare or prepare material classical format services according to the understanding of the needs of learners. The material of classical counseling services should consider the purpose of guidance and counseling and national education objectives; 4. choosing the systematic preparation of materials reflecting the readiness of service of classical format and preparation known by the Coordinator of Guidance and Counseling and or Principal; 5. prepare tools to carry out the provision of services of classical format in accordance with the needs of the service; 6. To evaluate the provision of services of the classical format necessary to know how the process, whether or not the services provided and the development of attitudes and behaviors or the degree of attainment of developmental tasks; 7. Follow-up is done as an effort to improve the service quality of classical format. Follow-up activities are always based on the evaluation of activities that have been implemented.

Hypothesis in this research is: "Through learning guidance module of can improve student time management at MA NW Ketangga Academic Year 2016/2017".

B. Research Methodology

This research develops product in the form of learning guidance module to improve the management of student time of class XI in MA NW Ketangga. In order for the product to be developed in accordance with the objectives of this development research adopted the development model of Borg and Gall. This model consists of 10 (ten) stages. Based on the development needs that researchers do then this stage is simplified into 5 stages of needs analysis, design, prototype, limited group trial, last revision.

The data obtained in this study are qualitative data and quantitative data. Qualitative data in this research is data obtained from validation results by expert judgment that is about display aspect of learning guidance module and content or material coverage that is material expert and expert appearance and result of feedback given by student during learning process using learning guidance module.

In this research will be studied student responses to learning guidance module in order to improve student learning style. Questionnaires are used to identify student activities that describe their responses to products developed in the product trial process. The test is used to determine the completeness of student learning outcomes after using the developed product.

Data analysis used is descriptive statistic technique which include mean score or mean (Me) and Standard Deviation (SD). The results of this research data in the form of expert team responses to product quality developed in terms of language aspects and content / material, and the results of student responses to the resulting product. Data in the form of expert response scores collected through the validation sheet, analyzed descriptively qualitative with categorization techniques and concluded as input to revise the developed product.

C. Results And Discussion

Based on the results of research conducted in the field obtained pre-test data experimental group of 29 students total score is 1156 with average is 39.9. While the pre-test control group the number of scores was 1188, with an average of 4. Then the results of the experimental group post tests, the total score of 2151 with an average of 74.2. While the control group's post test score is 1671 with an average of 57.6. Therefore the calculation results illustrate that the increase of time management by using learning guidance module in the students of class XI IPA in MA NW Ketangga Academic Year 2016/2017 by showing the price t -hitung> t- table (10,158> 1,684) for error 5%.

The learning guidance module given to the students has a positive and significant influence on the improvement of student time management XI IPA in MA NW Ketangga, because the teacher of BK conducts continuous guidance to the students by providing the guidance module according to the student's needs. Which is in accordance with the theoretical study disclosed by winkel (2009: 472) module is the unit of the smallest learning program, which is studied by the students themselves individually or taught by students to themselves (self-instructional). While the learning guidance module is a media or book used by students that are arranged systematically so that students can adjust and solve problems in learning. In addition the purpose of

the learning guidance module is for students to improve their time management and facilitate the teacher or mentor to provide service materials.

According to James and Gardner in his book "Time Management" page 42 "time management is a complex way in which students perceive and feel most effective and efficient in processing, storing and recalling what they have learned." In addition to understanding the meaning of time management, we also need to know what factors that affect the student's time management such as internal factors and external factors. Internal factors include physical and psychological, while external factors include family, school and community. In addition to that understanding of the types of time management it is necessary to know, where the types of time management there are three types of visual (speak faster), auditorial type (loud voice) and kinestetik type (like to move / can not be silent) . Thus the learning guidance module has a role and function so great in improving the management of student time to be better again, so that students easily overcome the problems experienced in learning. The learning module in this module has five discussions in order to improve the management of student time that is understanding of learning, learning motivation, time management, learning concentration and learning difficulties.

Based on the description that has been described above, it can be said that the learning guidance module is very effective and significant in improving the time management in the students of class XI IPA in MA NW Ketangga Academic Year 2016/2017 ".

D. Conclusion

Based on the results of research and discussion conducted by researchers on Improving Learning Time Management Using Student Guidance Module in Class XI in MA NW KETANGGA Academic Year 2016/2017, it can be concluded that the results of hypothesis testing work using t-test obtained t data = 10,158 at 5% significance level with dk 56, then t table is equal to 1,684, thus t-hitung> t-table. If t arithmetic> t- table then H0 rejected and Ha accepted. So it can be stated that the increase of time management learning by using learning guidance module in class XI students in MA NW KETANGGA Academic Year 2016/2017.

E. Reference

Cece wijaya. (1992). Upaya pembaharuan dalam pendidikan dan pengajaran. Bandung: PT Remaja Rosda

Departemen pendidikan nasional. (2002). Teknik belajar dengan modul. Jakarta: dirjen pendidikan dasar dan menengah

Eka Prihatin. (2011). Manajemen Peserta Didik. Bandung: Alfabeta

Endang mulyatiningsih. (2011). Metode penelitian terapan bidang pendidikan.Bandung: alfabet

Jeanny shay schumm. (2003). Sekolah siapa takut. Bandung: PT Mizan pustaka

Marion E.Haynes. (2010). Manajemen waktu. Jakarta: PT Indeks

Mastur & Triyono. (2014). Materi Layanan Klasikal Bimbingan dan Konseling.Yogyakarta: Paramitra Publishing.

Nurihsan, Juntika. (2003). Dasar –dasar bimbingan dan konseling. Bandung: PT Mutiara

Prayitno dan Erman amtin. (2004). Dasar-dasar Bimbingan dan Konseling. Jakarta: PT Asdi Mahasatya.

Sugiyono. (2012). Metode Penelitain Pendidikan, Pendekatan Kuantitatif, Kualitatif, dan R & D. Bandung: Alfabeta

Winkel W.S. (1997). Bimbingan dan konseling di institusi pendidikan. Jakarta: PT Grasindo

Developing Adobe Flash-Based Educational Game as A Learning Media for Elementary School/Madrasah Ibtidaiyah Students in Selong

Yosi Nur Kholisho [1], Marfuatun [2]
[1,2] *Hamzanwadi University*

[1]yosink.peninfo@gmail.com
[2]marfuatun.bkhamzanwadi@yahoo.ac.id

Abstract

This study aims at developing a new product in the form of adobe flash-based educational game learning media on science subjects of elementary school students, knowing the feasibility of the products produced, and applying the products produced in grade 6 students of elementary school. This research is a research development (Research and Development) has the purpose of developing new products. The purpose of this development research is to develop new products. The research design used is Development Research Methods with products in the form of educational games based on Adobe Flash. Try out is conducted on a small scale product. Subjects used for trials are 10 people from students and 5 teachers with the consideration of having the ability to run the educational games in terms of both infrastructure and human resources. Based on data from media expert's validation, it can be seen that the product in the form of instructional media can be categorized as "very feasible" with a mean value of 5.05 and from material validation can be categorized as "very feasible" with a mean value of 5.25. After testing the product to 10 students and 5 teachers, the average result is 4.57, so the result is "very good". This means that based on the calculation of instructional learning media based adobe flash edition of the subject of the solar system is very well used as a medium of learning science subjects.

Keywords: *educational game, adobe flash, elementary school*

A. Introduction

Technological developments greatly affect the world of education, especially the process of learning in schools and also affect the learning materials and how to deliver the material in the process of teaching and learning activities. Currently there is still a lot of learning in schools still using teaching methods using the textbook media (text) whereas in learners, students have been reluctant to read textbooks.

One of the technological advances that cause students to be reluctant to read textbooks is the development of handheld computers (gadgets). The problem does not only occur in high school students but elementary school students also experience, it is the average elementary school children given gadgets and the tendency of them using

the gadget to play games or watch, it is proved by a survey published by Uswitch. Com, which explains that more than a quarter of all children worldwide have handheld computers before their age is eight years old, the survey results say that a quarter of respondents say their children feel "lost" without technology and children are allocating more money them for gadgets.

With demands in the increasingly harsh world of education and the low interest of students to want to read textbooks, it is necessary interactive learning media that makes students interested to learn, not only interactive media can also be studied students anywhere and anytime it was.

In the elementary school-age education stage, students will tend to be more interested in easy-to-play games and have bright colors and engaging animated images. And in this stage students will more easily remember a form or writing that has the characteristics of attractive colors and forms of communicative and fun.

Formulate the following issues: 1. how the development of educational games based on Adobe Flash as a learning medium to improve student learning outcomes?; 2. how is the feasibility of educational games based on Adobe Flash as a learning media to improve student learning outcomes?; 3. how students respond to the use of educational games based on Adobe Flash as a medium of learning?. The purpose of the study as follows: 1. Known the results of the development of educational games adobe flash help; 2. know the feasibility of the game as a medium of learning to improve adobe-based flash learning results; 3. knowing the students' responses to the use of adobe flash based educational games as a learning medium.

Innovative learning in Indonesian dictionary (2003) the word "innovation" implies the introduction of new things or renewal ". Innovation also means new discoveries that are different from existing or previously known ones (ideas, methods, or tools). Syah and Kariadinata (2009: 16) innovative learning can balance left and right brain functions if done by integrating media / tools, especially those based on new technology / advanced into the learning process. Thus, there is a process of mental renovation in which build a sense of self-awareness of students. The use of lesson materials, multimedia software, and microsoft powerpoint is one alternative. Innovative learning is expected to make students who have the capacity to think critically and skillfully in problems solving.

Innovative learning according to Suyatno (2009) is a teacher-packed learning on the encouragement of new ideas to undertake learning steps with new methods so as to gain progress on learning outcomes. From the above explanation can be concluded that the learning of innovative learning is packaged by the teacher which is a form of ideas or techniques that are considered new in order to be able to facilitate students to gain

progress in the process and learning outcomes. The development of technology-based learning media in the form of adobe flash-based educational game is one form of innovative learning.

The word media comes from a latin medium which means "mediator" or "introduction". According to the Association for Education and Communication Technology (AECT) defines media as objects that can be manipulated, viewed, heard, read or discussed with instruments well used in teaching and learning activities, can influence the effectiveness of Asnawir and Usman instructional programs , (2002: 11).

Gagne states that the media are the various types of components in the student environment that can stimulate them to learn, while Briggs argues that the media are all physical tools that can present messages and stimulate students to learn (Arif S. Sadiman, 2006: 6). The media of instruction according to Ibrahim and Syaodih (2003: 112) defined as everything that can be used to distribute messages or content of the lesson, stimulate the mind, feelings, attention and ability of students, so as to encourage the process of teaching and learning. From the various definitions above can be concluded that the media are all objects that can distribute messages or content of the lesson so as to stimulate students to learn.

Law of the Republic of Indonesia Number 20 Year 2003 on National Education System, stated that learning is the process of interaction of learners with educators and learning resources in a learning environment. Each teacher is important to understand the learning system, because with the understanding of this system, each teacher will understand about the learning objectives or expected outcomes, the process of learning activities to be done, the utilization of each component in the process of activities to achieve the goals to be achieved and how to know the success of achievement. In the Big Indonesian Dictionary, the meaning of learning is the process, the way of making people or living things to learn (Sanjaya, 2008: 51). Based on the above description can be concluded that learning is a conscious process of delivery of all information in the form of science delivered by teachers to their students, which aims to provide good benefits of behavioral change, the addition of knowledge, and can provide skills, involving various components, Educate with educators and learning aids in a learning environment to achieve the learning objectives to be achieved.

Learning media is defined by Gagne and Reiser as physical tools in which instructional messages are communicated. So an instructor, a printed book, a movie show or tape recorder and other physical equipment that communicates instructional messages is considered a medium (Mulyana Sumantri, 2001: 150). Dinje Bowman Rumupuk defines instructional media as every tool, both of software and hardware that

is used as a communication medium and whose purpose is to improve the effectiveness of teaching and learning process (Mulyana Sumantri, 2001: 152).

The function of instructional media using instructional media can help improve the understanding and absorption of students on learning materials. The following functions of the use of instructional media according to Asnawir and Usman (2002: 24): 1) Help facilitate learning for students and help facilitate teaching for teachers; 2) Provide a more real experience (the abstract can be more concrete); 3) Attract greater student attention (learning activities can run more pleasant and not boring); 4) All student senses can be activated; 5) More attention and interest of students in learning.

Classification of Gagne & Briggs Learning Media in Arsyad (2008: 4) suggests that instructional media includes tools physically used to convey the content of learning materials consisting of, among others: books, 9 tape-recorders, tapes, video cameras, video recorders, Movies, slides (picture frames), photos, pictures, graphics, television, and computers. The following will be described in the Classification of Learning Media according to Leshin's taxonomy et.al in (Arsyad, 2008: 81-101), namely: 1) Human-based media; 2) Mold-based media; 3) Visual-based media; 4) Audio-visual based media; 5) Computer-based media. The role of computers as additional helpers in learning; Its utilization involves presenting information on the content of the subject matter, exercises, or both.

Games in English which means game or match, or can be interpreted as a structured activity that is usually done for fun. Game is a good training environment for the real world in organizations that demand collaborative problem solving. Game meaning "game", the theory of the game is a way of learning used in analyzing a number of players and individuals who show rational strategies. Based on the above description can be concluded game is a result of the multimedia process of a tool for fun and can be used as a medium for learning.

Education in a large dictionary of English education means education, where as according to Sugihartono (2007: 3) education comes from the learner, or educate which means nurturing and forming exercises. While in a large dictionary of Indonesian (1991) education is defined as the process of changing the attitude and behavior of a person or group of people in an effort to nature humans through the efforts of teaching and training. Education can be obtained formally or non-formally. Formal education is derived from a structured learning that has been designed by an institution. While non-formal education is knowledge gained man in everyday life whether experienced or learned from others. Based on the above description it can be concluded that education is a conscious and continuous effort made by government, family, and society for the purpose of turning an individual into directed and better, in all aspects of his life

Educational games are games designed or created to stimulate thinking power including improving concentration and solving problems (Handriyantini, 2009). Game Education is one type of media that is used to provide teaching, increase the knowledge of its users through a unique and interesting media. This type is usually intended for children, then the color game is needed here is not the level of difficulty that is important. Based on the above description it can be concluded educational game is one form of game that can be useful to support the learning process in a more fun and more creative, and used to provide teaching or increase the knowledge of its users through an interesting media.

Adobe Flash (formerly Macromedia Flash) is one of the computer software that is the flagship product of Adobe Systems (Priyanto, 2011: 18). Adobe Flash is a program specially designed by Adobe and a professional standard authoring tool application program used to create animations and bitmaps that are very interesting for the purpose of building an interactive and dynamic website. Flash is designed with the ability to create 2-dimensional animation that is reliable and lightweight so that flash is widely used to build and provide animated effects on websites, Interactive CD and more. In Flash, there are animation techniques, action script facilities, filters, custom easing and can include complete videos with FLV playback facility. From the description above can be concluded that Adobe Flash is one computer software that is used to create vector images or animation. Adobe Flash is interactive and dynamic, the ability to create 2-dimensional animation

B. Research methodology

This research was conducted in SD / MI located in Kecamatan Selong, with the determination of randomized trial sampling. Subjects in this study were teacher and student representation at SD / MI school in Kecamatan Selong, consisting of 5 teachers and students 10 students, so the total subject of research was 15 people, in this study using small class.

The research is a type of development research, with the aim of developing new products. The research design used is Development Research Methods with products in the form of educational games based on Adobe Flash. Research and Development method is a research method used to produce a specific product, and test the effectiveness of the product.

Product design stage, based on observation result through identification of potential problems and data collection, data obtained then analyzed. The results of the next analysis is used as a reference for making the initial design of the content of adobe-based flash games that will be developed. The product design illustrates the nature of

the cheerful SD / MI students so the colors will be brighter and showcase images. Content content describes the materials of the solar system based on the applicable curriculum, obtained from various related sources from school teachers, textbooks and digital.

Initial products are submitted to experts for assessment. The design was assessed by media experts and material experts at Hamzanwadi University and school teachers. To assess this design used the eligibility criteria of instructional media. The feasibility of Adobe Flash-based educational game learning media is assessed by materials and media experts as well as responses from teachers and students through the created instruments. Adobe Flash-based educational gaming products are said to be viable if on validated instruments experts say Adobe Flash-based educational games are in a viable category as well as minimal teacher and student responses. Once the design has been validated by a material expert and a media expert, a revision is made. The part that is fixed is the part that is still judged less by media experts and material experts. The validator suggestion on the questionnaire can be used as a reference for improvement.

Trials were conducted 2 times, and the first trial was conducted on a small scale product trial. Subjects used for the pilot are 5 people from students and teachers with the consideration of having the ability to run educational games both in terms of infrastructure and human resources. The revised stages of Adobe Flash-based educational gaming products are revised taking into account the results of product trials that have been conducted. The shortcomings that exist in Adobe Flash-based educational games can be improved first before being used as a medium in learning at the time of trial use. Trial usage is done after the educational games based on Adobe Flash improvements. This stage is done on students as many as 10 people and teachers as many as 5 people with random selection.

C. Results and Discussion

Based on the results of observations that have been made difficult to understand students with the material presented by the teacher, when he got home the students tend to seek gatged, and play games, so it needs to be developed innovative and creative learning model.

Result of analysis stage:

1. Validation of media experts

   Validation of media experts was conducted by two lecturers of hamzanwadi university who studied in relation to the media in learning. Assessment is done by

filling the questionnaire (questionnaire) by providing a value ranging from very decent to unfeasible.

Expert media analysis results obtained average value that of: a. Navigation: 7 very feasible results; B. Ease: 5 very feasible results; C. Written: 3.2 feasible results; D. Display: 5 results are very feasible, and overall results obtained a mean of 5.05 obtained very feasible results. The results of calculation and analysis of adobe flash-based educational game products are very feasible to use..

2. Validation of material experts

Validation of instructional media material is done by the material expert that is done by two subject teachers. Assessment is done by filling the questionnaire (questionnaire) by providing a value ranging from very decent to unfeasible.

The result of expert analysis of the material obtained the average value that from: a.pembelajaran: 4, 5 results very feasible; B.materi: 6 results are very feasible, and the overall results obtained averaged 5.25 very feasible results. The results of the calculation and analysis of the material presented in adobe flash based educational game products are very feasible to use.

3. Student and teacher test results

The test of learning media product of educational game is done in small class that is on 10 students and 5 teachers, so total that do the test as many as 15 people. Product testing was performed randomly on 15 people who conducted the experiment

Results of product trial to 15 students and teachers of SD obtained results: a. Attraction: 6 very good results; B. Ease: 4 very good results; C. Motivation: 3.3 good results; D. Utilization: 5 very good results. The overall result is 4.57, so the result category is excellent.

The results of the assessment can be concluded that the learning media based educational media adobe flash fundamental discussion of the solar system is very well used as a medium of learning subjects IPAHasil assessment can be concluded that learning media based adobe flash edition of the subject of the solar system is very well used as a medium of learning subjects IPA.

D. Conclusion

Based on the results of research and discussion obtained:

1. There are stages in the development of a product, starting from initial product development (design), expert team validation, initial test, revision until final trial.
2. The results obtained from the expert team obtained a feasible result to be used as a medium for learning SD / MI students
3. At the end of the test stage the product gets good results, so the products are based in the form of adobe-based flash games with solar materials can be spread as massively.

E. Reference

Alwi, Hasan, dkk. (2003). Kamus Besar Bahasa Indonesia. Jakarta:Balai Pustaka

Arif S, Sadiman. (2003). Media Pendidikan: Pengertian, Pengembangan dan Pemanfaatannya. Jakarta PT. Grafindo Persada

Arsyad,A. (2008). Media Pembelajaran, Jakarta: Raja Grafindo Persada

Asnawir, dan Basyiruddin Usman. (2002). Media Pembelajaran Jakarta: Ciputat Pers.

Berns, R.M. (2004). *Child, family, School, community, socialization and support*. Australia: Thomson

Crain, W. (2004). Theories of development: *Conseptsand aplications fifth edition*. New Jersey: Pearson

Eka Ihsanudin. (2010). Tujuan Pendidikan Sekolah Dasar. Diakses dari"http://sdnkampung sawah06.blogspot.com/2010/07/tujuan-pendidikan-sekolah-dasar.html. Diunduh pada tanggal 1 Mei 2016

Fuad Ihsan. (2008). Dasar-Dasar Kependidikan. Jakarta: Rineka Cipta

Gagne. (977. *The Conditioning of learning*. New York: Holt Rinehart and Wiston.

Handriyantini, Eva. (2009). Permainan edukasi (*educational Games)* berbasis komputer untuk siswa Sekolah Dasar. Malang: Sekolah Tinggi Informasi & Komputer Indonesia

Ibrahim, R. dan Nana Syaodih. (2003). Perencanaan Pengajaran. Jakarta: Rineka Cipta.

Mulyana Sumantri & Johar Permana. (2001). Strategi Belajar Mengajar. Bandung: CV.

Priyanto, Hadayatullah, & et all. (2011). Animasi Pendidikan Menggunakan Flash. Bandung: Informatika

Sadiman Arif. (2006). *Media Pendidikan Pengertian dan Pemanfaatan*. Jakarta: Raja Grafindo Persada.

Sanjaya, Wina. (2008). Strategi Pembelajaran Berorientasi Standar Proses Pendidikan. Jakarta: Kencana

Santrock, J.W. (2004). *Life span development*. Boston: McGraw-Hill Hogher Education

Sugihartono, et all. (2007). *Psikologi Pendidikan.* Yogyakarta: UNY Press

Sugiyanto. (2010). Karakteristik Anak SD . Diakses dari:staff.uny.ac.id/sites/default/files/.../karakteristik%20Siswa%20SD.pdf. Diakses tanggal 1 Mei 2016

Suharjo. (2006). Mengenal Pendidikan Sekolah Dasar: Teori dan Praktik. Jakarta: Depdiknas

Suparlan, Suhartono. (2008). Wawasan Pendidikan: Sebuah Pengantar Pendidikan. Yogyakarta: Ar-Ruzzmedia

Suyatno. (2009). *Menjelajah Pembelajaran Inovatif*. Sidoarjo: Masmedia Buana Pustaka.

Syah ,Muhibbin dan Kariadinata, Rahayu. (2009). Pembelajaran Aktif, Inovatif, Kreatif, Efektif dan Menyenangkan (PAIKEM). Pendidikan dan Latihan Profesi Guru(PLPG) Rayon Fakultas Tarbiyah dan Keguruan UIN Sunan Gunung Djati Bandung

Choosing And Developing Learning Materials

Zahratul Fikni
Hamzanwadi University
zahratulfiknii@gmail.com

Abstract

This paper discusses how to choose and develop appropriate materials for teaching and learning process. The materials are used to assist teacher's instruction, and serves as the preliminary step regarding the implementation of instructional strategies in the language teaching. When the materials are appropriate to the learners, the learning can be better but to get appropriate materials is not easy. This paper will try to give some ways to choose the appropriate materials for learning materials. Since the materials still can be developed to make better and more appropriate, there are some ways correlated developing materials that will be discussed in this paper

Keywords: *learning materials, choosing, developing*

A. **Introduction**

In recent years, the government has taken measures to improve the level of foreign language at primary, junior and senior high school. This has produced a high need for appropriate language teaching and learning materials and many teachers are forced to improvise by using their own materials. Publishing houses have reacted quickly by releasing a large number of books targeting these schools which have made it overwhelming for teachers to choose which material is more adequate for their needs. It is therefore necessary to have enough criteria for selecting and developing the best material for both teachers and students of English schools. As all teaching methods consist on course books and supplementary material, the analysis has to take into account of all these elements. In addition, the information included in this paper also covers definition of learning material.

In all learning courses, especially a self-learning style course, it is very important to develop the learning materials so that learners can surely understand. To design such learning materials, instructional design concepts and systematic models are variable and helpful. When we develop the learning materials, we need to design not only the class activities following the instructional design models but also the detailed structures and contents of the learning materials. However, sometimes it is very hard and time consuming to develop learning materials strictly following the instructional design models. This paper will try to give some important points to choose and develop learning materials.

B. **Learning and Learning Material**

Learning is a process of gaining or receiving knowledge of things in the world around us, through sight, sound, smell, taste and touch. Based on the Longman dictionary, learning is the process by which change in behavior, knowledge, skills, etc., comes about through practice, instruction or experience and the result of such a process. Learning takes place in everyone's life all the time from a very early stage in life, and human beings keep on learning all the time. Learning starts from childhood and it is a continuous and life long process. Through learning an individual gains the skills to cope with life. Learning occurs in the family and the community, in formal and informal settings. The word learning encompasses a wide range of connotations across different spheres of life. Correlated to the language learning Zahner et al (2000) describe that the language learning is a deliberate and controlled activity, not only involves the non-conscious and conscious processes but also situated it the meta-conscious stage. It invokes learners' inter-mental process socially and culturally.

The learning process must need materials in order to make it easier for both the learners and the teachers. Material is anything which is used to help language learners to learn. Materials can be in the form, for example, of a textbook, a workbook, a cassette, a CD-ROM, a video, a photocopied handout, a newspaper, a paragraph written on a whiteboard: anything which presents or informs about the language being learned. Tomlinson defines 'materials' as "anything" which can be used to facilitate the learning of a language. They can be linguistic, visual, auditory or kinesthetic, and they can be presented in print, through life performance or display, or on a cassette, CD-ROM, DVD or the internet. Learning materials form an important part of most English teaching and learning programs. From textbooks, videotapes and pictures to the internet, the teachers rely heavily on a diverse range of materials to support their teaching and their students learning.

In recent years the field of education, especially language teaching, is dominated by discussion and research on interactive multimedia. Some experts claim that the multimedia can be effective tool for teaching and learning English. Traditional textbooks seem to be of lesser importance when contrasted with ICT potentials. A variety of media formats including video, sound or animations provide opportunities for multidimensional and multisensory language learning. Yet, despite common enthusiasm for numerous modern tools the popularity of textbooks does not decline. A textbook is still the most important teaching aid it 'not only survives, it thrives'. The authors notice that 'textbooks clearly survive because they satisfy certain needs'.

Learning or teaching materials are essential tools in the English language arts classroom. They allow students to interact with words, images, and ideas in ways that develop their abilities in reading, listening, viewing, thinking, speaking, writing, and using media and technology. Because instructional materials are a primary resource for

English language arts teachers, they must be selected wisely. Whatever the materials that will be used by the teachers, it is better to consider some criteria that will be explained here to choose appropriate materials or develop reusing materials.

C. **Choosing Appropriate Learning Materials**

There are many kinds of learning materials that can be used by the teachers and students but to choose the appropriate materials is not easy. The teachers are supposed to know some criteria to select the materials. It is better for the teacher to know the premise first that underlying the selecting of learning materials. There are five basic premises that underlie selecting and providing access to books, films, computer software, online resources, videos and other learning materials in preschools and schools.

1. The right to freedom of expression
   a. The child shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice.
   b. The exercise of this right may be subject to certain restrictions, but these shall only be such as are provided by law and are necessary:
      (1) For respect of the rights or reputations of others; or
      (2) For the protection of national security or of public order (ordre public), or of public health or morals.'

2. Duty of care

At the same time, however, preschools and schools have a guardian role, whereby the best interests of the child shall be the guiding principle of those responsible for his/her education and guidance.

3. Safe and secure environment

Preschools and schools also have an obligation to provide a regulated and protected environment, shielding children from practices which may foster racial, religious or any other form of discrimination.

4. Rights of parents and caregivers

Parents and caregivers have the right to make decisions regarding the learning materials their children use within the curriculum and to object to the use of materials they consider offensive.

5. Balance and sensitivity

While providing a protected environment for children and students appropriate to their age and maturity, preschools and schools should consider society's relative lack of censorship for adults which may or may not have an impact on children's and

students' experiences outside the preschool or school environment. To prepare children and students adequately to make balanced decisions as to what they read or view in adult life is a function of the preschool and school environment. The intention is to develop mature readers and viewers who are able to use critical frameworks for selecting, with discernment, material for informational and recreational use.

There are actually many principles for selecting the learning materials. In this paper, the writer will try to give some important main principles to choose the appropriate learning materials. Groves (2004) explains that Teaching and learning materials, whether purchased or donated, should be selected and accessed in ways which ensure:

1. Materials are directly related to a preschool's or school's curriculum policy and program, based on the department's framework of standards and accountability, and include, where relevant, support for the recreational needs of children and students.
2. Materials support an inclusive curriculum, thus helping children and students to gain an awareness of our pluralistic society and the importance of respectful relations with others.
3. Materials motivate children, students and educators to examine their own attitudes and behavior and to comprehend their duties, responsibilities, rights and privileges as citizens in our society.
4. Materials are relevant for the age of the children or students for whom they are selected and for their emotional, intellectual, social and cultural development. This includes the assurance that children and students will not be exposed to offensive materials; that is, materials which describe, depict, express or otherwise deal with matters of nudity, sexual activity, sex, drug misuse or addiction, crime, cruelty, violence or revolting or abhorrent phenomena in a manner that a reasonable adult would generally regard as unsuitable for minors of the age of the relevant children and students.
5. Materials provide opportunities for children and students to find, use, evaluate and present information and to develop the critical capacities to make discerning choices, so that they are prepared for exercising their freedom of access, with discrimination, as informed and skilled adults.
6. Materials represent a range of views on all issues.

Those principles for choosing the learning materials can be references for the teacher for choosing the appropriate learning materials. Those principles are not only for the books for learning materials but also for other learning materials like a video, a photocopied handout, a newspaper and others. As part of those principles, the proposed resource(s) should be subjected to the following questions and appropriate action taken as required.

1. Highly offensive or obscene materials or themes

Are the proposed materials or themes contained in the resource likely to be regarded as highly offensive or obscene by the school community? If so, the resource cannot be used irrespective of any possible educational value.

2. Controversial materials or themes

Are the materials or themes contained in the resource controversial and likely to be regarded as inappropriate by some students using the resource or by their parents? If so, alternative texts and study arrangements should be selected for students who may be involved in objections to the proposed materials on the grounds that they are inappropriate.

If objections to materials on the grounds that they are inappropriate can reasonably be anticipated, the school must inform the relevant students and their parents of the controversial nature of the resource and inform them that an alternative is available if students or parents hold a genuine and reasonable objection. Parents and students should be informed that they have a right to object.

In the event of individual students being given alternative materials or activities, teachers should endeavor to integrate the alternative study or activity into the classroom program and ensure that the student is supported in his or her position and not isolated from other classmates.

3. Films and television or computer games

Do the proposed films or computer games have classifications which indicate their unsuitability for certain age groups? Film, television or computer game age-group classifications must be followed. Parental permission must be obtained for students under seventeen years to use materials applying to films and computer games. Important: Material classified 17+ is legally restricted and means that films or games with this classification can only be seen if the student is: 17 years or older; or under 17 years is accompanied by a parent or guardian. Television classifications and warnings must also be heeded for example warnings about disturbing images, sexual references.

4. Internet access

The Internet is becoming an increasingly valuable educational resource. Schools must ensure that services, policy and user education provide a service which supports students and teachers to use this valuable resource effectively and safely.

5. Public performances

Is the public performance, display or event being staged at or by the school appropriate for the whole school community? Public events staged by schools and open to the school community (including small children in family groups) must be suitable for general exhibition. Where there is a doubt as to the suitability of public performances, the principal should consult teachers and the school council and consider whether the material is suitable to be performed or displayed before audiences of any

age. If the material is considered unsuitable for some age groups, the principal in liaison with the school council, may either: not permit the performance, event or display.

There are also some other criteria for choosing the learning materials and when the teachers will choose the learning material, it is better for the teachers to consider the following criteria:

1. Choose learning materials which are suitable for identified students.
2. Match the materials to the learning environment.
3. Ensure that the language and format of the materials are appropriate to the need of the learners and that you use an appropriate way of delivering the learning program.
4. Adapt the learning materials to meet the learning objectives.
5. Produce support materials in a style and format that are appropriate to the needs and capabilities of the learners.
6. Choose and prepare realistic simulation and exercise materials which are relevant to the learners.
7. Adapt materials from external sources, taking account of copyright law.
8. Ensure that the materials you have chosen support equal opportunities and diversity.
9. Keep within agreed budgets when choosing materials.
10. Identify and resolve any problem with the materials.

When having known the criteria for choosing the materials that will be used, the teachers will be not confused to choose the appropriate materials for their teaching. The next task for the teachers is how they can develop their chosen materials. The next chapter will discuss how to develop learning materials. It is hoped to help the teachers develop their materials.

D. **Developing Learning Materials**

In developing materials for language teaching a practitioner must keep in mind those things which will assist the student to acquire and retain knowledge, and vocabulary. For instance, a teacher could collect various items, each of which will trigger an autonomic response in the learner and have the learner remember the vocabulary associated with that item. In the field of language teaching there are many materials that the experienced language teacher will develop during the practice of language education.

Against this background on meaning, rationale and clarity of learning material the topic elaborates on a few tips for using different forms of possible communication format to facilitate learning in the communities. If a facilitator/material developer does not have the skills to develop learning material, there is always the possibility of using talent of different caliber available in the teaching and learning environment. In most communities there is always some natural talent in expressing feelings through song,

the spoken word or symbolic visual forms. A good facilitator can always use such talent as a resource for devising learning material that suits the community.

Learning materials increase the effectiveness of a lesson and make the information more comprehensible to pupils. Materials of this type commonly present students with the opportunity to practice the information that they are in the process of acquiring and, thereby, improve overall student retention. There are some tips that can be considered by the teachers for creating and developing learning materials;

1. Pick a topic.

Select a specific topic that can be adequately covered in your learning material. If you pick an overly broad topic and try to cram too much into one piece of educational material, the material you produce will likely be confusing and of little help to your students.

2. Select an intended audience.

Your primary consideration should be the age of your audience, as this factor will more greatly impact the material you produce. However, if you know that you are writing for a specific gender, race or socioeconomic class you can allow your reading material to reflect this audience by including vocabulary specific to the group or making reference to areas in which that group may be interested.

3. Set an objective.

Your objective is what you want to accomplish with your learning material. The objective is most commonly a statement that begins, "students will be able to," and concludes with a specific task that you want students to be able to accomplish after use of the material. You will likely not include this objective within your course material, but instead use it as a guide for you to ensure that your material is accomplishing the necessary goal.

4. Select a format.

Most commonly, learning material takes the form of a printed paper or worksheet. You can, however, opt to create visual learning materials by creating a movie or even audio learning materials by recording a presentation or creating a musical composition.

5. Create your learning material.

Write or produce your learning material in the format you selected. Whenever possible, try to incorporate an interactive element into the learning material, as students are more likely to retain information if presented in an interactive fashion. For example, you may ask users of the learning material to complete a task or assignment, thereby ensuring that they engage with the material being learned.

6. Edit the material.

Error ridden educational material is rarely optimally effective as students commonly notice the mistakes and become more concerned about the errors than the learning task at hand.

7. Try using the material.

The only way to see how well a piece of learning material works is to actually try it. Present the material to a group of pupils, and allow them to act as your test group to see how effective the material actually is in accomplishing the objective.

8. Revise the material based upon the results of the test usage.

Consider how the material could be improved, and make improvements to ensure that the material is as effective as it could possibly be.

Developing teaching material is an important beginning to teaching any course, class, or student, whether you're a professional or amateur teacher. Teaching materials provide a foundation for the skills and knowledge to be taught and learned, and very often these materials will provide a record or portfolio that your students will be able to use for review at a later date. There are some tips that can be used by the teachers for developing learning materials;

1. Review your curriculum or syllabus carefully.

As you review, make notes on ideas for teaching materials you may need in order to teach the skills and knowledge listed in the curriculum or syllabus. This may seem like a preliminary step that can be dispensed with, but it's actually very important because you need to make sure that you create teaching materials that are relevant to the curriculum or the syllabus that you are to teach.

2. Make notes about the class, the students, or the level of students you will teach.

Consider what their prior knowledge, skills, and interests are, or are likely to be. Make notes on what kinds of activities they enjoy in or outside of the class.

3. Compare the list of possible teaching materials with the list of interests and skills of students you created.

Highlight the ideas for teaching materials that seem to match or complement the likely interests and skills of the students. During this step, you'll likely think of other, even better, ideas for teaching materials. Add these new ideas to your list.

4. Decide on a budget.

If you've been given a budget from the school, stick to it. If you're paying for materials out of your own pocket, which teachers commonly need to do, decide on your budget now. Write down a rupiah amount.

5. Choose your best ideas from your list of ideas for class materials.

Make sure that you include materials for beginning, middle, and ending sections of the curriculum or syllabus.

6. For each class material item that you have decided to make, create a list of supplies needed.

Buy the supplies if necessary, and use appropriate tools such as your computer, printer, a copier, scissors, die-cut machine, laminating machine, and others, to create the materials.

When the teachers want to create and develop the material in audio-visual format and the print medium, there are some tips as follows:

1. Use of clip-art picture/illustration
2. Stick pictures.
3. Opportunities using magazines
4. Use of local talent
5. Illustrating through appropriate local material
6. Use of local traditional media for learning.

E. Conclusion

It is initially important to emphasize that the selection, development and use of educational materials are part of a complex user-process, which not least become evident in teachers' reasoning concerning the close connection between method and materials. Teachers' reasoning also clearly illustrate how the use of educational materials is context-based, how the local conditions and the people within the performing field influence what material is selected and how it is used. Results that also indicate that educational materials in themselves do not have a function and that they do not become useful and meaningful until they are used by teachers and pupils in a context where learning takes place. The tips above in choosing and developing learning materials are expected to be able to help the teachers although they are not so complete.

F. References

Groves, Gunta ed. 2004. *Choosing and using teaching and learning materials; Guidelines for preschools and school*s. South Australia: DECS Publishing.

McKeachie, W. 1999. *McKeachie's Teaching Tips: Strategies, Research, and Theory for College and University Teachers* (10th ed.). Boston: Houghton Mifflin Company.

Richard J. 2007. *The Field Guide to Teaching: a Handbook for New Teachers*. Marchesani.

Richards, Jack C. and Richard Schmidt. 2002. *Longman Dictionary of Language Teaching and Applied Linguistics***.** London : Pearson Education Limited.

Ranjit, Sharad. *How to Develop and Produce Simple Learning Materials with Limited Resources at Community Level*. unpublished paper.

Tomlinson, B. 2003. *Developing Materials for Language Teaching, Continuum*, p.18. New York.

Tomlinson, Brian. 2011. *Materials Development in Language Teaching*. Cambridge: Cambridge University Press.

Zahner, C. Fauverge, A. & Wong, J. 2000. *Task-based language learning via audiovisual networks The LEVERAGE project.* (In Warschauer M. & Kern R. Ed.) *Network-based Language Teaching: Concepts and Practice*. Cambrige: Cambridge University Press.

Improving Students' Critical Thinking Ability to Introduction Course of The Main Physics Through Lesson Study

Tarpin Juandi[1], Mijahamuddin Alwi[2]
[1, 2]Hamzanwadi University
[1]starpinjuandi@yahoo.com,[2]alwi_sains121@yahoo.co.id

Abstract

This study aimedatimproving students' critical thinking abilityto introduction course of the main physics through lesson study through lesson study. This study was cattagorized to action research through a lesson study includes four cycles, each cycle through three stages of plan, do, and see. The research was conducted on students'semester of Physics Education Study Program of Hamzanwadi University with 38 students. The instrument of data collection used was the rubric of students' critical thinking ability assessment; the data was collected by observation technique. After the data collected then analyzed with descriptive statistics. Based on the result of data analysis, the average of students 'critical thinking skill of first cycle 30, second cycle 50, third cycle 75, and fourth cycle 90, it means that there is an increase of average of students' critical thinking ability from each cycle. So from the results of the analysis can be concluded that there is an increase in the ability of critical thinking of students in the introduction of core physics through lesson study.

Keywords*: critical thinking ability, lesson study*

A. Introduction

The growing globalization of this millennium era must be balanced with adequate life skills. To obtain life skills must be pursued through education both formal and non formal. The Government has facilitated these needs as a form of implementation of the mandate of the law. Education should be interpreted as a whole as a concept that is offered to equip learners in living life in the present and future. Uncomplicated understanding of education causes the emergence of many problems one of which is the low ability to think high-level graduates.

High-level thinking abilitywere needed for every graduate to solve problems encountered in everyday life. This capability is not easily obtained but through a long and well-rounded series of processes. The low level of thinking ability of high level of students was inseparable from the process that was passed in middle school first and even high school from elementary school, that is learning pattern which was still oriented to comprehension concept given directly.

The thinking process should be emphasized early as an exercise to find and solve problems with alternative solutions. Thinking refers to a series of processes of activity assembling, using, and improving internal symbolic models (Gilholly in Wijaya, 2007: 71). One of the higher-order thinking components is critical thinking.

Critical thinking ability can be learn appropriately and the students be better thinkers (Romanowski and Nasser, 2012). Critical thinking referred to in this study is an organized process that involves mental activity that includes the ability to formulate problems, argue, deduce, induce, evaluate, and make decisions and implement.

One of the learning patterns that can stimulate students to think critically was the lesson study. Lesson study also anabled lecturers to consider the long-term goals of students achieving soft skills, including critical thinking and tolerance (Santyasa, 2009). Lesson study was first developed in Japan as an exclusive learning solution. The principle of learning developed in the lesson study is public, democrasi, and excellent. Learning is open to all people with a priority of college to form a learning community. With the application of lesson study pattern learning will make students more easily understand the concept of the core physics preliminary course.

Introduction to core physics is a compulsory advanced course which is the consolidation and deepening of modern physics in previous lectures. This course aims to provide deeper concepts and principles about atoms, so that students have a broad insight into analyzing the problems of atomic nuclei (core radius, binding energy, angular momentum), radioactive decay, decay of alpha, beta, gamma, fission and fusion reactions and so forth. Many students are faced with concepts of physics in abstract form and mathematical equations. Indirectly the abstract form and mathematical equations presented in the learning aims to train the mindset of students in order to solve the problem with the critical, logical, and precise. But the reality is different, it is often a barrier of students in understanding the concept discussed. On the other hand, it is found that: (1) lack of student initiative to ask questions; (2) students tend to receive information; (3) low courage of students answer questions asked by lecturers.

The above facts require a great effort to make effective learning, this effort begins with the improvement of the learning process by offering a way or method or media that appeals to the students. A concept will be easy to understand and remember if the concept is presented through procedures and steps that are precise, clear, and interesting. Based on the above description the focus of this research is to improve students' critical thinking skills in the introduction of core physics through lesson study.

B. Research Method

This research included action research with four cycles, each cycle through three stages namely, planning (plan), implementation (do), and reflection (see). At the planning stage, a joint assessment of the teaching plan and teaching materials, including the course syllabus, materials to be learned, students' activity sheets and evaluation instruments were needed. The results of the assessment were used to improve the lesson plans that had been drawn up by the lecturer'smodel.

Implementation stage (do), lecturer'smodel implemented the learning scenario in accordance with the design prepared in the stage plan. While the other team conducted as an observer. Observations conducted aim at seeing the activity and critical thinking ability of students in problems solving given. To strengthen the results of observation is also done documentation through photo and video recording.

Stages of reflection was done after the learning was complete. This activity was followed by all observer and lecturer model led by a moderator. In this activity the discussion of events that appear in learning both in general and special, positive or negative. The steps taken in this activity is the lecturers of the model are asked to convey first the learning experience that had just been going on. Next all observers were asked to convey the results of his observations. The results of this reflection were then used as consideration for the preparation of the next learning plan. The data collected were quantitative data about students' critical thinking ability and qualitative data about students' learning activities

C. Results

Lesson study with lesson study was applied to students semester of Physics Education Study Program of Hamzanwadi University in the core physics introduction course. The study involved a team of eight people consisting of one lecturermodel, Tarpin Juandi, and seven observers, Baiq Aryani Novianti, Tsamarul Hizbi, Badrul Wajdi, Sapiruddin, Laxmi Zahara, Khaerussyahidi, and Fartina. The subjects that were learned for four consecutive cycles were atomic nuclei, radioactive decay, decay of alpha particles, decay of gamma particles. Here are described the findings in each cycle.

Cycle I

There are some learning findings obtained by the observer in the first cycle, the findings can be written in general as follows; 1) the low ability of students in group work; 2) the difficulties of students put forward ideas, opinions, and suggestions; 3) students were less careful to read the distributed students' worksheets. As a beginning, these findings were a natural thing since students had not been well trained in group learning. Likewise with ketercapain indicator of critical thinking was still low that is average 30.

Cycle II

The findings obtained in the first cycle were the capital for the team to design more interactive learning. However, in the second cycle still found weaknesses of students that was in doing the induction, to evaluate, made decisions and implemented them. Based on the observation result, the average of students' critical thinking ability was 50 from all indicators

Cycle III

Process improvement continued to be done both in terms of technical and learning design. The learning process was better than the previous cycle, as well as the students' critical thinkingability. In this cycle, the average student's ability to think critically was 75, this was due to the experience of students in previous cycles that were getting used to communicate and contribute his ideas to the problems encountered. but there was still a weakness in the ability of students in concluding the learning process and connected it with other concepts.

Cycle IV

Increased students' critical thinking ability continued from cycle to cycle, not excluding this fourth cycle. Based on the observation result, the average of students' critical thinking ability reached 90, this achievement was still not perfect, it means maximal effort in designing, executing, and evaluating the learning process. Habits in conveying ideas and problems solving was contributed to the students' reasoning and critical thinking ability contained in action and formulating good planning.

D. Discussion

The focus in this lesson study activity was to improve students' critical thinking ability. Based on the result of the research, the average of students' critical thinking ability from the first cycle up to the fourth cycle was as follows 30.50, 75, and 90. In the first cycle was obtained an average of 30, this is the lowest average among the four cycles. The low ability of critical thinking of students in the first cycle was caused by the habits of students obtain learning materials directly from the lecturer, without taking the initiative to seek and discuss with their friends. However in cycle two, three, and four.There was an increase in each cycle compared to the next cycle. The focus of each stage of learning is how to stimulate students to learn (Cerbin and Copp, 2006). The occurrence of these improvements can not be separated from the experience of students in the previous cycle.

Lesson study pattern was very possible to improve the quality of process and learning outcomes, because the learning was designed, implemented, and evaluated jointly by the team. lesson study is a coaching effort to improve the learning process conducted by a group of teachers in a collaborative and sustainable in planning, implementing, observing and reporting learning outcomes (Syamsuri & Ibrohim, 2008). The findings of each cycle will be an evaluation material by the team to anticipate the next cycle, one of which is the increase in the average of students' critical thinking skills in each cycle. If a teacher wants to improve the quality of learning, one of the most obvious ways is to collaborate with other teachers in designing, observing and reflecting on the learning (Lewis, 2002).

The average ability of students' critical thinking in the fourth cycle of 90, meaning that most students had been able to achieve critical thinking indicators. But the acquisition was still lower than 100, to achieve perfection required practice and learning design that leaded to the formation of a critical mindset of students. However, in this case the pattern of learning with lesson study can improve students' critical thinking ability.

E. Conclusion

Based on the results of research and discussion can be concluded that learning with the pattern of lesson study can improve students' thinking abilityto introduction course of the main physics through lesson study through lesson studyof hamzanwadi university. This can be seen from the improvement of the average of students' critical thinking ability from the first cycle to the fourth cycle as follows; 30. 50, 75, and 90.

F. Suggestion

Given the lesson study pattern of learning embraces the principle of collegial, then the pattern can be used and developed by teachers in the learning process to form a learning community and achieve maximum learning outcomes.

G. Reference

Cerbin, W. and Kopp, B. (2006), *Lesson study as a model for building pedagogical knowledge and improving teaching*, International Journal of Teaching an Learning in Higher Education, Vol. 18 No. 3 250-257.

Lewis C., 2002. *Lesson Study: A Handbook of Teacher-Led Instructional Change*. Philadelphia: Published by Research for Better Schools Inc.

Romanawskhi, M.H. and Nasser, R (2012), *How critical thinking is taught in Qatari independent schools' social studies classrooms: teachers' perspectives*, International Journal of Educations Vol 4 No. 1.

Santyasa, I.W. (2009), Implementasi Lesson Study dalam Pembelajaran, makalah disajikan pada seminar implementasi lesson study dalam pembelajaran bagi guru-guru TK, Sekolah Dasar, dan Sekolah Menengah Pertama di Kecamatan Nusa Penida, Nusa Penida, 24 Januari

Wijaya, C. 2007. Pendidikan remedial. Bandung: remaja rosdakarya

Problemsidentification Of The Implementation Curriculum 2013 in PAUD Islahul Ummah

Suhirman, Mulianah Khaironi, Zuhut Ramdani
Hamzanwadi University
suhirman.sakti@gmail.com.;guru.anah@gmail.com.: ramdanizuhud@gmail.com

Abstract

The aim of this research was to find out: (1) the problem faced by the teacher of PAUD Islahul Ummah in implementing curriculum 2013; and (2) the solution of problem in implementing curriculum 2013. This research was qualitative research. The main unit analysis is implementation of curriculum 2013 at PAUD Islahul Ummah. The teachers of PAUD Islahul Ummah were the main source of information and were selected randomly. In collecting the data, the researchers used observation, interview and documentation. The validity of the data was obtained by triangulation data. While the technique of data analysis used holistic analysis. The research result showed: (1) there are some problems in arranging theme, semester programme, weekly lesson planning (RPPM), daily lesson planning (RPPH) and assessment; (2) the difficulties in the preparation of learning planning are caused the diffrent format who are given when the teachers follow the training of curriculum 2013; (3) the teachers' problem in implementing model and learning method in curriculum 2013 are limit of tools and infrastructures; (4) the teachers' weaknesses in understanding scientific approach. Meanwhile, the solution of those problems are: (1) the teachers attend many curriculum training 2013 from regency to province level; (2) teachers continue to try making lesson plans that are consulted to those who are competent in curriculum 13 early childhood education; (3) the teachers still used the learning classical model by continuing to innovate and improve the learning method that used at PAUD Islahul Ummah.

Keywords*: Problems Identification, Implementation Curriculum 2013*

A. Introduction

Changes and developments of various aspects of life need to be responded by the performance of professional education and high quality. So such education is very necessary to create the creation of intelligent and democratic human beings and able to compete openly in the era of globalization, so as to improve the welfare of all citizens in Indonesia. therefore the performance of education requires a change and refinement of one of the substantive aspects that support it ie the curriculum. To achieve this, the government has made improvements to the education system. These efforts include the issuanceNo. 25 1999 on Regional Autonomy, which directly affect the planning and evaluation of education. If previously the management of education is the central

authority, then with the start of the enactment of the Act the authority is located at the City/District Government.

In Law No.20 of 2003 on National Education System mentioned:

1. Education is a conscious and planned effort to create an atmosphere of studying and learning process so that learners actively develop their potential to have spiritual strength, religious, self-control, intelligence, noble morals and skills needed in the community, nation and state.
2. National Education is an education based on *Pancasila* and the Constitution the State of the Republic of Indonesia in 1945, rooted in the values of religion, national culture of Indonesia and responsive to the challenges of changing times.
3. The National Education System is all components education that interdependent related with integrated in order to achieve the goals of national education.
4. Students are members of the community who seek to develop their potential through the learning process available on the path, ladder and certain types of education.
5. Formal education is a structured and tiered education path consisting of primary, secondary and university.
6. Non-formal education is an educational pathway outside of formal education that is structured and tiered.
7. The curriculum is a set of plans and arrangements regarding the objectives, content and lesson materials as well as the means used as guidelines for the implementation of learning activities to achieve certain educational goals.
8. Learning is the process of interaction of learners with educators and learning resources in a learning environment.

Curriculum 2013 is one of the curriculum used in the implementation of Early Childhood Education, which began to be implemented since 2014. However, the implementation of the curriculum, is inseparable from various obstacles. Therefore, this study was conducted to answer the problem formulation: 1) What are the difficulties faced by kindergarten teachers in the implementation of the 2013 curriculum ?; 2) How is the teacher's solution in overcoming the difficulties faced in applying the 2013 curriculum ?. The aims of this research are: 1) To know the difficulties faced by kindergarten teacher in applying of curriculum 2013. 2) To know solution of kindergarten teacher in overcoming difficulties encountered in applying of curriculum 2013.

Suminah, et al. (2015: 1-4)National education functions to develop the ability and shape the character and civilization of a dignified nation in order to educated the nation's life. National education aims to develop the potential of learners to become

human beings who believe and obedien to God Almighty, have a noble character, healthy, knowledgeable, capable, creative, inde-pendent, and become citizens of a democratic and responsible. Early childhood education is the most fundamental education because the development of children in the future is greatly determined by the variety of meaningful stimulation that is given from an early age. Early childhood education should be prepared in a planned and holistic-integrative so that in the golden age of child development get full stimulation, to develop the various potentials it has. Efforts that can be made in order to develop the potential through a structured education program. The component for structured education is the curriculum. The curriculum guides teachers to meet the full range of learning that children use using appropriate learning approaches, appropriate environmental arrangement strategies to support the development of children's abilities quality according to their stage of deve-lopment. Teachers should have a strong vision of what they want to develop in children, knowledge and skills that children can learn, and attitudes to be implanted in children.

Suminah, et al. (2015: 1-3)Law No. 20 of 2003 on the National Education System states that the curriculum is a set of plans and arrangements concerning objectives, content, and lesson materials and ways used as guidelines for the implementation of learning activities to achieve certain educational goals. Based on that understanding, there are two dimensions of the curriculum, the first is the plan and the setting of the objectives, content, and lesson materials, while the second is the way used for learning activities. The curriculum as a framework that contains plans and implementation of a program to develop all aspects of child development in preparing children to achieve success in school and the next stage. The curriculum provides a meaningful, engaging, and high-quality learning experience. Curriculum 2013 Early Childhood Education be valid from the academic year 2014/2015 fulfills both dimensions. To apply these two dimensions, all early childhood educators and managers must understand the curriculum framework and structure of the 2013 Early Childhood Education in order to implement the ECD program in accordance with the stated objectives. The objectives of this guidance are: Related Parties, among others: Early Childhood Teachers, Early Childhood Education Unit Management, Early Childhood Education Supervisors and Observers, Stakeholders of various elements.

Suminah, et al. (2015: 4-6) The Curriculum 2013 Early Childhood Education is developed on the basis of a clear and empirically philosophical, sociological, theoretical, psychological-pedagogical, and juridical foundation.

Suminah, et al. (2015: 8)curriculum content of development programs are consist of: (1) religious and moral value development programs, (2) motor development programs, (3) cognitive development programs, (4) language

development programs, (5) social development programs- emotional, and (6) art development programs. Development program referred to is the embodiment of learning atmosphere for the development of behavior, maturity of thinking, kinestetik, social and emotional, and language through play activities. Learning atmosphere is defined as anything that can encourage children's interest to learn. Children can learn well if:

1. The people around them are fun. Friendly teachers, treatment all children fairly, playmates who receive each other, and communication is warm, open, polite, and happens in two directions.
2. The environment is fun. There is an adequate, clean, well-ordered playground in accordance with the child's physical growth, and can be used by the child according to his/her mind. The area inside and outside is enough for the child to be able to perform activities comfortably is an environmental footing that strongly supports the freedom of the children to be creative.
3. Learning process that supports freedom of thought, without pressure, few instructions and restrictions from the teacher. The teacher responds appropriately when the child asks, gives reinforcement when the child finds something/succeeds in doing something, provides help when the child needs it.

Related to the exposure, Suminah (2015: 8-10 explains:

a. Religious values development programs mean there are teachers who are role models for the development of behaviors derived from religious and moral values. Supported by a learning environment that reflects the application of religious and moral values and other values that develop in society. Carried out in a fun learning process.
b. motoric physical development program means there are teachers who understand the needs and provide opportunities and support for children to move, practice gross motor and fine motor, and get used to implement a healthy life. There are tools and time that children can use to practice their strength, prowess, flexibility, body coordination to achieve kinesthetic maturity and healthy living habits. Carried out in a fun learning process.
c. Cognitive development programs mean there are teachers who understand the basic concepts of knowledge that children can learn, understand how children learn, support children to find out, and do / try to find answers to their curiosity. Optimizing every space, tools, materials and events that exist in the environment to encourage the maturity of the child's thinking process. Implemented in a scientific learning process that encourages children to be critical, analytical, evaluative in every action to produce ways to overcome the problem or be creative.

d. Language development programs mean there are teachers who master proper communication techniques to help achieve expressive and receptive language maturity. Available places of resources, tools and time that children can use to practice language and get to know early literacy. Carried out in a fun learning process.
e. The social-emotional development program means that there are teachers who understand the emotional social development stage of the child, supporting the development of awareness of the feelings of the self, the feelings of others, the example of prosocial behavior for children. The creation of a learning environment that enables children to grow emotional social maturity through a fun learning process with educator support that understands the learning and management of children's emotional conflict.
f. Art development programs mean that there are teachers who understand the development of the arts for children, provide opportunities, provide places, time and tools that children can use to explore, express and appreciate the work of themselves and others in the form of movement, music, drama, and diverse fields other art of painting, fine arts, crafts in a pleasant atmosphere.

B. Method

This research is intended to find out the problems that exist in the implementation of curriculum 2013 early childhood education and how the solution in overcoming the problem. The approach used in this research is to use phenomenology approach with the presentation of qualitative descriptive data. The basic assumption of this approach is that human beings in knowledge are inseparable from their moral views, whether at observing, gathering, analyzing, or making conclusions (Muhadjir, 2002: 116-117). The relevance of research selection, because it requires the merging of research subjects with the object of research. This research takes place in Early Childhood Education IslahulUmmah. This location determination is based on the reason that the Early Childhood Education IslahulUmmah is one of the non-formal Early Childhood Education programs located outside the city and is trying to implement the 2013 Curriculum with its various limitations. Subjects in this study are teachers that doing teaching who know the difficulties that exist in the implementation of curriculum 2013 early childhood education.

Data collection techniques used in this study include observation, interview, and documentation. In this study the validity of the data used primarily to seek credibility, pursued by the way: Extend the time of research to know the subject of research, environmental activities, phenomena that occur everyday; Continuous

observation to see things more closely, in detail and deeply, so that incoming data is more valid; Triangulation as a process of finding conclusions by conducting checks and rechecks from various points of view or strategy. In this triangulation, it is not merely to test the truth of data and not to collect various data types, but also an attempt to see more sharply the relationship between the various data to prevent mistakes and errors in data analysis. Data analysis technique is done by holistic analysis.

C. Discussion

Early Childhood Education Islahul Ummah has four teachers, including the principal. the number of study groups two classes. One class for learners ages 3-4 years, and one class for learners ages 5-6 years. The existence of Early Childhood Education Islahul Ummah is very beneficial, because it is able to provide stimulation for the growth and development of early childhood. Teachers in Early Childhood Education Islahul Ummah have qualified primary education teacher education and economic education.

Early childhood education in Islahul Ummah is implemented by following the nationally apply curriculum. Currently, early childhood education Islahul Ummah tries to apply the curriculum 2013 of early childhood education. Form of applying the curriculum 2013 of early childhood education in Early Childhood Education Islahul Ummah seen from:

1. Efforts of teachers to apply thematic learning. Thematic learning is the delivery of material through prede-termined themes. Early Childhood Education Islahul Ummah uses themes ranging from themes closest to children to the furthest themes. the closest themes such as my body and the furthest themes such as the universe. It's just that there are difficulties for teachers to develop the theme of learning in accordance with the circumstances surrounding the early childhood educational institutions Islahul Ummah, so that the theme used still use the themes in the year before applying the curriculum 2013 of early childhood education. In the Curriculum 2013 Early Childhood Education there are four principles of theme selection, namely proximity, interest, cheap, and incidental. a) Proximity means in the selection of themes, teachers should analyze or consider that the chosen theme is close to or familiar with the child so that the presence of the theme in the lesson is able to update the information the child gained from the environment and develop the child's knowledge of the theme. b) Interest means the theme that will be used as a means of delivering the material in the learning process of early childhood should have an interest or attraction element for early childhood so that in the learning process the child feel happy, not forced, and able to develop his

imagination without feeling depressed. c) Inexpensive. it means in the selection of themes, teachers should consider the readiness of early childhood education institutions to facilitate the needs of the theme so that it can be applied in learning activities, such as the media needed to deliver the material in the theme. The required media must be tailored to the capacity of Early Childhood Education institutions. d) Incidental means the theme used can be adapted to the circumstances that are happening in the environment around early childhood education institutions, such as the rice season, then the theme can introduce the material about the rice in farm.

2. Early Childhood Education Islahul Ummah undertook the preparation of lesson plan that will be implemented in the learning. The lesson plans are semester program, weekly program, and daily program. But the problem at Early Childhood Education Islahul Ummah is the difficulty of teachers to arrange lesson plans according to the format, because of the number of learning plan formats obtained from various trainings. Teachers of Early Childhood Education institutions in Islahul Ummah need standard format for preparing lesson plans.
3. Learning method used in early childhood education Islahul Ummah mostly use lecture method, and giving task in the form of activity of reading and writing. One reason is due to the limited facilities and infrastructure owned. If you look at the condition of the environment, early childhood educational institutions Islahul Ummah has a large yard, surrounded by the natural environment of agricultural land. The natural environment can be used for learning for learners by applying various learning methods. So the learning process does not only take place in the classroom.
4. Early Childhood Education Islahul Ummah conducts assessment tools to evaluate the growth and development of children. Assessment is done every day from opening to closing activities. The most commonly used forms of assessment are observation, and works sheet. However, based on interviews with principals and teachers in Islahul Ummah early childhood education, they have difficulty in formatting to develop assessment tools, because based on the results of the training that has been followed in many places, does not show a uniform assessment format.
5. The application of the scientific approach as mentioned in Curriculum 2013 Early Childhood Education has begun to be implemented, although it is still not optimal. Teachers Early Childhood Education Islahul Ummah has tried to implement learning by applying a scientific approach, but learners have not been can well organized. In this case, other factors that cause is the ratio of teachers and children

are still not appropriate. In addition, the use of learning media in the form of text also causes the child does not get knowledge about the real condition of the material being studied.

Early childhood education IslahulUmmah experienced many difficulties in the implementation process. However, principals and teachers do not want to despair. They keep trying to prepare learning activities for their students. As for some efforts made by early childhood education teacher IslahulUmmah to overcome these difficulties, namely:

1. Teachers in Early Childhood Education IslahulUmmah attends various 2013 Curriculum training from village level to provincial level. The desire to understand well the curriculum 2013 Early Childhood Education makes teachers in Early Childhood Education IslahulUmmah the spirit to participate in various socialization and development activities Curriculum 2013 Early Childhood Education.
2. Teachers in Early Childhood Education IslahulUmmah continues to make efforts to arrange lesson plans, ranging from the development of themes, semester programs, weekly programs, daily programs, to the preparation of assessment tools. The results of its arrange are consulted to the competent parties in the Curriculum 2013 of early childhood education, such as lecturers and supervisors.
3. Teachers keep trying to carry out learning activities, although still using a classical model. But little by little teacher continues to innovate to improve the learning method used in Early Childhood Education IslahulUmmah. It is seen in the teacher's effort to apply question and answer method, which is one of the steps in scientific approach, so that the learning process that followed by the child is not monotonous.
4. Teachers are working with the maximum to utilize all existing facilities as media and learning resources in the learning process.

D. Conclusion

Based on the above discussion it can be concluded that the institution of Early Childhood Education Islahul Ummah still experiencing difficulties in the implementation of Curriculum 2013 Early Childhood Education. This is caused by the difficulties experienced by teachers in the development of themes, teachers have difficulty in the preparation of learning planning and assessment, teachers' difficulty in organizing children in learning activities, and the lack of learning media owned.

References

Muhadjir, Noeng. (2002). *Metodologipenelitiankualitatif.* Yogyakarta: Rake Sarasin.

Suminah, Enak, dkk. (2015). *Kerangka Dasar dan Struktur Kurikulum 2013 Pendidikan Anak Usia Dini*. Jakarta: Direktorat Pembinaan Pendidikan Anak Usia Dini.

Republik Indonesia. (2003). *Undang-UndangRepublik Indonesia Nomor 20 Tahun 2003 TentangSistemPendidikanNasional*.

The Effect of Cooperative Learning Model Type Role Playing on IPS Learning Result of fourth graders SDN 3 Suralaga

Burhanuddin, Yuniar Lestarini
Study Program of Primary School Teacher Education, Hamzanwadi University

Abstract

This study aims to determine the effect of cooperative learning model of role playing to the learning outcomes of IPS fourth grade students SDN 3 Suralagain the school year 2016 / 2017. This research used experimental methods. The population of this study is all students of grade IV at SDN 3 Suralaga Lesson 2016 /2017.Sampel samples determined by saturated sampling. This research used is one group pre-test post-test. Technique of data collection using a test description of 5 numbers of questions to measure student learning outcomes. The data collected from the evaluation results are then analyzed using normality test, linearity test and hypothesis test. Based on learning result analysis obtained t count α0 equal to 61,66 bigger than t-table equal to 2,064, then Ha accepted and t-count for α1 equal to 3,545 bigger than t-table equal to 2,064, hence Ha accepted. Thus it can be concluded that the model of learning co-operative type of role playing on learning outcomes affect the learning outcomes IPS fourth grade students SDN 3 Suralaga Lesson2016/2017.

Keywords: Model of learning, Co-operative Type Role Playing, Learning Outcomes.

A. Introduction

Basically the Education System regulates the various forms of conscious and planned efforts to create an atmosphere of learning and learning process so that learners actively develop their potential to have spiritual strength, self-control, personality, intelligence, noble character, and skills needed by him, , nation, and country (WinaSanjaya, 2010: 2).

Education is one form of efforts to improve the quality of natural resources. But what we feel now is the backwardness in the quality of education, both formal and informal. And this result is obtained by comparing it with other countries, because education has become a support in increasing Indonesia's resources to build nation. Therefore, we should be able to improve Indonesian human resources that are not less competitive with other countries.After observation, it seems clear that a serious

problem in improving the quality of education in Indonesia is the low quality of education at various levels of education, both formal and informal education. And that is what causes the low quality of education that hampers the provision of human resources who have the skills and skills to meet the nation's development in various fields.

There are many causes why the quality of education in Indonesia, both formal and informal, is considered low. The causes of the low quality of education in Indonesia include the problem of effectiveness, efficiency and standardization of teaching. It is still a problem of education in Indonesia in general. The specific problems in the education sector are: 1) The low level of facilities and infrastructures that support the teaching and learning process such as ownership and use of low learning media and incomplete library books, 2) the low quality of teachers, 3) the low achievement of students, 4) and the high cost of education.Awareness about the importance of education has encouraged the efforts and concerns of the entire community towards every development of education. Speaking of the quality of education, there are some opinions saying that in general the achievement of students in the field of education is still less satisfactory, including in the field of achievement IPS.IPS is one eye lessons provided in the basic school that examine a set of events, facts, concepts, and generalizations related to social issues. Contains geographic, historical, sociological, and economic material (Rudy Gunawan, 2013: 78).According to Rudy Gunawan (2013: 48) the main objective of social studies subjects in elementary school is to form citizens who are socially capable and confident of their own lives in the midst of physical and social forces, which in turn will become good and responsible citizens. IPS learning has a fundamental function in developing basic knowledge and skills to see the social reality that students face in their daily lives. In order for IPS goals and functions to be met, IPS needs to be taught in the right way and can involve active students in the learning process.The learning process is the interaction or mutual relationship between teachers and students in the situation of teaching and learning process in class.

The learning process in each elementary and secondary education unit must be interactive, inspirational, fun, challenging, and motivate learners to participate actively, and provide sufficient space for initiative, creativity, and independence according to the participant's physical, psychological talents, interests and development educate. This is inseparable from the role of teachers who guide the learning process. The role of teachers is very important in education world. This is because, teachers directly deal with students. Teachers should be able to plan an IPS lesson that is interesting, fun and not boring.

When planning a lesson, it is important to design how students will excel in learning. In reality many students are still afraid to express themselves.As stated above some teachers still use the old paradigm in teaching, ie teaching by lecture method and expecting students to sit, hear, record, and memorize, and consider the old paradigm one- as the alternative. Guidance in the world of education has changed a lot, we can no longer maintain the old paradigm.Theory, research, and implementation of learning activities prove that teachers have changed the teaching paradigm. Strategy most widely used to activate students is to involve students in the discussion with the whole class. But this strategy is not very effective even if the teacher has tried and encouraged the students to participate. Most students are glued to the audience while the classroom is dominated by a handful of students.In this case cooperative learning is suitable to use, because cooperative learning allows students to interact with each other. The cooperative learning model helps students learn each subject, from basic skills to complex problems. Ironically, cooperative learning models have not been widely applied in education (Isjoni, 2013: 20).

Cooperative models have several types. One type of cooperative learning model that builds students' self-confidence and encourages their participation in the classroom is the cooperative learning model of Role Playing type. The Role Playing model of cooperative learning helps students discover the meaning of the social world and solve the dilemma with the help of the group. That is, through role play students learn to use role concepts, aware of the different roles and think about the behavior of himself and the behavior of others. This role play process can provide an example of a useful life of human behavior as a means of students to: 1) explore their feelings, 2) gain inspiration and understanding that affect their attitudes, values and perceptions, 3) develop skills and attitudes in solving problems, 4) subjects in various ways. This will be beneficial for the student at the time of his future plunge as he will find himself in a situation where so many roles occur. As in the family, neighbors, work environment, etc. Role Playing type cooperative learning model suitable for elementary school because the condition of elementary students who are still in the childhood, where they still love the game and interesting things of course fun and not boring (Hamzah B. Uno, 2010: 26).

Based on preliminary observations conducted on Tuesday 7 March 2017 and interviews with teachers and students of grade IV, it was found that most students scored under KKM 70 for social studies subjects as required in KNSP SDN 3 Suralaga in the 2016/2017 Lessons Year. Student non-completeness in learning caused by things as follows: a) some students are less motivated in learning, because teachers do not use the media in learning; B). lack of guidance and supervision from parents to learn the

child at home, because most parents are educated junior high. ; c) There is boredom in learning so that the results of learning less satisfactory, because the model used is less varied. Because of the many problems that exist. So, in this study, researchers are very hopeful with the implementation of cooperative learning model of Role Playing type can influence or improve student learning outcomes especially on social studies subjects (IPS).

B. Method

This research is an experimental research. Experimental research is a way to find a causal relationship (causal relationship) between two factors that deliberately caused by the researchers by eliminating, reducing or setting aside the disturbing factors. Experiments are always conducted with the intent to see the effect of a treatment (SuharsimiArikunto, 2010: 9).

According Sugiyono (2014: 110-111) form of design in this study is pre-experimentaldesign. In pre-experimental design there are three forms of pre-experimental design namely one-shot case study, one group pretest-posttest design, and intact-group comparison. The design used in this study is one group pretest-posttest design. In this design there is pretest, before being treated. Thus the result of treatment can be known more accurate, because it can compare with the condition before being treated. This design can be described as follows:

O1 X O2

Figure 1

One-Group Pretest-Postest Design Research Design(Sugiyono, 2014: 111)

Information:

O1 = pretest value (before use model co-operative type Role Playing)

O2 = the value of posttest (after use model co-operative type Role Playing).

In this design, the observation is done twice before the experiment and after the experiment. The observation performed before the experiment (O1) is called the pre-test, and the after-experimental observation called (O2) is called the post-test. The difference between O1 and O2 is O2- assumed to be the effect of treatment or experimentation (SuharsimiArikunto, 2010: 124).

The research was conducted to find out the influence of cooperative model of role playing type on social studies learning result of social problems in fourth grade students. In this study the subject of research is given initial test (pretest) to determine the extent of the initial ability of students before being given treatment with IPS

learning using a co-operative model of role playing type. After given initial test, then students are given treatment that is learning using cooperative model of role playing type. After given treatment, then all students are given a final test (posttest) to determine how far the influence of model co-operative type of role playing on student learning outcomes IPS.

C. Findings and Discussion

Innovation in the field of learning including the subjects of social studies in elementary school is very necessary, innovation in teaching and learning process one of which is the application of a model of learning. But the problem that a learning model that does not guarantee its effectiveness to be applied to each learning material.Therefore needs to be tested in the form of experiments.This research applied cooperative learning model of role playing.It is investigated the influence of the model of role playing co-operative type the results of IPS students learning grade IV SDN 3 Suralaga Lesson 2016/2017.

Based on the data collected for the IPS class IV student learning outcomes before the role playing model was applied, the highest score was 58 and the lowest score was 42 with the average score of 50.76, so it can be categorized that the pre-test result of IPS class IV SDN 3 Suralagain the school year 2016/2017 belongs to the moderate category. While for the learning result of IPS student of class IV after using co-operative model of role playing type, based on data that have been collected, obtained the highest value 94 and the lowest score 72 with the mean value is 83,92, so it can be categorized that IPS learning result after using model cooperative type of role playing fourth grade students SDN 3 Suralaga Year 2016/2017 Lessons are included in the high category.

Based on the result of data analysis with t-test for IPS learning result data, obtained t-count for αo equal to 61,66 and score of t-table for α1 equal to 3,55. The value of t-count is then compared with the t-table value t-table value obtained from the t-table price at a significant level of 0.05 that is equal to 2.064. This means that the t-count > t-table, so Ho is rejected or Ha is accepted, so it can be said there are significant differences in learning outcomes before using co-operative model of role playing and after using cooperative model of role playing.

The regression equation has been found to predict how the individual in the dependent variable will occur if the individual in the independent variable is applied. $\hat{Y}_i = 64.14 + 0.39X$. From the regression equation it can be interpreted that if the value of learning result before using cooperative model of role playing type (post-test) increases 1, then the learning result value before using cooperative model of role

playing type (post-test) will increase 0.39 or every value increase 10 then the value (post-test) will increase by 3.9 coefficient of discrimination is 0.23. The result shows that there is a 23% increase in IPS learning outcomes influenced by cooperative model of role playing type applied by the rest 77% is another factor.

D. Conclusion

From the results of research that has been done can be concluded that there are differences in learning outcomes before using cooperative model of typerole playing and after using the model of role playing co-operative type. The average value of learning outcomes after using the role playing co-operative model (X2 = 83.92) is higher than the average IPS learning score before applying the role playing co-operative model (X2 = 50,76). The value of t-count> t-table, then Ho is rejected or Ha accepted, so it can be declared difference of learning result between before using co-operative model of role playing type and after using co-operative model of role playing type.

The result shows that there is a 23% increase in IPS learning outcomes influenced by the cooperative model of role playing type applied, through regression equation $\hat{Y} = 64.14 + 0.39X$, and the remaining 77% is another factor. Thus it can be concluded that there is influence of model co-operative type of role playing on the learning outcomes of IPS students grade IV SDN 3 Suralagain the school Year 2016/2017.

References

Hamzah B Uno. (2010). Learning Model Creates Creative and Effective Teaching Process. Jakarta: Earth Literacy.

Isjoni. (2013). Cooperative Learning. Bandung: Alfabeta. Rudy Gunawan. (2013). IPS Education Philosophy, Concepts, and Applications. Bandung: Alfabeta.

Sugiyono (2014). Educational Research Methods Approach of Qualitative, Qualitative, and R & D. Bandung: Alfabeta.

SuharsimiArikunto. (2010). Research procedure. Jakarta: RinekaCipta. Vienna Sanjaya. (2010). Learning Story Strategy Standards Education Process: Jakarta. Kencana.

Icreasing Undergraduate Students' Understanding of Child Development Through Reading and Analysing Novel "Totto Chan"

Fitri Aulia, M. Pd. I, Arina Mufrihah, M.Pd.I
Guidance and Counseling Department, Faculty of Education, Hamzanwadi University
fitriaulia04@gmail.comrina.mufrihah@stkippgrisumenep.ac.id

Abstract

The lack of reading interest among undergraduate students has been becoming a research focus in many universities including at Hamzanwadi University. This situation is one of drawback factors of university alumna, in particular, academic culture as reading activity is getting weakened. Through this satudy, undergraduate students would be guided to read an understand a child development course by reading a novel entitled "Totto Chan". Reading understanding progress would be determined by these following criteria: assimilating, describing, explaining, exemplifying, and concluding. Mixed method is used as research technique, firstly, by observation and group discussion; and secondly, collecting data by non standardized scale and case study. Finally after undertaking research procedures, we could pointed out that: (1) undergraduatue students had different abilities in completing reading, there were students who would be able finishing Totto Chan in 7 days, 10 days, and 30 days. On the one hand, various reading abilities based on the duration of finishing the novel influenced students' understanding. On the other hand, reading faster did not guarantee their understanding toward child development course. Evidently, some students who read the novel dilatory could enhance their critical thinking onto child development course; and (2) the lowest score of undertansing of the course was 31.0and the highest was 48.0 from 19 items. Meanwhile, study case showed that 6 criteria of reading enhancement was sucessfully implemented.

Keywords*: reading skill, critical thingking, child development, novel totto chan*

A. Introduction

According to the Constitution Number 12 Year 2012 about Higher Education, it mentioned that university students are encouraged to be active in developing their potential by undertaking learning, researching scientific facts, and/or mastering, development, and encountering a knowledge branch and/or technology to be a civilized scientist, intellectualist, pratitioner, and/or a professional. The constitution is an important guideline for all universities including Hamzanwadi University. As an institution who educate teacher candidates, Child Development is one of mandatory

courses which is taught in the university. This course will help undergraduate students to be skilled in school students' development.

Child development is a crucial course for students as teacher candidate because it consist materials as: (1) physical and motoric aspect; (2) cognitive aspect; (3) social aspect; (4) emotional aspect; (5) morality aspect; and (6) religious aspect. Among these aspects are influences one another (Ditjen, 2016). To understand all development aspects is needed both of theoretical and practical experience. Even in some cases of handicap, risk of stress and hindarance of self-adjusment are higher for children as a manifestation of self-compensation, caused lack of self-confidence, and over sensitive (Aulia, 2014). There are certain factors which affect children development such as genetic, heredity, temperamental, intellectual, phycical health and nutrition, enviromental aspect, and several experiences from each development stage (Munandar, 1992).

Misconception of undertanding the Child Development course will contribute significant effect in the success of classroom learning especially how teacher candidates will create the positive character on school students as future generations of a nation. Such phenomena as school dropout, delinquency, and violence among adolescences are the obvious evidence of school system failure and misundertanding of child develpment as well. Teachers are not the only factor. Nonetheless, they have a major role in approacing students and support them how to develop good character in school sphere because teacher is a role model for every student.

Commonly, fiction books, for example novel can be used by undergraduate students to find positive values which are can be implemented to develop children's character. Understanding a novel needs reading process and in the process is needed a skill to analyse. By the novel, unddergradute students' reading skill will sharpen again.

Based on observation data, it was known that reading interest of undergraduate students were decreased, authenticated by decrease of a number of university library visitors. Moreover, plagiarism is a serious problem in writing academic article or essay. This proved that undergraduate students have lack of reading habit in the university academic culture. Other factors such as smartphone, social media, and internet are negative globalization reason behind this academic obstacle. Now paper era are replaced by digital era; ironically, undergraduate students are being not interested in reading academic books. A study from Resti (2015) showed that undergraduate students use their smartphone more than 5 hours each day merely for chatting, browsing, and downloading mobile phone application, songs, and games.

Arixs (2006) cited by Andim on Suara Merdeka, edition 24th September 2011 revealed six causes of reading tenuous: (1) learning system which does not support

reading motivation; (2) entertainment places and television programs which replaced reading activity; (3) undeveloped reading culture; (4) the little number of reading facilities such as public library and reading house/ garden; (5) unequal number of book donations between big and smaller cities; and (6) lack of reading support system in higher education (Farida: 2012).

The weak of reading culture consquently influenced the quality of university output. Some problems caused by this phenomenon are: (1) few references used in writing academic articles; (2) the university library does not have range of academic book collections; (3) reading is not a part yet of students' main activity; (4) students are busy with other than academic shedules; and (5) shamefull feeling (Farida, 2012). Apparently, education sphere is a strategic place to develop reading ability and skill (Siswati, 2010) and undergraduate students as the integral part of academic agent has task to read more frequently (Siregar, 1996). In the cognitive aspect, understanding is in the level of C2 after gaining knowledge (C1). Furthermore, criteria of understanding increase comprised assimilating, describing, explaining, exemplifying, and concluding.

University as a learning place for teacher candidate has to create an inovation in the learning process including reading activity because reading is require a good analysis skill. And active learning is already believed as predictor of undergraduate students' success. It was the reason why reading novel Totto Chan would be conducted in this study to flourish students' comprehending regarding Child Development course.

A research outcome undertooook by descriptive survey on 92 undergraduate students resulted that reading fiction books could increase more students' reading motivation than reading academic modules and books (Siswati, 2010). Thus, novel Totto Chan is one of fiction books with viewpoint of primary school children which tells about activities in school. This novel is an inspiring fiction book popular in education field because of its precious applicable values. This novel also has been citing as a reference for many school teachers. The core value that this novel can deliver a more concrete illustration about child development such as personality, social interaction between peers in school, the role of parents in children's education, and how other significant others can support children learning development.

Totto Chan is written by Tetsuko Kuroyanagi became profoundly popular among education practitioners and academicians. We found that at least 3 previous studies which appointed this novel as research focus, there are: (1) *Nilai-nilai pendidikan untuk anak usia madrasah ibtidaiyah (kajian dalam novel Totto Chan: gadis cilik di jendela karya Tetsuko Kuroyanagi)* by Fauziya (2013); (2) *Tokoh totto chan dalam novel Madogiwa No Totto Chan karya Tetsuko Kuroyanagi: tinjauan structural*, a thesis by Putra (2012); and (3) *Pendidikan berbasis kepribadian (studi*

Semiotik pada novel terjemahan totto chan: gadis cilik di Jendela yang berisi mengenai system pendidikan yang diterapkan di Tomoe Gakuen pada masa Pra Perang Dunia II tahun 1941-1945), a final university assignment by Karimawati (2010).

B. Method

This study used mixed method as research method by combining observation, group discussion, non test scale, and case study. Qualitative data collected from observation, group discussion, and case study; meanwhile quantitative data collected from the scale. The procedure was that the research scale arranged after all qualitative data collected and analysed. The use of this procedure belongs to Tshakkori (2010) who ecplicated that mixed method is a set of qualitative and quantitative research approach using together in one or some research processes. Specifically, this study used systematic mixed-method design.

This study was located in Hamzanwadi University with students of Primary School Education as respondent. In the qualitative procedure, key person is selected purposively (Sugiyono, 2013). For quantitative sampling, the total 33 students of the class were the population of the research and all of them selected as the research sample by using population sampling technique (Singarimbun, 1995). Finally, the qualitative data are processed by Miles and Huberman technique and by asessing students' case study on child development; meanwhile quantitative data are worked by statictical procedures.

C. Findings and Discussion

Reading and Analysis Ability Toward Novel Totto Chan

The novel has 280 pages and is in Pdf format, ithad distributed to all respondents before the trial process began. In the first phase, two trials of reading and analysing were implemented. In the first attempt, respondets read by their own technique as well as place and time toread the novel. As a result, there were some respondents who did not finish the novel; moroever, many respondents did not read the novel even though had been given a week to read.

Some causes of the first unsuccessful reading activity were: (1) respondents did not respect to the instruction; (2) respondents did not interested in reading; (3) respondents were finishing other university assignments; (4) some of them were sick; and (5) several respondents did not attend the class when the instruction be held.After the evaluation process, respondents were delivered a motivation through these following strategies: (1) explaining the urgency of novel Totto Chan in understanding Child Development course; (2) stating how the novel is utilized in education sector by

many international education academicians and practitioners; (3) giving easy acces to the novel by proding them the Pdf format; and (4) conducting a discussion session in the classroom whom 5 of students who read the novel as a presenter. In this panel forum, each respondent assigned to deliver the core story inside the novel and conveyed the most impressing stories from each presenter's personal viewpoint.Eventually, the 4th strategy was the most effective approach in increasing respondents' motivation to read the novel.

In the second trial phase, more respodents were motivated to read the novel as the result of the 4th technique of the first reading experiment stage. All respondents were provided 2 weeks to finish reading Totto Chan along with analysing it. To advance this step, repondents had to notify twice every week about their reading progress and accomplishment. In the first two weeks, some respondents completely finished the novel; meanwhile, others were still in the middle of pages but vary. However, ultimately, all of them accomplished the reading of novel. It was the signifant result compared to the first reading stage.

Despite all respondents were be able to read all pages of the novel. It could not be concluded that reading habit and culture improved. Reading ability of undergraduate students was still tenuous. Hence, motivation, support, and system of reading activity had better to continously be maintained in university level by various strategies and approaches.

The Increase of Undergraduate Students' Understanding of the Child Development Course through Novel Totto Chan

1. The Measurement Result:

The first requirement before fulfilling the scale was that undergraduate students had to finish reading as well as anlysed the novel. It was mandatory in order to validate the data would be collected by the scale. Following are six developmental aspects which are included in the scale, also each item represents specific education-related problems:

Table 1. Research Instrument Items

No.	List of Items
1	Physical violence and having uncontrollable behavior
2	Children with lower intellligence capacity should be left the class and can be dropouted from the school
3	Punishment can legally be implemented for children who break the school's discipline

4	Teachers can be pessimistic in guiding children
5	Every child has his/ her personal differences and deserves to be understood
6	Optimistic is the fundamental way to teach children
7	Guiding children based on their own aptitude and interest
8	Understanding that each child has various academic ability and intellectual capacity
9	Be able to understand the development character of children with special needs
10	Agree with the basic value of eduaction that children have to receive the best treatment
11	As a teacher candidate, I am optimistic can be a creative teacher
12	As a teacher candidate, I believe that can undertand the child development

To give a score for each answer on item was referring to 3 alternative choices: 3 for very agree, 2 for agree, and 1 for do not agree. After analysing, known that the 31 was the lowest and 48 for the highest score. In addition, the modus was between 42 and 45. It could be interpreted, the understanding of respondents toward child development were enhanced after reading Totto Chan.

2. Assessment Result of Child Development Case Study Assignment

Respondents divided into 5 groups to undertake a case study about child development. The main topic was about developmental disorder of primary schools students. Through this case study, respondents assigned to observe, deliver, exemplify, explain, and take a conclusion from their field mini-research findings. These were the brief finding of the case study of 5 groups:

Table 2. Description of Child Development Problems

Group	Case Description
1	A child who lives in broken family and broken home victim. The child has a negative social iterraction, has negative self-concept, being passive and is not focus on the learning process, and does not have a proper future plan
2	This group studied about a case of introverted child. The child does not want to socialize with other people, doing school assignment undisciplinary, and is not motivated to the classroom activities. This child also shows a symptom of lower ADHD level

3	Third group revealed a case of primary school child who lives with complete family: his father is an employee and his mother is a pastry seller. He has close bound with his parents and a good relationship with his peers. Moreover, his hobby is making *gasing*. His parents always support him to engange in religious activities such as reciting Quran and study in an Islamic Boarding School. In the future he will be an Islamic missionary and military officer
4	This group observed a child who left class and his parents are separated so that he does not have a good relationship with his father because he is often gotten violence from his father. Consequently, he imitated what his father did in his environment. However, he tends to cry when got a problem and does not have motivation to read Quran
5	A child with learning difficulties was the subject of the 5th group. The child has obstacle in understanding simple concept in math and has physical hindrance on his right hand; he is a left-handed because is difficult to move and write better by her right hand. In addition, the child has a problem to socialize, has low self-confidence, is not good in keeping clean and healthy, and has high temprament due to internal pressure

According to respondents' case study findings, we were be able to assesst how far respondents undertand the child development. We conclude the increase of their understanding in this table:

Table 3. Assessment of Respondents' Understanding Progress

No.	Case Study Report	The Assessment Criteria
1	Description of the subject and object of study in his/her home and school	Describing and explaining
2	Classifying child's condition	Describing and explaining
3	Creating a figure which provides specific informations about child's development in various environment settings	Exemplifying and concluding
4	Description and identification of child'problems (personal, social, academic, and career issues)	Describing and explaining

5	Creating a figure which describes the cause of child's development problems	Exemplifying and concluding
6	Discussion of the case study result	Describing and explaining
7	Conclusion and encouragement	Concluding and recommending

Respondents gained a comprehensive understanding regarding child development after conducting the case study and reading aslo analysing novel Totto Chan was a sufficient preparation before observing developmental child behavior. Reading the novel affected positively and signifantly the case study work. It is evidenced from how respondents deepened and analysed their case study subject and object by comparing and concluding the child's problem from various settings such as family life, interaction in school, and enviromental socialization.

Furthermore, respondents could reveal the personal differences of the case study subject by describing his/ her behavior either in home or school including explicating some problems in each aspect of personal, social, academic, and career, and providing some concrete examples to discuss their case study result. In he final report, respondents also wrote a conclusion to make a clear argument about a child developmental phenomena which was sourched from analysis process.

Rading and analysing novel Totto Chan has a significant incluence on increasing the undergraduate students' comprehending over the Child Development course. Based on observation and interview, we found some factors which affected repondents'understanding: (1) majority of respondents has basic knowledge about child development from previous courses; and (2) nearly all respondents gained practical knowledge by interracting and communicating with children and younger people at their home.

D. Conclusion

This research underlined an important point in the learning process that undergraduate students has lack motivation and interest to read. This is a task for every lecturer in universities to create a condusive system for reading. Smartphone is the hugest influence nowadays because undergraduate students in their leisure time prefers to engenge in smartphone use than reading their own books or go to the university library. Moreover, they use samrtphone in the process of the classroom learning. Thus, it is profoundly needed an inovative learning strategy to create a healthier academic atmosphere in order students can read and enjoy books more. Inspite of reading novel

Totto Chan could be accomplished; however, other alternive learning approaches can be implemented to find the best learning method in universities.

Ultimately, the increase of understanding towards chilf development could be assessed through the research instrument and the case study assignment. The modus of measurement result was between 42 and 45 with 31 as the lowest score and 48 as the highest score. In addition, by undertaking the case study, undergraduate students can enhance their undestanding. Indicators of the enhancement were: case study object and subject description, problem classifications, creating figures along with discussions, and concluding.

References

Aulia, Fitri, *Penyesuaian diri anak luar biasa (Studi Kasus Ade Irawan, Juara Pianis Tunanetra Indonesia),* Jurnal Madrasah FKIP UIN Maulana Malik Ibrahim Malang. Vol.6, No. 7, Januari-Juni 2014.

Ditjen, *Panduan Operasional Penyelenggaraan Bimbingan dan Konseling Sekolah Dasar (SD),*Juni 2016.

Farida, Sasmi, *Faktor-Faktro Penyebab Keengganan Membaca Di Lingkungan Mahasiswa: Studi Kasus.* Call for paper Seminar Nasional Bahasa 2012, Fakultas Bahasa Universitas Widyatama.

Fauziy, A'izza, (2013),*Nilai-Nilai Pendidikan Untuk Anak Usia Madrasah Ibtidaiyah (Kajian Dalam Novel Totto Chan: Gadis Cilik Di Jendela Karya Tetsuko Kuroyanagi),* Universitas Islam Negeri Sunan Kalijaga: Skripsi, tidak diterbitkan.

Karimawati, Fidayanni, (2010), *Pendidikan Berbasis Kepribadian (Studi Semiotik Pada Novel Terjemahan Totto Chan: Gadis Cilik Di Jendela Yang Berisi Mengenai System Pendidikan Yang Diterapkan Di Tomoe Gakuen Pada Masa Pra Perang Dunia II Tahun 1941-1945)* Universitas Sebelas Maret: skripsi, tidak diterbitkan.

Putra, Rhoma Afdal, (2012). *Tokoh Totto Chan Dalam Novel Madogiwa No Totto Chan Karya Tetsuko Kuroyanagi: Tinjauan Structural,* Universitas Andalas: skripsi tidak diterbitkan.

Resti, *Penggunaan Smartphone Di Kalangan Mahasiswa Fakultas Ilmu Social Dan Ilmu Politik Universitas Riau*", JOM Fisip, volume 2, No. 1, Februari 2015.

Sugiyono, (2013), *MetodePenelitianManajemen*, Bandung: Alfabeta

Singarimbun, Masri, (1995), *Metode Penelitian Survei*, Jakarta: PT Pustaka LP3ES,

Siswati, *Minat Membaca Pada Mahasiswa (Studi Deskriptif Pada Mahasiswa Fakultas Psikologi Undip Semarang).* Jurnal Psikologi Undip. Vol. 8, No. 2, Oktober 2010.

Tashakkori, Abbas, (2010), *Mixed Methodology: Mengkombinasikan Pendekatan Kualitatif dan Kuantitatif,* Yogyakarta: Pustaka Pelajar,

The Principle of Civility in the Speech-Act in Trading in Weekly Market In Tebaban—Suralaga

Herman Wijaya
HamzanwadiUniversity, Indonesia
Email wijaya.herman33@yahoo.com

Abstract

Communications will work well and smoothly if the people in it have the same understanding as what was communicated at the time. Describe the application of the principle of decency in the act of speech sale transaction in the market is the purpose of this study, because many people who do not understand each other the meaning of the language they have, such as research on the principle of modesty theory that exists between the seller and buyer in the act of speech on sale Weekly Market Tebaban. Research on the study of the principle of decency in the speech acts of sale and purchase transactions in Weekly Market Tebabanusing descriptive qualitative research method. Technique of collecting data using observation / observation, capability / interview, and tapping / recording technique, so that data from conversation between researcher with seller in Weekly Market Tebaban is more representative.Based on the research that has been done, the researcher found that in applying the principle of politeness more violated by the prospective buyer in speaking in the transaction. A reasonable narrative will take shape if the speaker and the other person are equally aware that there are rules governing his actions. The theory of the principle of modesty with the various maxims gives guidance to the companion how to speak politely.

Keywords: civility principle, speech act

A. Introduction

Speaking is a social activity. Like other social activities, new language activities come into being when humans are involved. In speaking, the speaker and the speech partner are equally aware that there are rules governing his actions, the use of his language, and his interpretations of the actions and utterances of his opponents. Every participant of speech acts is responsible for the actions and deviations against the linguistic rules in interaction. In everyday life, people can never be separated from the communication process, both verbal and nonverbal. Communication is done to facilitate human completion of their work.In any event, communication will take place if the people in it have the same perception or meaning of a thing communicated. "Language as a simple constraint can be said as a free symbol vowel system used by members of the community to communicate or connect." (Aslinda and Syafyahya,

2010: 92). Communication process is done both verbally and nonverbally. In verbal communication, speech is the most important thing when the communication process occurs. This is because speech is a socio-cultural practice that not only has a literal meaning, but also a nonliteral meaning.One example of the process of verbal communication is in the sale and purchase transactions between sellers and buyers. As we all know that in a shopping mall which is in this case in Tebaban Weekly Market, there are various types of goods sold by every person or seller. Like, sellers of kitchen utensils, clothes, fruit, birds, sneck, glasses, and vegetable sellers. The most prominent conversation in the sale and purchase transactions in the market Market Weekly This Tebaban is a conversation that occurs between the seller and the buyer of vegetables.In buying and selling transactions, good communication will result in good deals as well. Therefore, it takes the same understanding of the meaning of the speech either from the seller or from the buyer itself. In order to understand the literal and nonliteral meanings in the sale and purchase transactions, a functional, explicit, and contextual explanation is required that is unaffordable by formal linguistic explanations. One way to understand the meaning of the speech is to understand the meaning of the conversation or the speech itself.

Constraints of the situation and condition of the said partner in the event of interaction between the seller and the buyer can also affect the difference of intentions. It is necessary to have an implicatur study in understanding the meaning of speech in a transaction like this, ie communication between traders and buyers to prevent errors of intent from a speech. The example of the principle of modesty in the catapult by the buyer to the seller "*inaqaji terong pe?,ta mbli arak ahperapat* (mother how much eggplant price ?, I want to buy a quarter)", heard the words of buyers who use the word "ta (*ita:* not a name people) ", then with the principle and agreement of speech there the seller reply with a language equivalent*"mbe mele pe denda?, pe pe pilen ka ia, 2500 ahperapat"* (which wants it ?, please select 2500 quarter).(which one wants ?, please select 2500 a quarter). From the conversation we can know that the speaker with the said partner has the principle of equal courtesy so that in the sale and purchase transactions there are no obstacles because both of them already do and say what should be spoken as speakers (buyers) and as a partner said (the seller). Using the word "pe" (you) in sasak means showing modesty in social interaction.

B. Method

This research uses descriptive with qualitative approach. The data collected in this study form a description of the conversation between researchers and traders.

Descriptive, because the data collected in the form of words, images, and not the numbers. Moleong in Muhammad (2002: 19), explains that qualitative research method is a research method that produces descriptive data in the form of written words, or verbal from the people and behavior that can be observed. Descriptive writing is the type of writing based on the discussion.

The researcher attempts to describe and describe the objective descriptive neon implicatures of conversations of traders and buyers of vegetables and other goods in Tebaban Weekly Market.The research place that the researcher choose is PasarMingguTebabanSuralaga District because Tebaban Weekly Market is the nearest market from the location of the researcher, and the researchers also understand the language used in that place.

Data collection techniques that researchers use in this study are observation / observation, proficient / interview, tapping / record. The data validity, the researcher using data triangulation techniques. Sugiyono (2011: 241) suggests "the value of data collection techniques with triangulation is to know the data obtained convergent (incomplete), inconsistent or contradiction. "Triangulation of data is used to strengthen the data for the data to be valid by way of previously obtained data are checked and reconciled with a re-observation to informants who have been determined, to check whether the data has been given to the researchers are temporary or last on every sale and purchase transactions. Data analysis technique in this research is done through the steps of data transcription, data reduction, and data interpretation.

C. Findings and Discussion

Communication is the main thing that people do every day. In communicating, it needs understanding or cooperation between speakers with spoken partners who also need a name of decency. The goal is for speakers and partners said equally feel comfortable and feel respected when communicating, in this case that is when the sale and purchase of vegetables in the market. As we often hear that the language used by these traders is very diverse, it is because they do not come from one village but from different villages that have to adapt and the language they have with the language where it is located. As the researchers have pointed out earlier that the majority of the villagers of Tebaban strongly uphold the modesty in speaking.For a seller who usually speaks rough language at home, when he comes to the market for selling he has to abandon the harsh language and uphold the modesty in the language so that the people who shop

for them feel respected, meaning they do not feel underestimated or abused with the language they use in the hope of smooth transactions between the seller and the buyer.

In the collection of data, informants who became the object of study not only sellers who use language of Tebaban, but also examine the language outside dialect of Tebaban(Ngeto-Ngete), given the sellers who come there various areas, there from Sakra, Masbagik, Terara, and others etc. Unlike buyers, the average buyer / consumer who is shopping at the Tebaban weekly market only comes from Suralaga sub-district using Suralagaor SasakNgeto-Ngete dialect.

Based on the statement, the researcher tried to find information to some informants to know how the application of propriety principles that exist between the seller and the buyer. For that researchers asked a few questions to provoke the recognition of the informants, such as *"... yak pe merasa tersinggung ke misal na na ngeto pembeli no, lain bae ekspresi wajah na bareng bahasa na kurang sopan?*of the questions informants provide information that is the response to the language used by the buyer at the time of bidding or buy the stuffs with answer"*... yak na kumbe-kumbe angenku, wah biasa*(my feeling is okay, it's common).Referring to the communication that occurs between researchers with informants can be concluded that the informant is not concerned about the utterances uttered by prospective buyers. In fact, it is not unusual for you to hear the unfavorable words. Traders always positioned himself to always respond to buyers who are less polite language to be willing to dig their goods. From the statement, the informant has implemented the principle of decency which refers to the maxim of wisdom in which the trader puts forward the wisdom in communication and respects the buyer and gives freedom to the prospective buyer to communicate, meaning the trader does not limit the words of the prospective buyer and should the prospective buyer also understand what desired by the merchant, not just thinking about or prioritizing his own desires.

Based on the above analysis, the researchers tried to dig further information to the informants. The informant who researchers interviewed the seller of Sakra which has a different dialect with the buyer. The ongoing conversation is *"...ngumbetanggepan de sijeripedaganglamune arak sinawarbarangdagangan de sambilnelampaq?* (how would a mother respond as a merchant if there were a prospective buyer bidding on merchandise by the way?), with a sense of inferiority the informer gave the confession with the saying "*...aroowah, ndek kembe-kembe lamun tiang jak, wah biase pembeli nawar sambil ne lampak*... (well, it's okay if in my usual buyers offer while walking ...). From the informant's acknowledgment it is clear that the informant tried to receive treatment from the prospective buyer although in fact he

felt offended by the actions done by the prospective buyer that bid merchandise by walking, as if the prospective buyer does not have customs, but the informant tried to receive it considering he is a merchant who desperately needs the presence of a buyer. Customers do not want any conflict with consumers, especially where they sell is where the consumer village itself, so that traders always respect and succumb to any conflict with consumers.

Still at the informant's position from Sakra. Furthermore, researchers continue to seek information to the informant with the question "*...endek-ndek de doang side jakne, endekne kembe-kembe brembe maksud de?* (is it okay this mother, it's okay why?), informant also give answer that is *timak ape keuni, endeknemeledengan, coba ape jak teunijok pembeli?,, ,,,* (well,I have to say what, people do not want, whatI have to say?). Based on the informant's acknowledgment that he was trying to succumb from the buyer's treatment so as not to inflict personal resentment. Considering consumers are expected to be willing to buy goods. Conversation continues*endekke de merese tersinggung ato ngembe?,karnakan ada tato kebiiasaante no endekne cerengeno ntan dengan? (does not mothers feel unloved or what? Because our customs and habits are not like that way people ...?),* informants also answered with patience"*...endekkekembe-kembeangkakakujakne, munteempoh ne terusneendekmele jak,,terus ape jakteuni?(so it's okay if in me, if we call him then he does not want, we want to say what?).*From the recognition of informants can be concluded that the informant has been implementing the principle of decency that refers to the maxim of wisdom, where the informant is trying to accept the treatment of prospective buyers, in this case the merchant provides benefits to prospective buyers when communicating. Things like this happen because there is no sense of empathy in the prospective buyer. Buyers just simply pretend to ask the price of the goods or may be willing to compare prices with other sellers.

Referring to some information or sellers coming from Suralaga that researchers get in the principle of decency, researchers found some recognition from informants, one of them is*"... inaq, kumbe ke cara pe mun na arak pembeli rukat ngena "tono jak mudak na, tene jak mahal ia".*The informant answers *"ado mun na mudaan tono jak, tono ka pe mbeli, lagu biasa na dengan rukat ngeto karena tono yak na muan mbli yak ampok na kte mbli atau nawar no"*(if it is cheaper there, let's buy there I say, because later he cannot there so he came back here ..), from the recognition of the informant can be concluded that the informant is not too much comment from words spoken by the prospective buyer to avoid offense on him, that is why the seller ordered buyers to return to buy goods in a cheap place according to the consumer so as not to happen a lot of comments from buyers, because according to the seller if too served in the process

of bargaining there will be conflict, that is why the seller is not too much comment. To clarify the answer from the informant, the researcher again asked the question to convince the opinion of the informant"*.... laguk yak pe tersinggung ke dengan ngkat-ngkat pembeli marak no-no*?*"*(will not mothers be offended as a merchant if he is like that?), with a brief informant responding *" aok kah tono ka langan pe mbeli"* (just buy it there, I say). Based on the conversation, the researcher can conclude that the informant is not much moment when conducting the transaction, and from the acknowledgment the informant has run the principle of decency which refers to the maxim of generosity, where the informant asks the prospective buyer with short words, because maybe by accident the buyer offends the informant with the words he speaks, for that is the informant only answer just as simple.

Furthermore, the researcher tries to ask the informant/seller who comes from Masbagik using Indonesian language "how do I respond to the attitude of the buyer when making a transaction or bargain the price of merchandise lower or not in accordance with the price determined?", From the question the informant gave the answer namely "I the price." Based on the acknowledgment informant to the researcher, it can be concluded that the informant has done the principle of decency which refers to maxim acceptance, where the informant try to minimize its own profit so that his goods can be quickly sold and not to take home. Given the seller very much and the goods are also difficult because the other sellers also sell the same goods, so the seller only a little profit does not match the target price of goods.

Furthermore, researchers are looking for information by asking some questions, such as "how do you feel as a merchant if prospective buyers only bid merchandise but not so to buy it?", Based on the question the informant answered "no nothing, that's common", from the informant's acknowledgment can be concluded that the informant is accustomed to get such treatment from the prospective buyer but he does not question the treatment, so the informant has adopted the principle of decency which refers to the maxim of wisdom, where the informant tries to give benefit to the said partner or prospective buyers to make potential buyers feel valued by the merchant, but often prospective buyers are not aware of it.

Based on the above-mentioned informant's acknowledgment, the researcher keeps digging the information to fulfill the data that the researcher hopes to be, as one of the conversations that took place between the researcher and the informant is how the mother responds as a merchant if the prospective buyer offers the merchandise by walking ", with short informant answer it with "I call him to come closer and talk well, but still the buyer's way without looking back".

Based on the informant's acknowledgment, he did not expect the buyers like that, so the informant was somewhat indifferent and said only the word. From the information given by the informant, the researcher asks further question that is by using Sasaklanguage "for example he heard, the wine to the experience of the seller? (suppose he heard, never had his experience back to mother?), based on the question, the informant gave the answer in the form of "*pe kete ka, girang pe nawa-nawar sambil lekak*) (let's stop, why bargains while walking, I say).From the answers the informants,the researchers can draw the conclusion that when trading is not too spoiling or serve one prospective buyer but trying not to pay too much attention to it so that prospective buyers feel that he also needs a trader, not just merchants who need buyers. Based on the information provided by informants, the researcher increasingly want to know how this informant is responding to prospective buyer when at the time of transactions buying and selling turns buyers do not so buy the goods., As for the question is *"... laguk mun na urung dengan belanja, kumbe tanggapan pe?*but later will not be he shopping, how the mother's response? "), from the question, the informant answered it with pessimistic "*yak na kumbe-kumbe, kan jak hak dengan...*"(it's okay, leave it right people ...). With a sense of inferiority of informants trying to receive treatment from prospective buyers considering his position is merely a merchant. Researchers also ask further questions to further strengthen the opinion of the informant with the question *" mule ngeto pendait ta mun ta jari pedagang setiap hari ke?* (it's like that faced every day huh?). From the question the informant also ran the answer "*aok, mule ia wah mun ta jari pedaggang jak"*(yes, that's how we as a trader).

Referring to the conversations that occur between researchers with the above informants can researchers conclude that, should as a trader do not quickly feel offended or angry with any treatment expressed by prospective buyers, because if traders quickly angered rarely people who want to spend on it, for it, be clever lifting up people in communication. As for the conversation, the informant has adopted the principle of decency which refers to the maxim of acceptance, where the informant tries to minimize his role as a merchant, meaning that the informant is not concerned with his ego but more attention to the prospective buyer, because in this case the informant is aware of his role of being a trader to fulfill the necessities of life itself and his family.

Further research on "what kind of buyer's speech that can offend mother's feeling as a trader?", From that question informna answered *"ngetengkatna" tonojakmauqita 5 ne ne 1500 "aoktonokapembeli*" (there we get 5 in 1,500 for example ,, just buy there, I say). Based on the informant's acknowledgment it is clear that he is

unhappy if one compares his merchandise with the goods of others, but thanks to his experience during trade, he tries to accept the words given to him, for that informant has been running the principle of decency that refers to maxim of wisdom, in which the informant sought to receive the words of a potential buyer who could offend him as a merchant.

The next conversation in the next study is "*jari na ketimbang da rugi, araan ke pe antik barang pe ulek dakak na masih penok?* (so from the mother of loss, better the goods are brought home even though there are still many. The informants also answer it "*araan so, ahparo jak kadang-kadang lamun na sepi lalo pembeli jak jual ku ia yang penting na laku"* (preferably like that, or sometimes I was too quiet that important behavior, I sell.). Based on the informant's answer is clearly seen that he tried to minimize his profits as a trader so that goods can be sold out, because the longer the item is not bought by the buyer it will make the goods become not good because considering the goods of the new type and model is sophisticated and defeated the goods that have been long, so sold at a cheap price despite a slight loss.The researcher continues the question that is "jual modal wah tuka juluk?" (Sell capital first), with a sense of inferiority informant answer it "*ngeto wah juluk, lagu mun ta jual sayur jak harus ne laku, mun yak jak loas ia* (can be spelled so, but if the sale of vegetables must be sold, if not will be damaged) from the informant's acknowledgment that he really needs the meaning of the prospective buyer so that the words spoken by the informant can be taken into consideration when doing the transaction before finding an agreement. But sometimes buyers do not understand these words so that buyers do not buy goods sold the goods, especially if the traders sell vegetables, their hope that vegetables can be sold without any residual, although sold cheap.

Furthermore, researchers get information on the principle of decency that occurs between the sellers and buyers of vegetables in the Market Weekly Tebaban, while one of the conversation is "*ape ngkat dengan (pembeli) mbeng epe tersinggung jari pedagang?"*(What words are often spoken people who can to offend the mother's feeling as a merchant?), the informant responded "*girang na bandingang harga barang ta kenca barang dengan"*(often compare my stuff with the goods person), based on the informant's acknowledgment, it is very clear that he does not like if there are people to compare- compare the merchandise with other people's merchandise. This is very disturbing to the sellers' thoughts and feelings.Researchers continue to provoke recognition from the informant, while the question is "*banding-bandingan kumbe maksud pe?* (how do you mean?), from the question the informant answered it "*girang na nyebut-nyebut ngena "tono jak beruk mudaan aji na, tene jak ndrak bau ta*

regak"marak-marak no-no wah.. (often he said "it was cheaper here, but now here is not negotiable", such a thing the researcher noticed the confessions of the informant, he was very, very depressed with the words of the prospective buyer who compares himself with others, so informants slightly ignore the words of the prospective buyer.

Based on the informant's acknowledgment, the researcher asked the follow-up question "*terus kumbe tanggapan pe mun na rukat ngeto no?* (how do you respond to that person?), the informant replied "*apa ka tuka, tdoak doang, aran jak ta meta rizki"*.. (well…what to say, I just quietly, I just seek for fortune). Based on that answer, it is clear that the informant is trying to humble himself as a person who desperately needs the presence of a buyer who can bring grace to himself. To strengthen the recognition of the informant, the researcher asked a follow-up question "*yak pe suru ia mbeli langan lain pin langan paran na mudaan no?*(donot you tell her to buy in the place that she says cheaper?), from the researcher's question, the informant answered it "*yak, tdok doang, belagak cuek timak jak sebenarnya sakit angen ta.* (no, I was silent, just indifferent although in fact my heart hurts).Based on the conversation that occurs the informant tries to harbor the wishes of his heart that could be sick by the words of the prospective buyers so that there is no offense and misunderstanding between them. Recognition can also be spoken from the informant because it is a lot of prospective buyers who ignore its existence as a trader. For that researchers can conclude that the informant is implementing the principle of modesty that refers to the maxim of humility, where the informant try to accept the comparisons made by the prospective buyer because the informant is aware that each individual has their own deficiencies and advantages.

The last conversation in extracting information about this principle of cooperation is *kumbe perasaan pe mun na arak dengan belanja langgar prinsip kesopanan berbahasa?* (how you feel when someone violates the principle of modesty in the language?), the informant answered "*pasti ta kecewa"*(of course I'm disappointed), from the answer informant who said he was disappointed if anyone violates the principle of language, then even though we are in the market we should keep the language we use so that there is no offense between the opponent said (traders) or partners said (prospective buyers).Based on the recognition, researchers continue to dig information to the informant "*kumbe cara pe respon dengan ngeto no?* (how do you respond to something like that?), with the confidence of the informant replied "*tergantung dengan no, kadang-kadang dengan na ngeto no, peringatinku ia agar yak na singgung perasaan pedangng lain na.* (depending on the person's appearance, sometimes if the person is like that, so I warn her not to be that way, which can offend

other merchants). Based on the informant answer, it is clearly visible that humanity's sense remains so that in this case the informant tries to commemorate each other if there is wrong-wrong word or wrong word so that later no mistake language when communicating with others.

Referring to the conversation that occurred between the researchers and the informants above, it can be the researcher that the community should be commemorating each other as a person who cares about each other, as happened between the informants that she tried to commemorate the prospective buyers that in communicating should be arranged or adjusted language with whom and where he communicates. For that informant is running the principle of decency that refers to the maxim of modesty of mercy, where the informant realizes that we live in different environments and of course with different languages and cultures also, for that informant trying to commemorate the said partners (prospective buyers) so that later when dealing with others, partners said proficiency can adjust the language used.

D. Conclusions and Suggestions

After analyzing the principles of cooperation and courtesy that occur between the sellers and buyers of vegetables in Weekly MarketTebaban the researcher can draw the conclusion that the principle of decency can not only happen to the seller and buyer only but the decency should be embedded in a person. In everyday life when the passing of symbols or communication between two or more parties occurs because theseimpliersare the most important pragmatic branch for us to know the implied meaning of a speech. Maximize the relevance and cooperation principle between speaker and speech partner is needed by both parties, as well as both speakers and partners said to contribute relevant to the problem.Therefore, both speakers and speech partners are required to always uphold the principle of cooperation and the principle of decency so that perpetrators said at that time still understand each other and understand the meaning behind the speech-speech itself when communicating/interacting, both speakers and partners often say using few words and doing irregularities in acting speech, so it cannot be separated from the two principles that already exist that is the principle of cooperation and the principle of decency.

Of the four maxims available, namely the maxim of quantity, the maxim of quality, the maxim of relevance, and the maxim of implementation incorporated in the principle of cooperation. We also cannot be separated by the principles of modesty namely maxim of wisdom, maxim acceptance, maxim of mercy, maxim of humility,

maxim of suitability, and maxim of inferences. As in this research that is about the principle of cooperation and politeness in the act of speech sale transaction in Weekly Market ofTebaban,Suralaga District.

References

Aslinda & Syafyahya, Leni. 2010. *Pengantar Sosiolinguistik.* Bandung: RefikaAditama.

Chaer, Abdul & Agustina, Leoni. 2010. *Sosiolinguistik Perkenalan Awal.* Jakarta: RinekaCipta.

Chaer, abdul. 2010. *Kesantunan Berbahasa*. Jakarta: RinekaCipta.

Louis, Cummings. 2007. *Pragmatik Sebuah Perspektif Multidisipliner.* Yogyaarta: PustakaPelajar.

Muhammad. 2002.*Paradigma Kualitatif Penelitian Bahasa.* Yogyakarta: Liebe Book Press.

Sugiyono. 2011. *Metode Penelitian Kuantitatif Kualitatifdan R&D.* Bandung: Alfabeta.

Sumarsono. 2010. *Pragmatik.* Singaraja: Universitas PendidikanGanesa.

Pranowo. 2009. *Berbahasa Santun.* Yogyakarta: PustakaBelajar.

Wijana, I Dewa Putu. 1996. Dasar-Dasar Pragmatik. Yogyakarta: ANDI.

Yule, George. 2006. *Pragmatik*. Yogyakarta: PustakaBelajar.

Islamic Ethic-Based Educational Profession Material toward the Students' Profession Responsibility Improvement of the Early-Child Education Study Program of Hamzanwadi University

M. Deni Siregar
Hamzanwadi University, Indonesia
muhammaddenisiregar@gmail.com

Abstract

This research is purposed to find out the students' responsibility to their profession as a teacher who owns Islamic ethic through learning Islamic Ethic-BasedEducational Profession Class. This research is phenomenological research which is a philosophical thinking of a research object. The data are collected using observation, interview, and documentation. The data analysis is done descriptive qualitatively. The respondents are the students of the Early-Child Education Study Program (PGPAUD) taking Educational Profession Class: IIA and IIB. The result of the analysis shows that the students are loyal to their profession as teachers and are ready to apply and share their knowledge by showing their activeness and Islamic attitude in line with their religion. It can be seen from the way they dress or clothe like wearing syar'i veil, and they always say greeting and smile. This reminds the students about a profession; anywhere they are, teachers must show the essence of teachers in case of speak, faith, and morals.

Keywords*: Islamic ethic-basedEducational Profession, responsibility to profession*

A. Introduction

Teachers are the noblest persons in this world because they can produce valuable and useful generations here and the hereafter. A great teacher is a teacher who can focus on values to be transferred including religious value, cultural value, science and technology, and skills. These values must be transferred to protect and develop good cultures, and change bad cultures at schools and in society.

Education is an important part of human life which distinguish human from other beings. Teachers play very important role in the development of a nation. Teachers create ideal young generations for the development of a nation. A teacher is a pillar to achieve the aim of education issued in Law No. 20 in 2003 about national education system. This law states that education is a conscious planned effort to create instructional process in order students actively develop their self-potency to have

spiritual religious supremacy, self-control, good personality, quotient, good moral, and skills they, society, and nation need. To achieve these goals, teachers as change agent have responsibility for improvement.

The most recent issue is the low quality of teachers. This signs how urgent effort for improvement is. In PGPAUD study program of Hamzanwadi University, there are many subjects. Some are Education Science, Educational Profession, Curriculum Instruction, and many more about instructions and education for early child. However, the basic subject to be learnt by the students—in the researcher's opinion—is the essence of educational profession and how to have Islamic-based profession ethic. Islamic ethic is very important because it deals directly with the students' belief and character which is in line with the vision of Hamzanwadi University. The vision is to be globally competitive and possessing Islamic ethic in order to produce competitive human resource who honor the Islamic ethic anywhere they are.

The problem in the instructional process is the monotonous teaching method and discussion which is not based on Islamic ethic; this causes students only receive knowledge but do not deeply feel the energy of the knowledge. The energy here means that the students should empower all the potency in applying the Islamic ethic in line with their profession as early child teachers. Teachers who possess Islamic ethic must be loved, respected, and obeyed by their students because teachers are the parents when students are at schools. It will be difficult for students to implement their knowledge if they do not possess the Islamic ethic. A teacher is a component in a teaching and learning process who plays role to produce human resources who are competent in national development (Sardiman, 2001:123).

To solve all the problems, the researcher –the lecturer of Educational Profession class—applies various methods to match good characters taught in Islam. This is purposed to motivate students to be active, creative, critical, and faithful to their profession in religious ethics. Thus, the problem proposed in this research is the students' awareness of Educational Profession class based on the religion and the vision of Hamzanwadi University.

Educational Profession

A profession is a vacancy based on a certain educational skill or vocational training. Profession is an open statement or promise. Profession contains a devotion, not a self-benefit; it is for a submission. A devotion of professionals refer to giving priority to society to self-interest. Thus, it can be concluded that profession is a vacancy demanding skills of the doer, and it needs training and mastery of a specific knowledge.

According to Law No. 14 Year 2005 about teacher and lecturer, profession is a vacancy or activity done that needs standard skill or education and becomes an earning.

Abdul Kadir Muhammad (1996:58) states that profession is a steady vacancy in a ceratin field based on a certain skill done in responsible by the purpose of earning payment. Teacher as a profession, National Education Association (NEA) in UdinSyaefudinSa'ud (2009:16) suggest that the requirement of being a teacher are: 1) occupation deals with intellectual activities, 2) occupation deals with a part of specific field, 3) occupation needs preparation of previous profession, 4) occupation needs continuous training in between the occupation , 5) occupation promises life carrier and permanent members, 6) occupation decides its own standard, 7) occupation puts services in priority than self-interest, 8) occupation has a strong professional organization.

Education is an important part of life that differentiate human from other livings. The duty of teacher as profession educate, teach, and train. Educate means continuing and developing life values. Teach means continuing and developing knowledge and technology. Train means developing students' skills. Teachers' duty in humanism at school must make them as second parents. They must be able to attract sympathy to be an idol of their students (Uzer Usman, 2011:34). This result then creates professions which characterize attitudes. Education result cannot be seen instantly. Education is an integrated activity among thought, feel, and work in the development of students' logic. Instructional process is a precious moment when a lecturer teaches his/her students. The presence of teacher is very influential in class management and instructional process. Lecturers' ability to create conducive class is needed to motivate students to participate and learn. There are some reasons why teachers must be professional: 1) teachers are liable to produce qualified religious, and knowledgeable human resources; 2) teachers are liable to the life of a nation. Teachers are to produce leaders for tomorrow—student today, leader tomorrow; 3) teachers are liable for the cultures and civilization of a generation—change of attitude and behavior (Iskandar, 2009:34). Learning community in a classroom must be good. The point of educating is the formation of students' personality, and the point of teaching is mastery of knowledge and certain skills.

Islamic Ethic

Ethics comes from ancient Greek. The Greek word ethos in singular form has many meanings: ordinary residence, pasture, enclosure; customs, customs; character, character; feelings, attitudes, ways of thinking. Thus, ethics is the moral values and

norms that hold a grip for a person or group in regulating his behavior. In the Dictionary of Sociology and Related Sciences it is argued that value is a trustworthiness and an object to satisfy human beings. Thus, the value is essentially the nature or quality attached to an object, the value itself contained ideals, hopes, desires and imperatives.According to the high, the values can be grouped in four levels: a) The values of pleasure. In this stage there is a row of unpleasant and uncomfortable values that cause people to enjoy or suffer discomfort. b) Values of life. In these levels there are important values for life such as health, physical fitness, and general well-being. c) Psychological values. In this level there are psychological values that are totally independent of the physical and environmental circumstances. For example the value of beauty, truth and environment. d) Spiritual values.In this level there is a value modality of the sacred and unholy. For example personal values. There are four kinds of spiritual values, namely: 1) The value of truth that comes from reason (ratio, mind, creative force) of humans. 2) The value of beauty or aesthetic value, which comes from human feelings. 3) The value of goodness or moral value, which comes from the element of human will. 4) Religious value, which is the highest and absolute spiritual value.

This value comes from human belief or belief. Values and norms are always related to morals and ethics. The moral term contains the integrity and dignity of the human person. Moral meaning contained in a person's personality is reflected in his attitude and behavior. So the norm as a guide attitude and human behavior. Between norms and ethics have a very close relationship that is ethics as a science that discusses the principles of morality.

Ethics has a role or function such as: 1) with ethics a person or group can put forward an assessment of human behavior. 2) become a control tool or be a beacon for someone or group in doing an action or activity as a student. 3) Ethics can give prospects to overcome the moral difficulties that we face today. 4) Ethics can be a fundamental principle for students in running their student activities. 5) Ethics be a guide in order to be polite, polite, and with our ethics can be stamped as a good person in society.

Students are perpetrators in the movement of renewal or subject that will become the next generation of nation and build nation and homeland in a better direction who are required to have ethics. Ethics for students can be a tool of control in performing an action. Ethics can be a picture for students in making a decision or doing something good or bad.Therefore, the meaning of ethics should be better understood and applied in the environment of students who in fact are not aware and do not know

the meaning of ethics and the role of ethics itself. As a result, students who are not really having good mannersometimes are not polite or courteous to the lecturers. They in some cases prefer to live freely, and even they do not keep proper behavior.If students still do not realize how important ethics in the formation of the characters as the successor of the nation and state, will the nation of Indonesia beled by good manner or ethicalgenerations? How Indonesia would be if it is built by fraud disgraceful souls?

Ethics is the science of what is good and what is bad and about moral rights and duties (characters); a set of principles or values pertaining to morality; the value of true or false values held by a class or society. Ethics is more concerned on the basic principles of justification in the relationships of human behavior. The role of ethics for students' activity is the basis in doing activities that still refer to the values and norms, so that all our actions and behavior can be accepted by the community.An educator must decorate himself with a noble character. In addition he must also be simple and sincere. Therefore, for a teacher must have ethics and requirements that match the level of the layers of people who are studying it. In this case, Al-Ghazali gives certain restrictions on teacher ethics as cited by AbudinNata (2010: 98). Those are: a)Be gentle and affectionate to the students.In this connection, Al-Ghazali rates that a teacher compared to the parents of children, then the teacher is more important than the parents. The parents play a role to the child's education in this temporary world, while the teacher becomes the cause for the existence of eternal life in the hereafter. This is in accordance with the words of the Prophet *Sollallohu 'Alaihiwasallam*: "I am really to you is like a parent to his son". b) Teacher have the duty to follow the prophet as the guidance.Al-Ghazali explained that a teacher do not ask for rewards of his teaching assignment. This is so because it follows what God and His Apostles are teaching people without asking for rewards, without asking for thanks, only for God. Therefore, a teacher must carry out his teaching duties as grace and compassion to those in need or request without a desire for a reward. c) Do not leave teachers' advice.Teachers are expected to warn their students that the purpose of seeking knowledge is to get closer to God, not leadership, splendor and race. They must also really appear as a counselor, counselor of the students when the students need it. For that it is in the effort and given awareness to all students so that they do not leave whatever given and taught by a teacher to his student. d) Instill things smooth.In this case, teachersare obliged to prevent his students from bad morality by avoiding him wherever possible. A teacher,in giving instruction, should use gentle and subtle ways in order that what is conveyed can be absorbed and applied in everyday life. For that, Al-Ghazali calls for the correct way of teaching, such as how to repeat not explain, affection not degrading, because it will lead to the clogging of potential children and cause the emergence of boredom and

encourage the memory. Thus, teaching requires special skills. e) To keep in mind, the level of the minds of the children are different, so speak with them according to the level of reason.In this case, Al-Ghazali saw the attitude of mutual humiliation and denouncing other teachers in front of children is a part that must be avoided and eluded by a teacher. In addition, teachers also, in conducting the teaching and learning process, should adjust to the development and phasing of psychology and soul. This is so that when delivering the subject matter, the child does not feel not too heavy and burdened. f) Do not cause hate in students.This task gives students an understanding not to hate other branches of science, but open the way for them to learn the branch of science which means the student is not too fanatical. It can also be implanted and given the awareness that all science comes from Alloh Subhanahu Wa Taala and when we study one branch of any science, we have learned the true nature of Alloh Subhanahu Wa Taala. g) Teachers should work with students in discussing and explaining.In conveying a science, teachers should not mention behind all this detail because it removes his pleasure, confuses his heart and suspects the teacher. This is called stingy (MuahammadZuhri in Hamzah Ya'kub, 1990: 171). This is based on the idea that self-study has a more complete understanding and intelligence and is able to express what is explained or come to him. Al-Ghazali said that it is possible for a student to be given the intelligence and perfection of reason by Alloh Subhanahu WaTaala so that he is very intelligent and brilliant and more fortunate. h) Teachers must practice their knowledge.In this case, the teacher is prohibited to deny the word because the science is obtained with a view of the heart, while experience is obtained with the eye. God speaks in *QS. Al-Baqarah* verse 44 which means "do you tell people to do good while you forget yourself" (Ministry of Religious Affairs, 992: 16).

This is what *insyaAllah* produce qualified education in order to produce human resources that support the nation development in various fields.

B. Method

The method used in this study is phenomenology which is a philosophical thinking order of the object under a study (Endraswara, 2003: 38). In literary research, phenomenology does not encourage purely subjective involvement, but there is an attempt to enter literary texts according to the consciousness of the researcher. The researcher's authority as a giver of meaning has an important role in conducting the research. This then requires the disclosure of a symptom based on the explanation and understanding of the phenomenon. Based on the basis of thought with the basic philosophy in phenomenology, the researchers drafted this study by using descriptive method in qualitative form.

According to Moleong (2010: 6) qualitative research is research that intends to understand the phenomenon of what is experienced by research subjects such as behavior, perception, motivation, action, etc .; holistically, and by way of descriptions in the form of words and languages, in a particular context that is natural and by utilizing various natural methods. Qualitative research is used to describe the social phenomena contained in the subject of this study, which discusses the professionalism and ethics in alleviating the problems in PG-PAUD students.

The subjects of this study are lecturers related to the Court profession of education and Islamic ethics in improving the responsibilities of the profession is the object of research analysis to be discussed in the results of research and discussion. Data source in this research are Lecturer and academic advisors and achievement card (*KHS*) document of PG-PAUD student. The technique used in data collection research is indirect technique.

This technique is used because the researcher did research by using documents, namely the state of students through achievement (KHS), the academic advisor' notes and lecturers of Educational Profession class. The data collection tool used is the researcher himself as a key instrument. The researcherwas the planner, implementer of data collector, data analysis, and eventually become a reporter of the results of the research undertaken. The data that has been collected will go through the process of testing the validity of the data. Researchers use several techniques in testing the validity of these data: observational persistence, and triangulation.

C. Findings and Discussion

The result of this research reveals that the subject of Profession of Education (Educational Profession) which is designed in Islamic ethics improves the morality of the students. Students are able to become teacher candidates who bring the value of Islam, where in the process of learning the subject of teaching profession with the basis of Islamic ethics, PG-PAUD students apply a lot of Islamic ethics in lecturing process. For example, they wear proper clothes covering their whole body, they utter polite words, and they are active in class discussion. Greetings and smiles become a habit that allow students socialize each other about the importance of ethics in their profession as a teacher especially in PAUD institutions that require people who deeply understand children.

Education Foundation Hamzanwadi*Darunnahdlatain NW*Pancor has one of several universities that is Hamzanwadi University which focuses on Islamic culture.

All students are equipped with the science of religion and ke-NW-an (knowledge of *NahdlatulWathan*) so that students become educators who have a good quality of profession in terms of physical and spiritual, because when the teacher became the choice of profession then all attitudes and deeds to be examples from bottom to top and be a model for both the students and the surrounding community, whether or not the teacher's role is important.In school teachers become teachers, educators, mentors and take role as models for their students while in the teacher community becomes an exemplary figure for the community around contributing positively to social norms in society. Advancing the retreat of education depends on the teacher who teaches, education likened our body, the student is the body and the teacher is his life. Students are just a powerless body that needs to be driven in every way while the teacher is the driving force that drives students to grow and develop well.

Teaching with morality is an indispensable obligation with the character that students can be invited to carry out their obligations as people who learn. Lecturingis not onlytransfering knowledge from lecturers to students with no attention to certain aspects, such as the spirit of student learning, the ability to understand the lessons delivered by lecturers, student learning conditions and other things that can support teaching and learning activities in the classroom, but also religiously showing faith and noble manner as a code of Islamic ethics that characterize Hamzanwadi University.

The EducationalProfession class is a compulsory subject that is taken by *PG-PAUD* students because in the Constitutional Court, it is stated that the importance of teaching should keep the identity as a teacher who truly becomes a model for everyone. Profession is an inherent position directly attached to a person produced through the process of education. However, it is not enough to make the profession of teachers just relying on knowledge and diploma, it must be equipped with noble character that is ethics or noble manner. The role of ethics for student activity is the basis in doing activities that still refer to the values and norms, so that all our actions and behavior can be accepted by the community. An educator must embellish him/herself with a noble character. In addition he must also be *zuhud* (not too much in love with worldly life) and simple.

Therefore, a teacher must have ethics and requirements that match the level of the layers of people who are studying it. In this case, Al-Ghazali gives certain restrictions on teachers' ethics as cited by AbudinNata (2010: 98). Those are:be gentle and affectionate to the students. In this connection Al-Ghazali rate that a teacher compared to the parents of children, then the teacher is more important than the parents. According to him, parents play a role as the cause of the child in this temporary world,

while the teacher becomes the cause for the existence of eternal life in the afterlife, the teacher is tasked to follow the prophet as the teacher of religious teaching.

Teachers are professions that play an important role in society not just for learners. The teacher is someone who has the ability to model the referrals to others. Teachers are not a profession that only requires competence but also demands good behavior. Therefore, every activity and attitude of a teacher shows his personality and competence and shows the results he achieves, especially in educating his students and setting an example to the community.To achieve it all requires a moral teacher. Being a moral teacher is not an easy matter. Morality always asks for everyone to be consistent. Consistency in question is the consistency between what is spoken with the attitude done. There is a straight line between attitude and speech. Moral can also be interpreted as attitudes, behaviors, actions, behavior that someone does based on experience, interpretation, conscience, and advice.

D. Conclusions and Suggestions

After passing the above discussion, it can be concluded that the lectures of the educational profession having Islamic ethics can increase the responsibility of *PG-PAUD* students in keeping their profession as a teacher who later can run their knowledge according to their profession. The soul of Islam that has been in the course, many of the code of ethics of students both related to men and women, clearly oblige students not to let go of the good name and identity of the graduates who are competitive and having Islamic culture. Therefore, every lecturer should provide quality learning by inculcating Islamic soul in the environment of Hamzanwadi University.

References

Abuddin Nata, Prof. Dr. 2010. *AklhaqTasawuf*. Jakarta : PT. Raja GrafindoPersada

Agung, Iskandar. 2012. *Menghasilkan Guru Kompetensi dan Profesional*. Jakarta: Bee Media Indonesia

A.M. Sardiman. 2001. *Interaksi dan Motivasi Belajar Mengajar,* Jakarta: PT Raja Grafindo Persada.

Denim, Sudarman. 2010. *Profesionalisasi Implementasi Kurikulum KTSP dan Sukses dalam Sertifikasi Guru*. Jakarta: Rajawali pers

Endraswara. 2003. *Metodologi Penelitian Sastra* :Niaga Swadaya.

LexyJ.Moleong. 2010. *Metodologi Penelitian Kualitatif* .Rosda Karya

Muhammad, Abdulkadir. 1996. *Etika Profesi Hukum.* Bandung : Citra Aditya Bakti

Saefudin Saud, Udin. 2009. *Pengembangan Profesi Guru.* Bandung : ALFABETA

Uzer Usman, Moh. 2011. *Menjadi Guru Profesional*. Bandung : IKAPI.

Undang-Undang No. 20 Tahun 2003, *Tentang Sistem Pendidikan Nasional*

UU no.14 Tahun 2005, *Tentang Guru dan Dosen*

Ya'kub, Hamzah. *Etika Islam Pembinaan Akhlakul karimah (suatu pengantar).* CV Diponegoro: Bandung. 1996.

Huda, N. (1995). Pendekatan kebermaknaan in the 1994 English syllabus. *English Language Education 1*(1), 26-36.

A Study On Teaching Speaking Using Video Exchange Project

Siti Maysuroh[1], Hairi Abdillah[2]
[1]Department of Language and Art Education, Hamzanwadi University, Selong, Indonesia, sitimaysuroh@yahoo.com; [2]Department of Language and Art Education, Hamzanwadi University, Selong, Indonesia, hairiabdillah@gmail.com

Abstract

In this study, the present researcher conducted a descriptive study on teaching speaking using Video Exchange Project. The purposes of this study were: (1) to know how teaching speaking using Video Exchange Project is; (2) to know the students' responses on teaching speaking using Video Exchange Project. The present researcher used a descriptive qualitative design. To answer the research questions, the present researcher used three research instruments namely observation, questionnaire, and interview applied to 40 students of MA Mu'allimat NW Pancor. The results of the data analysis indicated that teaching speaking using Video Exchange Project has three steps namely preparation, recording, and exchanging. Moreover, it made students smart to work together, creative, and spirit in the classroom. While, the responses were: Video Exchange Project is good for twisting tongue, it creates a change from routine class, and makes students feel free to speak.

Keywords: teaching speaking; Video Exchange Project

A. Introduction

English has been widely used in every aspect of human life. It is also one of the most languages used in international communication. It is considered as a qualified language to be international language. Abousenna (1995, p. 15) as cited in Torky (2006, p. 13) says that in the age of "globalism" we live nowadays, the interdependence of nations and countries creates a need for a global language and no language qualifies for this better than English. Therefore, English comes to be international currency of technology, science, as well as commerce.

As like other languages, English has four skills that must be mastered by the students. Those are listening, speaking, reading, and writing. Aljamal and Aljamal (2014, p. 19) suggest that to learn, EFL learners need to "construct" their own knowledge by understanding through many channels: reading, listening, writing, and speaking. Those skills are the objects of studying English which is always developed by the teacher through many methods and learning models.

The present researchers find that speaking is one of the important skills applied to express all ideas orally which is called by productive skill. Baidawi (2016, p. 54)

explains that speaking is the most important one to be learnt and mastered because they want to employ English as a tool for more global communication.

Many phenomena of teaching only develop students speaking ability by memorizing many vocabularies and expressions but ignoring oral skill training. It will force students' brain to be passive. Bohadorfar & Omidvar (2014, p. 1) state that today's world requires that the goal of teaching speaking should improve student's communicative skill. Thus, communicative method is needed to improve students' speaking ability.

Communicative method can be designed by the teacher. It aims to make classroom more active. Usually, the teacher only teaches using old teaching style. It sometime makes the class boring and monotonouss. That situation can be identified when the students look sleepy and spiritless to involve in teaching and learning process. One of the ways to overcome those problems is finding a creative idea to design new condition in the classroom using teaching media such as: teaching with video, song, picture, and many other media that help for creating communicative teaching style. According to Wright (1989) cited in Patmawidi (2011, p. 10-11) in making decision to use media, a teacher had some criteria as follow:

a. It is easy for use to prepare
b. It is easy to organize for the classroom
c. It is interesting in students

So, the media should have effect to make teaching learning process easier; not difficult to organize the classroom and the most important thing is that the use of media can make them enthusiasm in their learning process. Patsmawidi (2011, p. 13) reveals some advantages of reality or real object (media) as follow:

a. Can arise the students' interest.
b. Can give more opportunities or the students to use the language orally.
c. Can attract students' attention.
d. Can help student in understanding the meaning of word better.
e. Can add the students' pleasure to learn English (as motivation)

One of media that every teacher can choose in teaching English especially speaking is video. William and Lutes (2013) elaborated that:

a. Using new technology simply because they are available or cost effective is not a particularly good rationale for incorporating them as teaching tools.
b. A consideration of learning and the impact of video on the learning process is in order.
c. Because of the innovative features the teacher can make instruction more appealing to learners.

d. A major advantage is that video materials can focus on information that cannot be readily presented in a traditional classroom because constraints such as size, location, costs, etc.
e. Video materials are an effective delivery system because they contain a combination of visual and aural information.
f. Variety of selections available.
g. Can be used to give the learners a chance to demonstrate their comprehensionThey can be used to actively engage students in the learning process.
h. The students have the opportunity to observe more authentic materials.

Furthermore, using video is very creative way to make students motivated in the classroom. Because, it will make students relaxed and entertained. Besides, it has been developed as the media for teaching. Based on the result of Greene and Crespy (2012, p. 273) that students appreciate the video experience; they find it relevant and entertaining. The result helps us to make sure that video brings students to the relax condition.

Using video in the classroom sometimes puts the students to be the observer only. It will not give more effective to the speaking development. Because, Williams and Lutes (2013, p. 5) state that the students are not only learn through observation, but also through participation in the process of learning. The experience of Deborah Bullock (2016) in British Council, Ukraine tried to make the students to be the actor in the classrooms. That was the project of designing video that would be shared to other students which is called by Video Exchange Project. The video was uploaded to social media or school website. There, the students were invited to be active and involved in designing their own video. Therefore, in relation to the description above the present was interested to conduct the research about descriptive study on teaching speaking using Video Exchange Project which was applied in *MA Muallimat NW Pancor*in academic year 2016/2017.

B. Method

Participants

Total numbers of participants are 40 students taken from 239 students of tenth graders of *MA Muallimat NW Pancor* class X Agama chosen using purposive sampling.

Data Collection

In this study, the present researcher applied three instruments. The first was observation. It was used to observe class situation on teaching speaking using video exchange project. The second was questionnaire. It was used to know the students'

responses to the implementation of Video Exchange Project in teaching speaking. Finally, the present researcher used unstructured interview to confirm the students' responses to the implementation of Video Exchange Project in teaching speaking.

In conducting this research the present researcher used some ways to collect data:

Observation

This technique was used to investigate the methods of English teaching. The observation was done in every teaching step from the preparation up to the final section of the project. So that, the observation was divided into three main parts, those were in the preparation process, recording process, and exchanging process.

Questionnaire

The present researcher used questionnaire to take the real data from the sample. This technique was only used to get short answer from the sample related to their responses on the implementation of video exchange project.

Interview

There are two kinds of interview. Those are structured interview and unstructured interview. Structured interview means that the questions have been structured on the paper question without any development. Meanwhile, unstructured interview is developing prepared questions to know more about the information. In this case, the present researcher used unstructured interview to make students free to give the honest answer related to teaching process.

Data Analysis

In analyzing the data that had been collected, the present researcher used "descriptive qualitative research". It is a kind of research method where the present researcher tries to describe a phenomenon on condition which completely the same as what it is really like or without any manipulation on the subjects (variables). This method was implemented to be able to investigate teaching speaking using stated media.

Moleong (2007, p. 3) cited in Wulansari (2013, p. 4) explained descriptive research as a type of research which does not use calculation or numerating. There are four steps in descriptive method: Participation in the setting, direct observation; dept interview, and analyze the data (Denzim, 2000, p. 129) cited in Ashadi (2011) By using this technique, the present researcher collected the data, arranged the data, and presented the data.

Here the present researcher had some steps as follows:

a. The present researcher presented the detail description of the preparation section on teaching speaking using Video Exchange Project.

b. The present researcher presented the detail description of the recording section on teaching speaking using Video Exchange Project.
c. The present researcher presented the detail description of the exchanging section on teaching speaking using Video Exchange Project.

Trustworthiness

Lincoln and Guba Posit (1990) cited in Shenton (2004, p. 64) state that trustworthiness of a research study is important to evaluating its worth. Trustworthiness involves establishing:

1. Credibility (in preference to internal validity)

Credibility is something that is used to ensure whether the test is really measure what the researcher aimed. Lincoln and Guba (1990) argue that ensuring credibility is one of most important factors in establishing trustworthiness

2. Transferability (in preference to external validity/general ability)

Transferability is used to measure the extent of the result of a study can be applied in other situations. It has important role to test the validity with other conditions, situations, and regions.

3. Dependability (in preference to reliability);

Dependability is the same with reliability to check the result in the second time using same method, context, and participants. It is used to find the result will be the same or not.

4. Confirm ability (in preference to objectivity).

The use of confirm ability is to ensure the result of data using stated instrument is not dependent on human's skills and perceptions. It is natural based on the fact happened.

C. Findings and Discussion

Based on the those instruments, the description of teaching speaking using Video Exchange Project; students' and teacher's responses on teaching speaking Using Video Exchange Project are described below.

1. General Description of Teaching Speaking Using Video Exchange Project

After doing observation, the present researcher found that the teacher applied three main steps of Video Exchange Project. Those are: preparation, recording, and exchanging process.

First, in preparation step, the teacher explained the general description of using Video Exchange Project such what the students will do in the preparation process, in the recording process, and in exchanging process. The teacher and students also did

some activities such are making group, determining topic, discussing topic, and practicing.

Second, in the recording step the teacher recorded students based on their groups. He did not use special room for recording process because of lightening problem. So that, recording process was taken in the school environment. It was done in two meetings.

Finally, in the exchanging step, the teacher asked students to watch video of other students to give the comment. It was done in computer laboratory and it spent one meeting only.

2. Students' and Teacher's Responses of Teaching Speaking Using Video Exchange Project based on observation, questionnaire, and interview

After conducting the research, the present researcher presents the responses of students and the teacher on teaching speaking using Video Exchange Project.

Firstly, in preparation, the present researcher found that the students and teacher were very enthusiasm to apply this media. When some of the students were getting confused, they tried to ask to the teacher that made class very noise. It was happened because they asked many questions about this media. It proved that they are enthusiasm to know what Video Exchange Project is.

Secondly, in the recording step, the students also tried to make video as good as possible. They considered that making video is challenging which needed good confident. However, the result was they made many repetitions on making video. The teacher said that it is good because the point of this media is on the repetition of vocabulary. Therefore, the students can twist or train their tongue in pronouncing every word. In addition, the students gave their response that they feel easy to speak after recording video.

Finally, the students and teacher felt the taste of this media is on exchanging process. It was very interesting. Students were proud to their video project. Those cases proved that they were very enthusiasm and interested to use this Video Exchange Project. In conclusion, this media has positive responses from the students and the teacher. It was useful to teach speaking.

Finding reveals how Video Exchange Project was done in teaching speaking, the strengths and weaknesses of Video Exchange Project, the problem faced by teacher and students, and students responses to the Video Exchange Project.

Video Exchange Project, which is developed by Bullock (2016), is a kind of teaching media to bring teaching speaking out of habitual. It means changing situation to be more interesting and more creative. There are three main steps of this media. They

are the preparation step, recording step, and exchanging step. In preparation step, the teacher helped the students to make group, finding the topic, arranging the sentence, and pronunciation correction. Firstly, the teacher divided the students into some groups which consist of three, four, or five students in a group. It is used to teach them working together. He also taught how to divide task in their group. Secondly, to find the topic, the teacher gave freedom to the students to choose what their favorite topic. Because, the teacher said that the students will be very enthusiasm if they talk about their favorite. It was proved when he offered the topic, the students were very active and noise. Next, He guided them to arrange the sentence while correcting their pronunciation. He did all above in preparation step. In recording step, the teacher had prepared language laboratory as special room for recording video. But, after trying to use that room, the result is not good. He considered that the room is less on its lightening. Therefore, he gave students freedom to record their video in the school environment. Next, he just monitored them and gave suggestion. However, he found the difficulties to control the students and manage the time. Based on the result observation, some students were always repeating their recording. So that, recording process was conducted in two days. In exchanging step, the teacher used computer laboratory to conduct exchanging process. He did not use online exchanging, because he wanted to make this process much quicker than online exchanging. While the present researcher interviewing the students, one of them said that exchanging using manual is more interesting, because they can comment using small paper to their friend directly. So, this process is the last step of using Video Exchange Project.

The present researcher found the strengths and weaknesses of Video Exchange Project. In fact, it was interesting for students, increasing motivation, increasing self confident, enriching vocabulary, and easy to do. Based on the result, the students who considered this media is interesting are 90 %. It showed that almost all students agreed that using this media is good to omit boring in speaking class. While the weaknesses was taken from students and teacher difficulties of this media, they were: less of self confident, need long time to do preparation, need big capacity of memory card, and finding good place for making video. Especially for the teacher, he felt difficult to control the class.

Students and teacher had some responses to Video Exchange Project. First, they considered that this media is useful to teach speaking. They said that after conducting the video they feel free to speak. Second, this video is good to twist students' tongue because; they would practice many times before recording the video. Next, they also said that this video is good to change speaking class situation to be more interesting

and enjoyable. Therefore, it is suitable to omit spiritless, laziness, and sleepy in the classroom

D. Conclusion

Based on the explanation on the results and discussion the present researcher concludes as follow:

1. Teaching speaking using Video Exchange Project has three steps. Those are preparation, recording, and exchanging. It is also able to make students smart in work together in their group, make them creative, and to be spirit in the classroom.
2. Students' and teacher's responses on teaching speaking using Video Exchange Project were:

a. Video Exchange Project is useful to teach speaking.
b. Video Exchange project is good for twisting tongue.
c. Video Exchange Project is interesting.
d. Video Exchange Project makes students feel free to speak.

References

Aljamal, Dina A. and Ghadeer A Aljamal. (2014). *An Investigation of the Difficulties Faced by EFL Under Graduates in Speaking Skill*. Jordan: Yanmork University.

Baidawi, Ahmad. (2016). *Using Visual Media in Teaching Speaking*. Unstated: OKARA Journal of Languages and Literature.

Bohadorfar, Maryam and Reza Omidvar. (2014). *Technology in Teaching Speaking Skill*. Mysore India: University of Mysore.

Bullock, Deborah. (2016). *Video Exchange Project.* Retrieved December 11, 2016 from www.Teachingenglish.org.uk/article/video-exchange-project.html.

Greene, Henry and Cheryl Crespy. (2012). *The Value of Student Created Videos in the College Classroom-an Exploratory Study in Marketing and Accounting*. Unknown Publisher of International Journal.

Hornby, AS. (1995). *Oxford Advance Leaner's Dictionary.* Oxford: Oxford University Press.

Lincon & Guba Posit. Retrieved from http://www.qualres.org/HomeLinc-3684.html.

Patmawidi, Arca. 2011. *The Effect of Using Real Objects in Developing Students' Speaking Ability: an Experimental Study at the Second Year Students of SMP Negeri 1 Pemenang in Academic Year 2010/2011*. Uunpublished undergraduate thesis, IKIP Mataram.

Teaching Speaking. Retrived December 10, 2016, from http://www.nclrc.org/esentials/speaking/spindex.htm.

Torky, Shiamaa Abd EL Fattah. (2006). *The Effectiveness of a Task- Based Instruction program in Developing the English Language Speaking Skills of Secondary Stage Students.* Unpublished Ph.D. degree Dissertation, Ain Shams University.

Williams, R.T. and Peter Lutes. (2013). *Using video in the ESL classroom.* Unknown Publisher of International Journal.

Wulansari, Dwi. (2013). *A Descriptive Study on Teaching Speaking Method to the Seventh Year*

Student of SMP Negeri 3 Baturetno. Unpublished Undergraduate Thesis, University of Surakarta

Providing Information and Individual Counseling Services To Increase Student Cylics in MA NW Wanasaba

Musifuddin
Hamzanwadi University

Abstract

Providing Information Services And Individual Counseling is important to Improve Students' Discipline In MA NW Wanasaba. This study aims to determine how Student Enhancement Improvement after being given Individual Information and Counseling Services. This research usedclassroom action research. Data were analyzed by analyzing the result of observation and interview that have been collected by using quantitative data analysis and percentage descriptive analysis. Based on the results of hypothesis test calculation which states that in cycle I the average value of student discipline 42 and percentage rate obtained 60% and then increase in the second cycle with an average value of 53.42 and percentage increase is 76.32%. Student discipline in cycle I is included in enough discipline. While in the second cycle of discipline students included into good discipline criteria. It can be conclude that providing information services and individual services can improve student discipline at MA NW Wanasaba.

Keywords: Information Services, Individual Counseling and Student Discipline

A. Introduction

In Law Number 20 Year 2003 About National Education System, education is defined as a conscious and planned effort to create an atmosphere of learning and learning process so that learners actively develop their potential to have spiritual power of religion, self-control, personality, noble moral intelligence, as well as the skills that he needs, society, nation and state.

Based on the two restrictions above, the education in Indonesia is not only prioritize the development of cognitive aspects or knowledge of learners, but also the development of individuals as a unique person as a whole. Because each educational unit should provide services that can facilitate the personal development of students in the form of optimal guidance and counseling services. Understanding of what and how school guidance services are required by supervisors. This is part of the competence of managerial supervision that must be done to every school within the scope of its guidance.

Discipline in school-aged children is very important, the existence of clear and directed rules greatly affect the child on adult masses later. Discipline in children must

be done, one of which is discipline must make sense and there are consequences if discipline is violated.

In terms of discipline at the age of school children, parents or teachers should be serious about what he says. Consistent application of rules and assignments is far more beneficial to children than severe punishment is given. Discipline is a parent or teacher's way to show children that they are actually taking care of their behavior, so they will be more motivated to behave in accordance with expectations.

Reality that can be seen in MA NW Wanasaba in general and students XI IPS 2 in particular, still found less disciplined actions by students, especially from the accuracy of students entering school, dress and behave well. There are 7 students or 23% of 30 students who are in class XI IPS 2 in MA NW Wanasaba who experienced the problem.

Meanwhile, the desire of the school to make students to be disciplined in terms of school entrance on time, dressed neatly and serious study. To overcome the above problems, there are several efforts that can be done, among others, providing information services, providing Individual counseling services.

These Counseling Services can facilitate the development of learners, individually, group and classical, according to their needs, potentials, talents, interests, developments, conditions, and opportunities. This service also helps overcome the weaknesses and obstacles and problems faced by learners.

Discipline

A student in learning activities in school will not be separated from the various rules and regulations that apply in school, and every student is required to behave in accordance with the rules and rules that apply in school. School discipline is a school effort to maintain student behavior in order not to deviate and can encourage students to behave in accordance with the norms, rules and regulations that apply in school. According Rasdiyanah (1995: 28) defines discipline is compliance to respect and implement a system that requires people to submit to the decisions, orders or regulations that apply. In other words discipline is obedience to obey the rules and conditions that have been set. Depdikbud (1992: 3) provides the meaning of discipline is the level of consistency and consequence of a person to a commitment or agreement with the related goals to be achieved. With regard to the purpose of school discipline, Maman Rachman (1999) argues that the purpose of school discipline is:

a. Giving support for the creation of behavior that does not deviate
b. Encourage students to do good and right things.
c. Help students understand and adjust to the demands of their environment and stay away from doing things that are prohibited by the school.

d. Students learn to live with good habits and benefit them and the environment.

While Wendy Schwartz (2001) mentions that "*the goals of discipline, once the need for it is determined, should be to heip students accept personal responsibility for their actions, understand why a behavior change is necessary, and commit themselves to cange*". (www.com 2016)

Information Services

Information services are one of the few services that exist in counseling guidance. As for the meaning of information services is all the information conveyed by someone as a supporter message given (Wiyono, 2007: 240). According Prayitno (2004: 11) information service is the guidance that allows learners and other parties that can give a big influence on learners in receiving and understanding information education and information positions that can be used as consideration in taking decisions everyday as students , family and society. It further explains that information services are "a process to assist the student in developing the unity of information or his or her image and role in the world" (Sukardi, 2000: 21). From the description above, it can be understood that the information service is the assistance provided by guidance counselor or counselor to the student as a client in relation to various information on the continuation of the student's career that is adapted to the ability, interest and talent. So the information service is an activity of giving view to the client to plan the continuation of his career by considering the state of self and the environment so as to gain a broader view of the potential development that is owned in everyday life.

Individual counseling

Rogers (in Kusmintardjo, 1992) provides the following counseling definition: Counseling is a series of direct contests with the individual which aims to offer his assistance in changing his attitude and behavior. Counseling is a set of direct contacts or relationships with the individual in order to provide assistance to him in changing his attitude and behavior). Furthermore, Mortensen (in Jones, 1987) provides the following counseling definitions: Counseling may, therefore, be defined as apeson to person process in which one person is helped by another to increase in understanding and ability to meet his problems ". Counseling can be defined as a process of one's relationship with a person in which one is assisted by the other to find the problem. Thus it is clear that counseling is one of the overall guidance service techniques, that is by providing individual assistance (face to face relationship).

Guidance and counseling aims to help learners to have the competence to develop their potential as optimal as possible or realize the values contained in developmental tasks that must be mastered as possible. Potential development involves three stages:

understanding and awareness, attitudes and acceptance (accommodation), and skills or action (action) to carry out developmental tasks.

Framework of thinking

Discipline is a very important behavior undertaken in determining the success of a goal to be achieved someone, with discipline can maintain a person's behavior in order not to deviate and can encourage someone to behave in accordance with applicable norms, rules and regulations. Discipline is not only applied or encountered in the neighborhood around the house but also found in the school environment. Discipline in the process of education and learning should be optimized and improved, because the discipline of education and learning process feels comfortable and has its own honor.

Supporting the creation of good discipline is through information services and individual consolidation and the use of a good data set of learners, providing information services and supporting services that enable learners to collectively obtain awareness so that learners can behave in an optimal discipline. Thus the better the services provided to the child, then the discipline of children is increasing.

B. Method

Referring to Kemnis and Mc. Taggat (1988), this research belongs to Classroom Action Research or Class Action Research (PTK) research, which is doing the action which is aimed at a group of students at the same time through the research procedure. According to Ridwan (2010: 12) says that "Action Research Class Islamic counseling is to perform service actions BK intended to God, on a group or individual students through research procedures." In this study, researcher used research methods of Islamic counseling action. Implementation is planned in the form of implementation of the design of learning presented through several cycles. Each cycle is implemented in accordance with the level of achievement of the expected objectives in accordance with the details of predetermined indicators. In this study there are stages, as for the stages that must be passed in each cycle.

Data collection technique

Suharsimi arikunto (2002: 94) defines "Variable is a varied phenomenon that becomes the object of research". While Sugiono defines "Variables are anything in the form of what is set by the researchers to be studied so that obtained information about it then taken conclusion". So the variable is everything that can be needed as the purpose of research to obtain the information studied.

Research Instruments

The instrument used were observation and interview technique which is data collecting technique that was done systematically and intentionally through observation and defect of the symptoms investigated (Sukardi, 2000: 153). Instruments performed in the data collection in this study are observation or observation guidelines. Observation is an effort to collect data that was done by direct observation to the implementation of learning. Another Devinition also states that observation is a way of conducting research by way of direct observation with systematic system (Nurkancana, 1986: 46). With these observations will be observed student activities or activities in implementing information services, individual counseling, and support services. The main tools used to collect these data are the Chek List (Observation Sheet). This observation sheet was prepared based on some student behaviors observed during the course of the research activity. While the interview is a question and answer process directly two or more people face to face or not through communication media.

Data Analysis Technique

The data obtained from a study should be analyzed first correctly in order to be drawn a conclusion that is the right answer from the problem posed. The data analysis techniques used in this study in analyzing the results of observations and interviews that have been collected by using quantitative data analysis and percentage descriptive analysis. Descriptive analysis method of this percentage is used to examine the variables - the variables that exist in this study that is about the level of student discipline. These variables consist of some very supportive indicators and then the indicators are developed into instruments (questionnaires or observation sheets). The steps taken in the use of this analytical technique are as follows:

a. Create an answer questionnaire distribution table.
b. Determine the score of respondents' answers with the provisions of predefined scores.
c. Sums up the score of answers obtained from each - each respondent
d. Incorporate the score into the following formula:

(Muhammad Ali, 1984: 184)

C. Findings and Discussion

From the results of research on the cycle I obtained ahsil which indicates that the implementation of the action has not met the percentage level that has been determined. This is indicated by the observation result of student's discipline level in providing individual information and counseling service and service support conducted by the researcher. Lack of student discipline in following pre-study in cycle I is closely related

to the existence of various weaknesses at the time of implementation of the activity and in the end also affects the low level of student keaktipan.

Because it can be said that the level of student discipline that is not satisfactory due to the many weaknesses in the implementation of the action, the analysis of the results of observations of the implementation of the action indicates that some things that are substantial enough to be considered a trigger to occur results that are not satisfactory among others are: Less optimal role of teachers and teachers in the teacher in raising the spirit of the students for example in attracting students' attention by telling how this attitude of discipline and the impact of what we get if we are disciplined. Less clear and directed the BK teacher in conveying the plan of activities that must be taken in the provision of information services and individual consolidation and supporters of this service for example in behaving towards teachers and other friends. In addition, BK responders are less responsive to the problems faced by students, consequently siawa seem to feel unnoticed and students will not ignore the existing rules in school.

The existence of various weaknesses in the implementation of action in the first cycle requires the need for improvement and verification again for activity cycle II with reference to the identification of the weaknesses of action in cycle I. Some of the above then several new actions implemented in the next cycle II.The unattainable indicator of the percentage of discipline is not caused by the service factor given to the students, but not the maximum implementation of those services. Therefore in cycle II the provision of services is maintained or used with corrective actions as identified by the problem faced.

The existence of several new actions that have been implemented in cycle II it has been able to overcome the obstacles that occur in cycle I. This happens is shown by increasing the attention of teachers to students both at the time of pre-study and in the learning process.

Based on the results of descriptive analysis, the percentage for student discipline in each cycle obtained percentage of 68%. Percentage of 68% based on table of discipline category in chapter III, including good category. Furthermore, in terms of each of the disciplinary support factors consisting of discipline of pre-school students in the first cycle is increased in cycle II based on descriptive analysis percentage in the attachment shows that the discipline is very good category (85%). Judging from the weight percentage indicates that the discipline of students increases. referring to the percentage descriptive interval, it can be said that the percentage improvement of student discipline by applying these services has been successful, and it can be said that the provision of information services and individual services and service advocates has been able to improve discipline of MA NW Wanasaba students. Because of this

research activity has been considered sufficient to be able to prove the hypothesis of previous actions.

D. Conclusion

From the results of research and discussion can be concluded that:

a. In cycle I the average value of student discipline 42 and percentage rate obtained 60% and then increase in the second cycle premises with an average value of 53.42 dendan percentage increase is 76.32%
b. Student discipline on the first cycle included in the keriteria enough discipline. While in the second cycle of discipline students included in the discipline keriteria.
c. Providing individual information and service services can improve discipline of MA NW wanasaba students.

References

Arikunto, suharsimi. 2006. *Prosedur Penelitian Suatu Pendekatan Peraktik*. Jakarta: Rhineka Cipta

Listiani, Puri. 2005.*Pengaruh Layanan Informasi dan Konsling Individu Terhadap Kedisiplinan Siswa di Sekolah Untuk meningkatkan Prestasi Belajar Siswa Kelas II SMK Negeri 5 Semarang*. Semarang: Fakultas Negeri Semarang.

Nurkencana, W. Dan Sumartana PPN. 1983. *Evaluasi Pendidikan*. Surabaya: Usaha Nasional Prayitno. 2006. *Seri Kegiatan Pendukung Konseling P.1 - P.6*. Universitas negeri Padang.

Ridwan. 2010. *Penelitian Tindakan Konsling Islam*. Mataram: BintangTimur.

Sudiyo. 2009. *Upaya Peneingkatan Kedisiplinan Masuk Sekolah Pada Jam Pelajaran Pertama Melalui Layanan Bimbingan dan Konsling Di sekolah Terhadap Siswa SMP Negeri 2 Randublatung Semester Ganjil Tahun Pelajaran 2008/2009.*

Wiriatmaja, Rochiati. 2007. *Metode Penelitian Kelas*. Bandung: Remaja Rosida Karya.

W.S. Winkel & M.M. Sri Hastuti. 2007. *Bimbingan Dan Konseling Di Institusi Pendidikan*.Yokyakarta : Media Abadi

An Effort to Develop Naturalist Intellengence by Using Field Trip Method (Clasroom Action Research in Kindergarten B TK PGRI 30 Pringgasela, 2017/2018)

Nur Adiyah Yuliastri, Moh. Alwi Ashari
PG-PAUD Universitas Hamzanwadi
Jln. TGKH M. Zainuddin Abdul Madjid no 132 Pancor/ Selong. E-mail:
yuliastrinuradiyah2@gmail.com. mohalwiashari@gmail.com

Abstract

This study aims to obtain a picture of the naturalist intellegence activity in early childhood PGRI 30 Pringgasela and determine the extent of resulting increase in intllegence naturalist child through the method of field trip. This research used classroom action research model Kemmis and Mc Taggart held for 3 cycle and each cycle connsisted of 3 sessions, consisting of stags: observation, planning, action and reflection. The subject in TK PGRI 30 Pringgasela class b were 15 children consist of 7 females and 8 males. Quantitaive data analysis used was descriptive statistic that compare the result obtained from the first cycle and second cycle . While the analysis of quantitative by analzing data from the field note and interview during the study to the step of data reduction, data display and verification. The result showed an increase naturalist method field trips, pre-cycle 37% an increase on first cycle 45,5% and the second cycle 59% and the third cylce75,1%.
Keyword: Naturalist Intellegence, Field Trip Method, Early Childhood.

A. Introduction

Early childhood education is the level of education before the level of basic education which is a coaching efforts aimed at children aged from birth to age six years done by providing stimulus education to help the growth and development of physical and spiritual so that children have readiness in entering more education continued, organized in a formal, nonformal and informal education.

In its development, the community has shown concern for education, care and protection of children aged 0-6 years with various types of services in the fomal and non-formal channels. PAUD is a formal kindergarten (TK / RA (Raudhatul atfhal) and other similar forms, where as non-formal education takes the form of TPA (daycare) and KB (Playing Group) .The kindergarten education is one of the forms of schooling.

Early childhood education activities prefer to learn while meaning that children's learning activities are playing because it is a fun activity for young children, through children's play activities are able to develop their potential.

The potential of intelligence relates to intellectual ability. The theory of intelligence is very appropriate for early childhood, and it would be better if grown since early childhood, the theory of intelligence is the theory of multiple intelligences, better known as multiple intelligence. As for multiple intelligences include 9 types of intelligence including; linguistic intelligence, mathematical logical intelligence, spatial visual intelligence, musical intelligence, kinesthetic intelligence, intrapersonal intelligence, interpersonal intelligence, spiritual intelligence and naturalist intelligence.

Intelligence is the ability to solve problems, the ability to create new problems to solve and the ability to create something to offer a valuable service within a society's culture. Therefore, early childhood education becomes an important thing to develop the intelligence of young children, through the development of this multiple intelligence activities teachers can know the weaknesses and shortcomings and provide opportunities to learn about the advantages. The goal is to have children have the opportunity to explore the world.

This multiple intelligence is an illustration for parents and educators that each child has different abilities, each intelligence has different indicators to achieve or standards to be possessed by someone who is considered to be an expert.

Based on observations made in kindergarten during this more developed intelligence of mathematical intelligence and linguistic intelligence so that other intelligences become neglected, even considered not too important. This is due to the lack of or lack of understanding of the importance of the 9 aspects of multiple intelligences, one of which is naturalist intelligence, naturalist intelligence can not be separated from life or from surroundings, because naturalist intelligence associated with nature and the environment, naturalist intelligence is emphasized in direct experience to develop the potential of children in seeing and understanding the environment in a real way. This intelligence is very emphasized so that children always maintain and care for the environment. Naturalist intelligence is more directed to find out and do so that children will gain a deeper understanding of nature and the environment so that it can be applied directly in daily activities.

Therefore the author wants to apply the method of field trip. It is expected that through this activity, it can change the way of learning that is often used by teachers and also can give children the opportunity to be free in thinking in accordance with the intended purpose. Due to the field trip method the child can see firsthand activities related to "preserving the environment" and from this activity the child can also learn to love the environment. Yaumi & Ibrahim (2013: 22) stated that the field trip method can give children insight in behaving in other ways. This field visit method gives the

child an opportunity to get experiences directly either in the form of ideas, inspiration and can create children creativity.

Based on the problems stated above, that the low intelligence of naturalist children and strengthened by observations that indicate the low level of naturalist intelligence of learners caused by the implementation of boring learning activities so that researchers interested in conducting research on naturalist intelligence through field trip method.

Naturalist intelligence according to Armstrong (2009: 7) Naturalist is expertise in the recongnition of the many species of flora and fauna. Where naturalist intelligence is the activity of classifying various species of flora and fauna.

According to Gardner naturalist (2009; 17) is the ability to recognize, differentiate, create categories against what is seen in nature and the environment. Meanwhile, according Budiningsih (dalam Muhammad 2012: 91) defines that naturalist intelligence is the intelligence associated with the ability of individuals to recognize, understand and recognize the signs of the natural environment or changes in nature by looking at the signs. Even the ability to see the facets of beauty and regularity so that naturalist intelligence is more widely owned by people who love the environment

Wina (2008; 74) Explaining the process that develops naturtalis abilities in children: 1). Maintaining the environment 2) in learning materials, relating to plants, ecosystems, environmental pollution 3) applying agricultural and fishery learning adapted to the conditions of their respective regions 4) learning process development schools that can awaken the child's care to the environment.

Based on the opinion of the experts above, it can be concluded that naturalist intelligence is a capability possessed by the child in relation to the child is able to recognize, distinguish what they see in nature or also the environment.

The method of visiting according to Campbell & Campbell (2007: 102) can be interpreted in other words that is a trip to the wild. A trip to nature beba is a real activity can provide a chance learning experiment. In order to succeed well in execution, the goals in this lesson should be well planned and notified before implementation. If you do not know the purpose, many children will just feel that the trip to the wild is a venue for entertainment or play games even though in the kindergarten activities done should learn while playing.

According to Yaumi (2012: 109-110) states that a field study or can also be called a trip to take a trip is a school trip conducted by a group of people outside of the normal environment in which they learn. Moeslichatoen (2004: 68) also argues that the field visit method or wista's work is one of the methods of carrying out teaching activities in

kindergartens by observing the world according to the realities that exist directly covering humans, animals, other objects around it.

Another way teachers can connect children with communities is through field trips with children. By introducing directly about nature to children not only in the classroom learning can be done. Children need to see, hear, feel and touch what they learn.

Based on the opinion of some experts it can be concluded that the field visit method is one of the methods that can teach directly to the child about the world and all of them in the form of plants, animals, etc.

B. Method

This type of research is a collaborative class action research based on the problems that arise in the learning activities that exist in the classroom. Classroom action research is a process of studying the problem of learning in the classroom by performing planned actions in real situations and analyzing each effect of the treatment. Classroom action research is a problem-solving activity consisting of a). Planning b). Implementation c). Data collection and d) analyze data to determine the extent of the weakness of the action. The cycles in this classroom action research adapted based on the theory of Mc Taggart (1931: 13) suggest that the principle of classroom action is done clearly in an effective and routine learning condition which means that classroom action research processes are held during class time.

The research was conducted at TK B 30 PGRI Pringgasela in pringgasela of east lombok with 15 students consisting of 7 girls and 8 boys.

Technique of collecting data in this research is through interview, observation and documentation while data analysis technique in this research use result of mean and percentage which then will be interpreted using sentence. Data analysis techniques used in this study include data reduction, data presentation, and inferred results.

C. Findings and Discussion

The results of the research have been done twice and each cycle is done three times the meeting with the activities undertaken is the effort to develop naturalist intelligence through field trip method (Field Trip) this activity started from April to May. The activities are done in four stages: planning, action, observation and reflection.

Based on the results of observations conducted by researchers on the average cycle of results obtained by the child about naturalist intelligence in the pre-cycle of children is still very low that reaches 37% this is reinforced by observations made by

researchers by looking at: 1. Lack of activities that can stimulate naturalist intelligence children in kindergarten 30 PGRI Pringgasela and proved from the observation that the activities provided by the teacher is always monotonous not variety so that makes this field visit activities attract the curiosity of the child because it faced directly on the reality / real evidence in the field 2. At the time of initial observation seen some children has not been able to show his love for the environment. Due to the observations the researchers see that the standard in the development of naturalist intelligence is still minimal then followed by doing cycle I activities.

After the observation, the teachers and researchers discussed to conduct research activities that is by planning field trip activity by going around in the paddy field which is located close to the rice fields owned by residents that can be utilized as a place / nature that can stimulate the naturalist ability of early childhood. The first thing described by the teacher is the rules and how to play in this activity then bring the child directly around and show the students how a farmer menanan rice and vegetables that can be planted, and what activities undertaken by farmers in caring for planted plants.

Based on the results in the first cycle underwent a fairly evolving change that is with an average score of 45.5% of 15 students, There are still many children who are still not maximized this is caused by the children are not used in following field trip activities. so that according to researchers and teachers as a collaborator to proceed to cycle II and reflect the errors found in the first cycle to further explain the details of field trip activity is for learners more leverage in activities 1. Explaining the stage of field visit method with full enthusiasm, 2 Motivating the child through questions by relating to the theme, 3. Giving praise to children who actively answer teacher questions.

Based on the results of the reflection of the cycle I given the activity is still not maximal, then the researchers do more activities by way of explaining in detail the activities undertaken then motivate learners and give praise to the child if able to complete the activities provided well.

In this second cycle activity modified by researchers and teachers is by way of taking the children to the pet cage that belongs to one of the residents. In this activity the teacher explains that all living things need food and drinks like humans therefore the activity on this day that is giving food to animals because animals is also the creation of Allah SWT, after the second cycle of the teacher gives penilain to the activities undertaken by learners. In this second cycle of learners the percentage obtained by the students still not meet the predetermined standard of reaching 57%, therefore, held back cycle III with the goal of this activity to achieve maximum results.

With the results of reflection on cycle II 1. Teachers explain the rules of the game with detail and add the songs in accordance with the theme of the animal 2. Motivating learners 3. Give rewards in the form of praise or provide a value of 'STAR' for children who are able to carry out activities until done. 4. Provide a star rating for children who are able to complete activities.

Based on activity result in cycle II that is reaching percentage 5,9% but this result have not fulfill targeted result hence held cycle III in order to develop naturalist child's intelligence kindergarten PGRI 30 Pringgasela. In this cycle teachers and researchers have modified the activities to attract more learners and focus more on the activities of children who felt not maximized the activity is to visit people who make Togeand directly practice the planting of Togein the home of the citizens. Seen once when each child enthusiastically planted Togein the Besekand not forget given their respective name Besekso that when it grows become a pride for children.

After the cycle III which reached the percentage up to 75.1%, and this according to researchers and teachers have reached the desired target because it is in accordance with the standards specified. The success in cycle III is based on the reflection of each cycle. Here is a percentage of each cycle:

Based on the table of children's ability to mention the types of plants, telling how to care for the plants and explaining the parts of plants is growing very well. it is known that the naturalist intelligence of learners began to increase from each meeting ranging from 42% to reach 75% and this is evidence that by using the right methods and media that can stimulate students in class activities will be very effective.

D. Conclusion

In accordance with the formulation of the problem submitted and based on the analysis of the discussion then the conclusion of the researcher is:The learning process through field visit method includes the initial stage, the core stage and the final stage of the cover. Preliminary activities aim as an introduction or initial perception of activities to be performed on core activities. The core activity is a series of learning

process through the field visit method that will be done by the child. This field trip aactivity is linked to a theme that has been determined by the school and closing activities aims to review again the activities that have been done that have been associated with themes and aspects of naturalist ability that has been determined by researchers.

Field visit method can develop naturalist intelligence because children get different experiences than usual, where children are able to recognize or see directly the media they use in learning activities. The results of this study are also evidenced by the increasing percentage of each cycle. Cycle I 45.5%, cycle II 59% increase reached 13.5% and in the third cycle reached 75.1% and an increase of 16.1%.

Based on the conclusions and implications that have been put forward, as for suggestions that can be given by researchers, among others; a). For teachers, it is expected to give more opportunity for children to do activities that can stimulate the naturalist intelligence of children and teachers more creative in combining various activities in the surrounding environment through field visit method, b) for parents are expected to provide stimulation related to naturalist intelligence to children as a form of program continuity provided by researchers and teachers in schools. c) for researchers is expected to enrich the studies related to efforts in developing the child's naturalist intelligence by using or finding the appropriate method and in accordance with the growth and development of children.

References

Amstrong, Thomas.(2002) *Setiap Anak Cerdas; Panduan Membantu Anak Belajar Dengan Memanfaatkan Multiple intellegensinya*. Jakarta; PT Gramedia Pustaka Utama.

Campbell, L.Campbell, B. dan Camphbell, D. (2007) *Metode Praktis Pembelajaran Berbasis Multiple Intellegence*, Jakarta; Intuisi Press

Gagne, H. (1999) Intellegensi Reframed; *Multiple Intellegence For 21 Century*. New york; basic book.

Mc, T. R (1993). *Action Research; A Short Modern* History. Victoria; Deakin University Press.

Yaumi, M. (2012). *Pembelajaran Berbasis Multiple Intelegensi*, Jakarta; Dian Rakyat.

Yaumi, M. Ibrahim, N. (2013) *Kecerdasan Jamak* (*Multiple Intellegensi*). Jakarta; Kencana.

Wina, S. (2008). *Perencanaan dan Desain Sistem Pembelajaran*, Jakarat; Kencana.

The Implementation of Quiz-Demonstration-Practice-Revision (QDPR) Learning Model to Improve University Students' Knowledge of English Pronunciation and Their Ability to Pronounce English Back Vowels /u:/-/ʊ/

Selamet Riadi Jaelani, M.Pd.
Hamzanwadi University
selametriadijaelani@yahoo.com

Abstract

This study aimed at knowing the significant contribution of Quiz-Demonstration-Practice Revision (QDPR) Learning Model to improve university students' knowledge of English pronunciation and their ability to pronounce English back vowels /u:/-/ʊ/. In this study, the present researcher used ex-post facto. There were three variables in this study, QDPR Learning Model as independent variable, the university students' knowledge of English pronunciation, and their ability to pronounce English back vowels /u:/-/ʊ/ as dependent variable. The sample of the study was 15 university students in majoring of English language education at Hamzanwadi University. The technique of collecting data used questioner, written test, and oral test. The data was analyzed by using simple regression, it showed that QDPR Learning Model had no significant contribution to the university students' knowledge of English pronunciation R^2*= .00 at p > .05, but QDPR Learning Model had significant contribution to the university students' ability to pronounce English back vowels /u:/-/ʊ/* R^2*=.41 at p < .05. Therefore, QDPR Learning Model can be an alternative learning model in pronunciation teaching especially for EFL Learners.*

Keywords: Quiz-Demonstration-Practice-Revision (QDPR) Learning Model, pronunciation teaching, knowledge of English pronunciation, ability to pronounce English back vowels /u:/-/ʊ/.

A. Introduction

In the last three decades, it could be seen the rapid progress because of globalization. The development of science and technology makes relations among the nations become easier and faster. The communication among the nations might occur without being limited by time and space. Inevitably, these changes have an impact on the status and roles of English as one of the most important communication tool in any hemisphere. In this time, the speakers of more than 1. billion (more than 400 million

speakers of English as native speakers, more than 400 million speakers of English as a second language, and over 600 million speakers of English as a foreign language), English really become a global language (Crystal, 1997; Graddol, 2006). One of the most noticeable impacts of the change of status of English language is the improvement of verbal interaction in English, which is very significant, not only among native speakers (NSs) and non-native of English (NNSs), but also among non-native speakers (Jenkins, 2000; Walker, 2001).

As a pedagogical impact on the change of status of English and the improvement of oral communication among nations, the researchers and the practitioners of English learning back to appreciate the importance of pronunciation for the successes of oral communication. For example, Tudor (2001, p. 53) argues that "the command of phonology of a language [the ability to understand spoken language and to produce a comprehensible version of the language] can play an important role in affective language use." This opinion is supported by Setter and Jenkins (2005, p. 2) who state that the pronunciation "plays a vital role in successful communication both productively and receptively."

But the reality proves that Communicative Language Teaching (CLT), the approach which dominate in English language teaching today, it is not yet accommodate pronunciation in learning activities in the classroom. CLT is more focused on meaning rather than appropriate pronunciation in the language classroom. This cause the English teachers pay more attention to how to promote interaction in the classroom with the target language, for example, through games and tasks of language. Instead, the English teacher does not tend to notice whether the learners' pronunciation is correct or not. This condition causes the learners often make mistakes that was triggered by the influence of their mother tongue (Moedjito, 2006). Unfortunately, the English teacher often gives a high tolerance for these pronunciation mistakes. It is certain tolerances for pronunciation errors like this will have an adverse impact, especially for English language learners themselves. Moreover, Indonesia will involve in the ASEAN Economic Community by 2015 and global trade.

Associated with the importance of pronunciation in oral communication among the nations, definitely this condition is not desirable because the higher the tolerance given on the pronunciation mistakes will lead to a class dialect formation that can only be understood by the teacher in the classroom. This condition will certainly lead to misunderstandings in oral communication outside the classroom. Therefore, teaching pronunciation for speakers of English as a foreign language need to get revision.

Based on the globalization impact, teaching pronunciation should be directed so that the learners achieve global intelligibility levels. However, because the concept is very new so most of English learners still unfamiliar with the concept so it is needed some efforts to explore what and how is the global intelligibility, the factors that determine the global intelligibility, specifically, how is the impact of the global concept of intelligibility in pronunciation teaching in the classroom. After describing the global concept of intelligibility, Moedjito (2006, 2008) has conducted several studies to explore determinants. In conclusion the results of other research, Moedjito (2009) is generally stated that there are four determinants of global intelligibility of a speaker of English as a foreign language: word stress [stress on the word], sound accuracy [accuracy of pronunciation], nuclear stress [stress on the sentence], and adjustments in connected speech [adjustments to the speech continued] (Moedjito, 2009). Studies have been done and the word stress can be concluded that the word stress needs to be taught to learners of English as a foreign language, especially in the early introduction of English. Meanwhile, the sound accuracy is also recommended to be taught to learners of English as a foreign language from the beginning.

This study is very important to do because the student is an aspiring teacher of English. How are they going to teach spoken English if they themselves have not mastered the pronunciation? Therefore, it is necessary to do research for scientific confirmation to collect information on the effectiveness of the model QDPR in teaching pronunciation, especially at the higher education level.

The present researcher found some mispronunciations produced by the students majoring English Education at *Hamzanwadi* University in the academic year 2016-2017. For instance, the students still got confusion to distinguish the pronunciation of some similar sounds such as long vowel /uː/ and reduced vowel /ʊ/, long vowel /iː/ and reduced vowel /I/, and many others. According to Moedjito & Harumi (2008), there are 32 seriousness mispronunciations which are found in EFL learners that consist of 19 consonants and 13 vowels. Based on the phenomenon found in Department of English Language Education at *Hamzanwadi* University, the present researcher would conduct a research by taking focus only on two mispronunciation which were commonly made by the students when they communicate those were English vowels long /uː/ and reduced vowel /ʊ/, because most of them still got difficulties to distinguish the pronunciation of both of the sounds.

There are two priorities that should be taught and learnt in pronunciation teaching namely English vowels and English consonant. According to Celce-Murcia, et al. (1996) recommended some techniques for teaching English pronunciation such as (1)

listen and imitate, (2) phonetic training, (3) minimal pair drills, (4) contextualized minimal pair, (5) visual aid, (6) tongue twister, (7) practice of vowels shifts and stress shifts related to affixation, (8) developmental approximation drills, (9) reading aloud/ recitation, and

1. recordings of learners' production. These techniques can be implemented appropriate with the condition and situation. Based on phenomenon or the problems that found by the present researcher QDPR learning model is suitable to solve the problems. Therefore, the present researcher intended to conduct a research entitled by the implementation of QDPR Learning Model to improve university students' knowledge of English pronunciation and their ability to pronounce English back vowels /uː/-/ʊ/. The present researcher formulated the statement of the problems as follows:

a. Was there a significant contribution of Quiz-Demonstration-Practice-Revision (QDPR) Learning Model to university students' knowledge of English pronunciation in back vowels /uː/ and /ʊ/?

i. Was there a significant contribution of Quiz-Demonstration-Practice-Revision (QDPR) Learning Model to university students' ability to pronounce English back vowels /uː/ and /ʊ/?

B. Method

Participants

The population of the current study was the students majoring at English language education, *Hamzanwadi* University in the academic year 2016-2017 which consist of 348 students. The sample of the study was 15 students who met the inclusions criteria provided in the study, those were: (1) the participants had enrolled *English Pronunciation Practice* course, (2) the participants are supposed to have difficulty in English pronunciation, and (3) the participants involve voluntarily in QDPR Learning Model program. In addition to inclusion criteria, the present researcher referred to exclusion criteria: (1) the participants have attended at least 3 sessions of QDPR Learning Model Program and (2) for personal or other reasons, the participants withdraw themselves from the QDPR Learning Model Program.

Data Collection

Instrument of Collecting Data

There were three instruments provided in the current study, those were: (1) questionnaire, it used to investigate the existence and process of QDPR Learning Model. The main focus of the current study, the questionnaire dealt with the participants' perceptions of implementation of QDPR Learning Model, including (a) students' difficulty in pronunciation, (b) students' involvement in QDPR Learning Model Program, (c) steps of QDPR Learning Model, (d) teaching media used in QDPR Learning Model, (e) time allocated in QDPR Learning Model, and general conclusion of in QDPR Learning Model. The participants were required to share their perceptions of the investigated aspects in four-point Likert scale by choosing one of the provided options; (2) a written test, it used to measure the students' knowledge of English pronunciation. An 9-item written test of pronunciation was administered to the participants. Providing four different underlined-character words containing the target sounds, the participants were asked to decide whether the underlined characters had the same sounds or not. If they had the same sounds, they have to write 1 (one) in the provided brackets, otherwise, they write 0 (zero); and (3) an Oral performance test, it used to measure the students' ability in pronouncing English back vowels /u:/ and /ʊ/.

All the participants were asked to read loudly a 39-word passage in which some words with the target sounds have been identified, while reading the passage, the participants' utterances were digitally recorded. The recording was then presented to the experienced assessor who evaluates the target sounds based on British English. The target sounds were measured using three-point Likert scale (3 = accurate, 2 = not so accurate, and 1 = not accurate).

Techniques for Collecting Data

In collecting the data, the prepared instruments were sequentially administrated to the participants. The first was the Oral performance test, in this section the participants were given 10 minutes to read aloud a passage in which some words with the target sounds have been identified, while reading the passage, the participants' utterances were digitally recorded, then followed by the written test of students' knowledge of pronunciation within 75 minutes, and finally, the questionnaire on QDPR Learning Model within 50 minutes questionnaire, it used to investigate the existence and process of QDPR Learning Model.

Data Analysis

The collected data were then analyzed by performing some statistical test; first, descriptive statistic was used to examine the mean score and standard deviation of each of the investigated variables. Second, correlation coefficient analysis was used to examine the correlation coefficient of the independent variable to each of the dependent variables. The last, simple regression test was used to know the contribution of the independent variable to each of the dependent variables. These entire statistical tests were performed by using IBM Statistics SPSS 22 for Windows.

C. Findings and Discussion

Table 1

Summary of the Descriptive Statistics and Correlation Coefficients of the Investigated Variables in the Current Study

Investigated Variables	***M***	***SD***	**Correlation Coefficients**
QDPR Learning Model	88.94	4.21	
Students' Knowledge of Pronunciation	57.78	16.38	
Students' Ability to Pronounce English vowels /u:/-/ʊ/	88.94	5.20	
QDPR–Students' Knowledge of Pronunciation			

QDPR – Students' Ability to Pronounce English vowels /u:/-/ʊ/	.01
	.64*

Note: * $p < .05$

Table 1 presented the mean scores (*M)* of the investigated variables are 88.94 for QDPR Learning Model, 57.78 for the university students' knowledge of English pronunciation, and 88.94 for the university students' ability to pronounce English back vowels /u:/-/ʊ/. It meant that the mean score of the university students' ability to pronounce English back vowels /u:/-/ʊ/ was higher than their knowledge of English pronunciation. Submitting the collected data to paired sample t-test, we found that there was significant difference in the mean scores between these two variables, meaning that the students' ability to pronounce English vowels was relatively not similar to their knowledge of English pronunciation.

Concerning the association between the independent variable and the dependent variables, the results of the study have disclosed that the correlation coefficient between QDPR Learning Model and the students' knowledge of English pronunciation was .01 at $p > .05$ while the correlation between QDPR Learning Model and the students' ability to pronounce vowels was .64 at $p < .05$ Thus, we can see that QDPR Learning Model correlated significantly only to students' ability to pronounce vowels at moderate level as it was more than .40. While QDPR Learning Model did not correlate significantly to students' knowledge of English pronunciation at moderate level as it was lower than .40.

Table 2

Summary of Simple Regression Analyses of QDPR Learning Model for the Investigated

Dependent Variables

Dependent Variables	*B*	*SE B*	*β*	R^2
Students' knowledge of English pronunciation	55.43	1.08	.01	.00
Students' ability to pronounce English vowels	18.46	.26	.64	.41*

Note: * $p < .05$

Table 2 showed that QDPR learning model did not contribute significantly to the university students' knowledge of English pronunciation $R^2 = .00$ at $p > .05$, but QDPR Learning Model contributed significantly to the university students' ability to pronounce English back vowels /u:/-/ʊ/ $R^2 = .41$ at $p < .05$.It meant that 41% the university students' knowledge of English pronunciation were explained by QDPR Learning Model and the rest 59% were explained by the other factor which were not investigated in this study.

The finding of this study related to the previous study that was conducted by Moedjito (2016) on the title "Quiz-Demonstration-Practice-Revision (QDPR) in teaching long

and reduced English vowels to Indonesia EFL Learners. In the previous study QDPR Learning Model significantly increased the students' knowledge and performance of

pronunciation while in the current study QDPR Learning Model contributed significantly only to the students' ability to pronounce English back vowels /uː/-/ʊ/ but QDPR Learning Model did not contribute significantly to students' knowledge of

English pronunciation because the time that was used by the lecturer was not enough to teach two symbols or sounds (/uː/-/ʊ/). The previous researcher used 100 minutes to teach two symbols or sounds while the lecturer in this study only use 40 minutes to teach two sounds.

D. Conclusion

Although QDPR Learning Model did not contribute significantly to university students' knowledge of English pronunciation, but QDPR Learning Model contributed significantly to university students' ability to pronounce English back vowels /uː/-/ʊ/. Therefore, QDPR Learning Model can be an alternative learning model in pronunciation teaching especially for EFL learners.

References

Celce-Murcia, M., Brinton, D. M., & Goodwin, J. M. (1996). *Teaching pronunciation: A reference for teachers of English to speakers of other languages.* Cambridge: Cambridge University Press.

Crystal, D. (1997). *English as a global language*. Cambridge: Cambridge University Press. Graddol, D. (2006). *English next*. London: The British Council. Jenkins, J. (2000). *The phonology of English as an international language.* Oxford: Oxford University Press.

Moedjito, & Ito, H. (2008). Perceptions for the seriousness of mispronunciations of English speech sounds. *Teaching English as a foreign language in Indonesia (TEFLIN) Journal 19*(1), 70-91.

Moedjito. (2006*). A study on perceptions of pronunciation among Indonesian EFL teachers and students.* Unpublished master's thesis. Naruto University of Education, Naruto, Tokushima, Japan.

Moedjito. (2009). A search for factors determining global intelligibility of EFL learners' oralcommunication. *Annual Review of English Language Education in Japan (ARELE)* 19,51-60

Moedjito. (2016). Quiz-demonstration-practice-revision (QDPR) in teaching long and reducedEnglish vowels to Indonesian EFL learner. STKIP Hamzanwadi selong.

Tudor, I. (2001). *The dynamis of the language classroom*. Cambridge: Cambridge UniversityPress.

Walker, R. (2001). *Pronunciation for international intelligibility*. English Teaching

Professional 21. [online] Available at www3.telus.net/linguisticsissues/internationallyinttelligibility.html (24 May 2005).

Statistics Learning In Language Education Studies Program (Study on Arabic and Indonesian Language Education Program)

Mimi Alpian
Hamzanwadi University

Abstract

The study is aimedat determining the achievement of language education programstudents in statistical learning and its application to the final project. This research used ex post facto method. Sampling technique used simple random sampling. The sample of this research consisting of 27 students of IAIH Arabic language study program and 32 students of language and literature education of FKIP University Hamzanwadi University who had taken statistics subject. Data collection method wasusing documentation, and interviews. Instruments used documentation tools, checklists and interview guides. Student achievement was seen based on the value of statistics that have been obtained that was strengthened by interview on the students result. The results showed that: (1) learning achievement of statistics student PBA and PBSI into good category based on the value already obtained; (2) there were still few students of Language Education study program using quantitative research (less than 5% of PBA students and less than 20% of PBSI students), it was indicated that statistical applications in the final project have not maximized; (3) Almost 75% of PBSI and PBA students who have good grades in statistics can not provide examples of statistical applications in language learning as well as their application in the final project preparation.

Keyword : Statistics Learning, Arabic Language, Indonesian Language

A. Introduction

Statistics is one of the courses in language education. The decision to make statistics as a subject is to support and facilitate the students to conduct various studies or research in the field of education and help them to maximize educational activities, for example in the field of research, assessment, evaluation of learning and so forth in accordance with the tridarma college, teaching, and community service.

AnasSudijono (2008: 9) explains that educational statistics is a science that discusses or develops principles, methods and procedures that need to apply and use as a framework of collecting, composing, presenting, analyzing the material in the form of figures related to education (especially the process of teaching and learning, and the conclusion, making forecasts and scientific forecasts on the basis of material collection and tangible information figures. Therefore, the course of statistics has an important role in helping students to interpretvarious information. The concrete implementation

can be seen when students as prospective teachers will remain in the data numbers of teaching which will be processed into meaningful information and will eventually be used as a basis for determining the steps or policies to be taken, according to student development.

Basically, each university has a similarity in terms ofproblems characteristics encountered during the learning process of statistics courses, as well as the problems that are owned by the Arabic language program at the Islamic Institute HamzanwadiSelong and Indonesian Language and Literature Study Program of HamzanwadiSelong University. Some problems found during the observation process at the two universities concerned, among others: (1) students were lack motivation to learn statistics; (2) students have perceptions if the statistic material are not in accordance with the language department that is being pursued, both in the Department of Indonesian language education of Hamzanwadi University and Arabic (IAIH); (3) the average student expressed the reason for choosing the language education department to avoid the exact material in statistics subject; (4) students do not know the benefits of statistics courses in the world of education or departments taken, and (5) students difficult to apply the statistics theories in education.

Based on some problems mentioned, the researcher took an initiative to conduct a study towards the learning phenomena on statistics subjects at language education program in IAIH and Hamzanwadi University. The title of the study was "*Statistical Learning in the Language Education Program (Study on Arabic and Indonesian Language Education Studies Program)"*.

B. Method

This research uses expost facto method. Sampling technique used a simple random sampling. The sample of this research is 27 students of IAIH Arabic language study program and 32 students from language and literature education of FKIP Hamzanwadi University who have joined statistics material in academic year 2015/2016. The data collection method used was documentation techniques, and interviews. Documentation is used to find out the learning outcomes based on the document of the value of the statistics lecturer. Furthermore, interview method is used to find out how far the knowledge of students in the statistical applications, the title of the thesis and the methods used in the thesis and strengthen the documentation obtained. Instruments used interview guides and documentation tools and checklist documents. Student achievement is seen based on the value on statistics collected through documentation techniques in the form of value documents obtained from

lecturer statistics that have been obtained and strengthened by the results of interviews on some students who used the sample of this study.

C. Discussion

People often equate the statistics term and statistics. Yet differences in existing writing have a fundamental difference in meaning. Statistics (Nurgiantoro,Gunawan, &Marzuki, 2009: 3) is a branch of science that observes and or develops ways of processing numerical data while statistics is a tool to process the data numbers so it can be concluded if statistics are statistical producers.

The above definition provides an overview that statistics and statistics have a strong relationship with various disciplines especially in the education. The world of education in fact can not be separated from the data in the form of numbers, especially the numbers that indicate or interpret the achievements of students or learners.

Basically statistics have quite number of definitions that are tailored to various disciplines. Uthman (2015: 20) distinguishes the notion of statistics can be divided into two, namely: (1) statistics is a description of data details that have been presented in the form of measures, numbers (numbers), graphs, tables, and images as a result of statistics ; (2) statistical is used to express know the size as a representative of the data set on a study.

The second expert opinion has a relationship to the first expert. Moreover, the applied statistical function in education that can not be freedfrom numbers is also described implicitly in the theory. Specifically, Sudijono (2008: 9) describes the definition of educational statistics in the sense of being a science, which is the science that discusses or develops the principles, methods and procedures that need to be pursued or used in the framework of collecting, composing, presenting, and analyzing the tangible data on educational matters (especially the teaching and learning process), and drawing conclusions, making estimates and scientific forecasts (in this case mathematically) on the basis of the collection of material in the form of figures.

If the above definition is concluded, it can be said that the course of educational statistics contains material or science that studies and develops principles and methods of collecting, composing, presenting, and analyzing data in the form of numbers relating to learning and learning or education. Therefore, it can be seen if the statistic has an important role in the world of education, especially for students who become prospective teachers who will perform various assessment activities and measurements using numbers.The function and use of statistics in education according to Sudijono(2008: 11) were:

1. Gaining a picture of the phenomenon or phenomenon that occurs in the world of education;
2. Following the symptoms or develop a symptom or event in the learning and learning process;
3. Performing test to know the differencesympton;
4. Knowing the relationship of the person;
5. Preparing the reports in the form of quantitative data concisely, and clearly,
6. Making a logical conclusion.

The importance of statistical learning for the education should be balanced with the quality of learning for prospective teachers with various study programs including IAIH NW Pancorarabic language learning program (PBA) and the Indonesian language and literature education program (PBSI) FKIP Hamzanwadi University. Here, the data statistics semester 4 PBA class of 2014/2015 and semester VI PBSI force 2015/2016 (same force) who are taking this year's thesiswill be presented.

Table 1. Statistics Data forsemester 4 PBA class of 2014/2015 and semester VI PBSI force 2015/2016

No.	PBA		PBSI	
	IVA	IVB	VIA	VIB
1	71.00	66.50	78.40	80.50
2	81.00	66.00	78.90	72.30
3	59.50	83.50	62.20	74.00
4	71.50	70.10	85.30	71.90
5	80.30	69.10	79.30	72.50
6	78.50	71.00	85.60	74.20
7	81.00	82.80	84.00	72.70
8	71.10	74.00	72.50	85.00
9	71.20	69.80	80.80	71.90
10	55.50	60.00	80.00	69.80
11	67.50	58.00	80.40	67.10
12	56.50	81.30	82.80	77.30
13	82.50	80.30	84.00	72.70
14	67.50	68.50	76.10	73.10
15	72.00	71.80	80.70	74.70
16	74.50	75.50	83.00	64.70
17	69.50	66.50	75.70	64.00
18	77.00	72.00	65.20	85.00

19	79.50	72.50	63.20	71.50
20	59.50	81.00	85.50	72.80
21	74.00		82.00	72.10
22	68.50		67.00	85.30
23			72.50	85.30
24			64.60	74.30
25			80.20	70.60
26			76.20	85.20
27			83.30	72.70
28			64.70	71.70
29			83.30	
30			74.60	
31			82.80	
32			80.90	
Average	**71.32**	**72.01**	**77.37**	**74.46**

Based on the value obtained if it is converted to the average value B, in detail the results of PBA students as follows: 10 students from class A and B got A, 6 students got a value of C and 26 students got B.

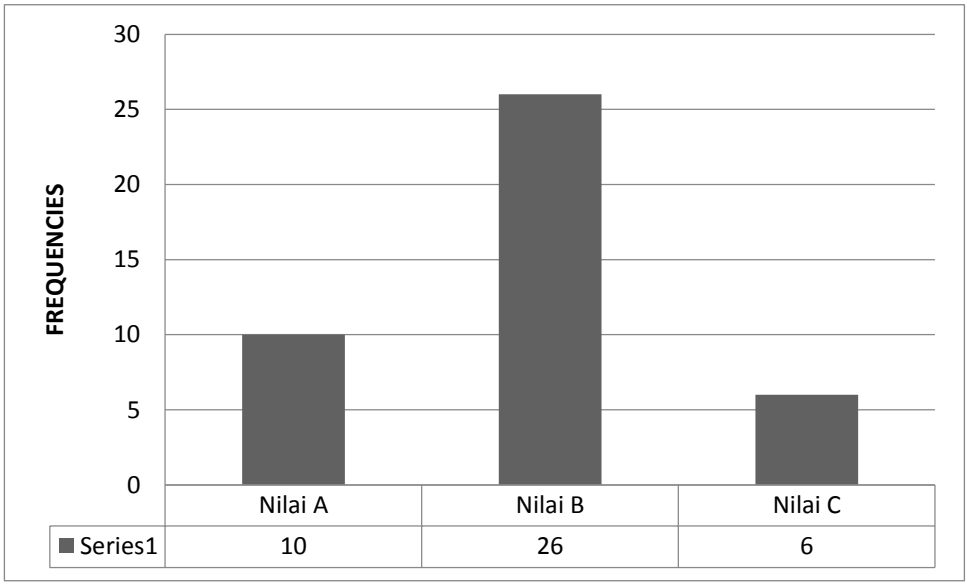


Figure 1. The Statistics Data semester 4 PBA class of 2014/2015

While for students PBSI 8 students got A, 10 students got a C grade and 41 students got a B.

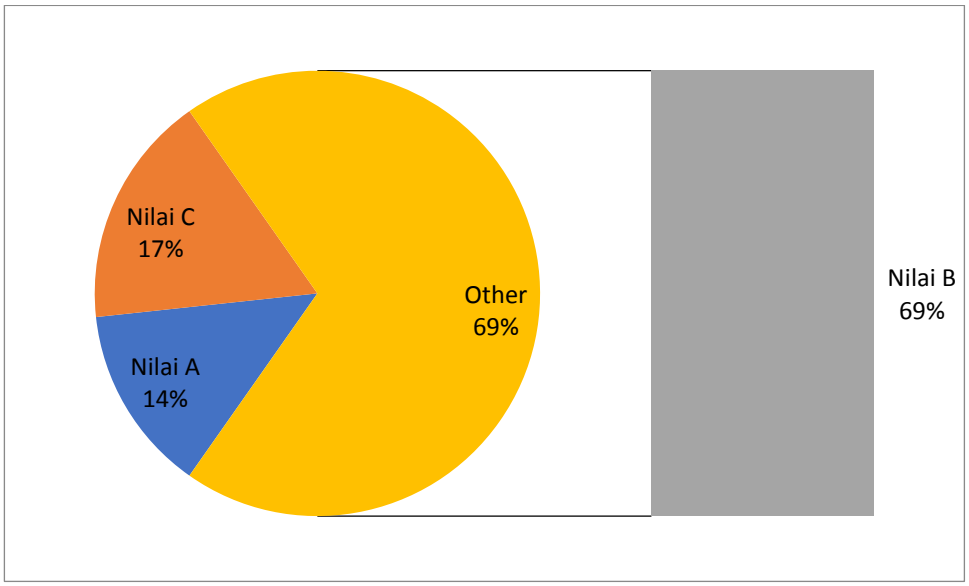


Figure 2. Data Statistics Semester 6 PBSI Class of 2015/2016

From results of the interviews conducted on 10 students at random who got the value of B or A related statistical applications in the world of education. Only 2 out of 10 students can answer the question well, this is due to several reasons, one of which is because students forget the material that has been studied. In addition, R3 and R7 students stated that studying statistics is difficult because it is related to formulas and numbers. Almost 75% of PBSI and PBA students who have good grades in statistics can not provide examples of statistical applications in language learning as well as its application in the preparation of the final project.

A good statistic score is obtained because IAIH students and Hamzanwadi University students different than math or physics education students who have motivation, and high self-confidence to study math related courses including statistics. This was reinforced by the results of Hamdi&Abadi (2014) which revealed that the average motivation of PGSD-Hamzanwadi University was 110 (high) and that of PGMI-IAIH students was 99.57 (medium), the average self-efficacy of PGSD-University of Hamzanwadi students was 86.61 (high) and that of PGMI-IAIH students was 81.55 (high).

Based on the final assignment of PBA students only one of 42 students conducting research with quantitative approach using correlation analysis, one reason is the tendency of language study program students using qualitative approach in the research and gaining quantitative approach will only be a problem and always associated with mathematical formula. In Indonesian Language (PBSI) study program.

There are still a few students of Language Education who use quantitative research (less than 10% of PBA students and PBSI students), it is indicating that statistical applications in the final project have not been maximized. In PBSI study program every 25 students a maximum of 2 students were using quantitative and statistical analysis using correlation and t test.

Lack of students applies statistics in the final project because students were not given enough provision related to the example of statistical applications related to the study program. Based on the results of interviews R1 and R10 stated that "we do not get statistical lessons that practice directly using software or special programs statistical analysis so we do not dare to use statistics using manual calculations". Based on the opinion of respondents R1 and R10 because the statistic subject in language education background and have not mastered the program related to statistical analysis. One solution is to use two lecturers with background of statistics and languagebackground. The combination can be a collaborativeteachingteam. According to Syh-Jong Jang & Chung-Yuan Christian (2006) based on the results of research conducted by comparing the conventional learning method with teaching team teaching method turned out to show a significant difference because each lecturer will complete each other, especially in material that is from different areas. Another opinion from Hanusch, Obijiovor, &Volcic (2009) based on the research conducted at the University of Queensland informs that if collaborative methods can facilitate learners with varied knowledge from faculty members, students or learners can expose their knowledge to a variety of topics or themes and may also understand concepts with some points. The facts also proved how the enthusiasm of students in the approach used.

D. Conclusion

The expose facto research based on the document result can be concluded that the learning result of statistics on the language study program has been categorized both from the value of the students obtained. Therewere still few students of the Language Education study program using quantitative research (less than 10% for PBA students and PBSI students) it is indicating that the application of statistics in the final project is not maximized; Almost 75% of PBSI and PBA students who have good grades in statistics can not provide any examples of statistical applications in language learning as well as their application in final project preparation.

References

Hamdi, S., &Abadi, A. M. (2014).Pengaruh motivasi, self-efficacy dan latar belakang pendidikan terhadap prestasi matematika mahasiswa PGSD STKIP-H dan PGMI IAIH.*Jurnal Riset Pendidikan Matematika*, *1*(1), 77-87.

Hanusch F, Obijiofor L, &Volcic Z, (2009). Theoretical and Practical Issues in Team-Teaching a Large Undergraduate Class. *International Journal of Teaching and Learning in Higher Education* 2009, Volume 21, Number 1, 66-74 http://www.isetl.org/ijtlhe/ ISSN 1812-9129

Nurgiyantoro B, Gunawan, &Marzuki, (2009).*Statistika terapan untuk penelitian ilmu-ilmu sosial.* Yogyakarta: Gadjah Mada University Press

Sudijono A, (1987). *Pengantar statistic pendidikan.*Jakarta: PT Raja GrafindoPersada

Syh-Jong Jang & Chung-Yuan Christian. (2006). Research on the effects of team teaching upon two secondary school teachers.*Educational Research, Vol. 48, No. 2, June 2006, pp. 177 – 194*

Usman F.R. (2015). *Panduanstatistikapendidikan.*Jogjakarta: Diva Press

The Influence of *Problem Based Learning* (PBL) Model Towards Student's Analysis Capability Through The Activity of *Lesson Study* in Seventh Grade Student of MTs. Mu'allimat NW Pancor in 2016/2017 Academic Year

Hartini Haritani, Qudsiatun Hasanah
ritani.haritani@gmail.com
qudsihasanah50@gmail.com

Abstract

This research aims to discover the influence the influence of Problem Based Learning (PBL) model towards student's analysis capability through the activity of Lesson Study in seventh grade student of MTs. Mu'allimat NW Pancor in 2016/2017 academic year. This study is an experimental research that uses quasy experimental design in the form of pretest-posttest control group design. the sample of this research is VII E class as the experimental class and VII C class as the control group class. The research instrument is the analysis capability test for student through an essay with a total of 6 questions. According to data analysis result, the average score of posttest in experimental class is 68,47 and in control class is 59,84. The data was analyzed by using two parties T-Test with the method of polled varian. Hypotheses test result on reliance level of 5% shows that $t_{count} > t_{table}$ *which is 2,54 > 1,99 that has the meaning of* H_0 *is unacceptable and Ha is acceptable. Therefore, this research concludes that Problem Based Learning (PBL) model is influential towards student's analysis capability in seventh grade student of MTs. Mu'allimat NW Pancor in 2016/2017 academic year.*

Keywords: Problem Based Learning, Analysis Capability

A. Introduction

Education is an important factor in order to achieve one of the national objectives that recorded in the Preamble of the 1945 Constitution of the State of the Republic of Indonesia, that is to enrich the life of this nation, in the law number 20 Year 2003 about National Education System article 6. The attainment of education objectives relies on how the learning process experienced by the student. According to Sanjaya (2008: 15), the variables which influence the learning process are teacher, student factor, infrastructure, means and provided media, and environmental factor.

Teaching and Learning Activities are so influenced by the role of the teachers, starting from the preparation to the learning process. In teaching activities, the teaching

method applied by the teachers affect the learning process. The teaching method that is inappropriate with the materials will influence students' learning mood.

Learning natural science is very related to nature. Natural science learning process demands the students to be able to enhance their capability to analyze the cause and effect of natural phenomenons, such as environmental contamination in which the students are the part of that environment who play important role towards the goodness or badness of the environment. Environmental problems will always be global and become the main issue. Therefore, through natural science (biology), students are expected to be able to inovate and have scientific demeanor, since scientific method is used in solving those natural problems.

In the elementary education learning process, the teachers are not really providing a connection of the materials with contextual issues. The teaching that focuses only in one field makes student cannot develop, especially for high-level thinking, one of which is student's analysis capability. In this case, the teachers are only sharpening the knowledge (C1) and understanding (C2) aspects, yet less concerning the analytical capability (C4). In the real life, students often find problems surround them that related to environment, which makes it important to construct and accompany them in analyzing the existing problems, dismantle its cause and effects, and offer the solutions to solve the problems.

One of the learning models that can be used by the teacher to construct students' knowledge is *Problem Based Learning* model. According to Arends (Trianto, 2007: 68), *Problem Based* Learningis a learning approach in which the students carry out an authentic problem to construct their own knowledge, develop their inquiry and high-level thinking capability, boost their independence and self-confidence.

Besides the aforementioned problems, we usually confronted with the fact that teachers are reluctant to inovate the teaching and learning process. Therefore, *Lesson Study Learning Community* pattern is one of the solutions that can overcome that problem. According to Asri (2015: 58), *Lesson Study* is one of the alternative references to cope practical learning problems that seems less effective all this time. Whereas Garfield (2006) stated that *Lesson Study* is a systematic process used by Japanese teachers to test their teaching effectiveness to increase the learning result. To find out the success of a learning process, it is important to conduct an observation by the teachers collectively. Therefore by implementing *Lesson Study*, it is expected to enhance the learning quality through the phase of *plan*, *do*, and *see*.

B. Method

Type of study used is an experimental research. Based on the proposed problem, objective, and hypothese, the design that will be used in this research is the *Quasi Experimental* Design. This design has control group, but cannot fully functioned to control the external variables that influence the experiment (Sugiyono, 2012: 72-77).

As for the quasi experimental design that used in this research is the *Pretest-Posttest Control Group Design.* Within this design, there are two groups that chosen randomly and given the *pretest* with the intention to know the origin condition, whether there are differences between the experimental class and the control class (Sugiyono, 2013: 113).

The population of this research is all of the seventh grade students in MTs. Mu'allimat NW Pancor, which comprises 6 classes with the total of 215 students. As for the research sample, it was taken randomly and consists of VII E class as the experimental class and VII C class as the control class.

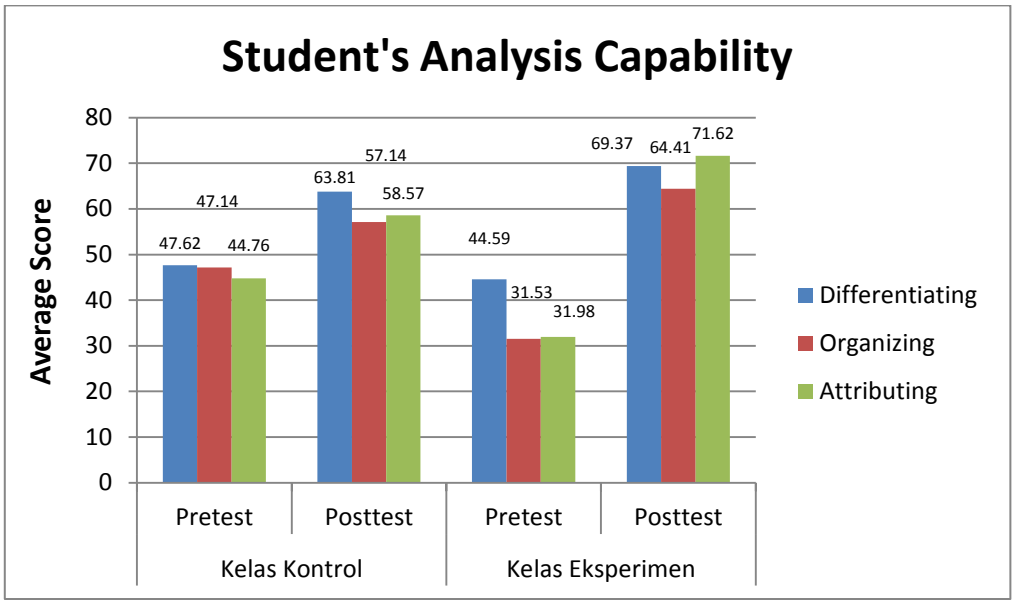
Instrument used is the essay test or description in the form of analysis thinking test for the students that arranged from three analysis capability indicators, such as *Differentiating, Organizing,* and *Attributing* in the subject of environmental contamination. There are 6 questions in the essay test on the analysis of the occurence of environmental contamination and its impact to the ecosystem and how to solve the environmental contamination problem.

The data that generated from this research is an interval data/ratio, therefore the data analysis technic used is the parametric inferential statistic with the formula of T-test.

C. Findings and Discussion

The result of data analysis shows that there is an influence of *Problem Based Learning* model towards students' analysis capability between the experimental class and the controll class, in which the experimental class is the students who are taught with the method of *Problem Based Learning* model, while the class control is given the conventional method. It can be seen from the final result of the test that presented to the students, in which the experimental class got higher average score (68,47) compare to control class' average score (59,84). As for student's analysis capability average score on each indicators, the experimental class got 69,37 on *Differentiating*, 64,41 on *Organizing,* and 71,62 on *Attributing*; while the control class got 63,81 on *Differentiating,* 57,14 on *Organizing,* and 58,57 on *Attributing*.

The result of average score on each analysis capability indicators can be seen in the following histogram:



Graph 1. Experimental and Control Class' Average Score Result on Each Analysis Capability Indicators

Students' analysis capability is higher when the *Problem Based Learning* model is applied, compare to the conventional teaching method (lecture and question-answer session), that is 68,47 for the prior and 59,84 for the later. This influence could take into effect since each phases in *Problem Based Learning* model support the development of students' analysis capability. Its teaching design is a collaborative process implemented in *Lesson Study* through predicting each students' capability, so that all of them are taking active role in learning proccess. Student with less-knowledge or less-understand the given materials are active in asking his or her classmate who comprehend the concept more. This research's result is in accordance with the statement of Duch, Allen, and White (Hamruni, 2009: 148) which stated that *Problem Based Learning* provides a condition to enhance critical and analytical thinking capability and solving complex problem in the real life that generates "thinking culture" in each students. The implementation of *Problem Based Learning* model brings significant influence. Students are more interested and enthusiast in following the learning process and they feel directly involved in a problem related to daily life (contextual).

In the experimental class, the strength of this learning process is using the *Problem Based Learning* model, so that the learning process is not focusing on the teacher and stimulate students' ability to analyze problems, especially those that related to environmental contamination. They also utilize interesting learning media, such as pictures and videos. However, the weakness of this learning process are the lacking

learning time management and class management need to be increased. As for in control class, the learning process is not effectively conducted since the process is basically teacher-centered. It lacks of student involvement and make the students tend to be bored due to less-interesting learning process, also students' source of knowledge is limited on teacher's explanation and book materials.

D. Conclusion And Recommendation

According to data analysis result the explanation in the previous section, the conclusion of this research is that the *Problem Based Learning* model is influential to students' analysis capability through the activity of *Lesson Study* in the case of environmental contamination. This is indicated from the higher average score of experimental class than the control class, which is 68,47, while the control class' average score is 59,84. Besides, it can be seen from the calculation of hypothese with the reliance level of 5%, the $t_{count} > t_{table}$ is 2,54 > 1,99. As for the learning process with the pattern of *Lesson Study,* it is also able to increase the quality of learning process in the classroom, since the teachers develop the process by sharing and collaborating with other teacher, conducting research by analyzing the learning process, based on the real fact, and focusing on student's learning process.

Researchers recognize this research is still lacking in so many aspects. Therefore, researchers expect to have a continuing research with broader topics and will strive to inovate to find the undiscovered problem for a betterment of this research.

References

Arikunto, Suharsimi. 2010. *Prosedur Penelitian Suatu Pendekatan Praktik.* Jakarta: PT Rineka Cipta.

Asri, H.I. *Meningkatkan Keterampilan Proses Sains Melalui Penerapan Metode Inquiry Terbimbing Pada Materi Jaringan Tumbuhan (Lesson Study Pada Mata Kuliah Anatomi Tumbuhan). Jurnal Pendidikan Biologi*: 58.

Baharuddin, dan Wahyuni. 2015. *Teori Belajar dan Pembelajaran*. Yogyakarta: Ar-Ruzz Media.

Fatmawati. *Pendidikan Karakter dalam pembelajaran Ilmu Pengetahuan Alam*. *Jurnal Pendidikan Biologi*: 310.

Hamruni, 2009. *Strategi Dan Model-Model Pembelajaran Aktif Menyenangkan*. Yogyakarta: Fakultas Tarbiyah UIN Sunan Kalijaga Yogyakarta.

Harianto dan Suyono. 2011. *Belajar Dan Pembelajaran Teori Dan Konsep Dasar*. Bandung: PT Remaja Rosdakarya.

Hasbullah. 2009. *Dasar-Dasar Ilmu Pendidikan*. Jakarta: PT RajaGrafindo Persada.

Huda, Miftahul. 2013. *Model-Model Pengajaran dan Pembelajaran*. Yogyakarta: Pustaka Pelajar.

Kuntidewi, Nafisah. 2017. IPA Terpadu *untuk SMP dan MTs. Kelas VII*. Surakarta: Putra Nugraha.

Marini. 2014. AnalisisKemampuanBerpikirAnalitisSiswaDengan GayaBelajarTipeInvestigatifDalamPemecahanMasalahMatematika. Hal. 4-5, (Online),(https://www.google.co.id/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cadrja&uact=8&ved=0ahUKEwj9kezAvOvSAhWJRY8KHfErAbEQFggZMAA&url=http%3A%2F%2Fecampus.fkip.unja.ac.id%2Feskripsi%2Fdata%2Fpdf%2Fjurnal_mhs%2Fartikel%2FRRA1C209069.pdf&usg=AFQjCNEXZzjMV9r45QDx5GKklp18DyZWOQ&sig2=j3JOZVLAh6H4JJN90Bq9wg&bvm=bv.150475504,d.c2I), diakses 23 Maret 2017.

Nur, Mohamad. 2011. *Model Pembelajaran Berdasarkan Masalah*. Surabaya: Pusat Sains dan Matematika Sekolah UNESA.

Riyanto, Yatim. 2010. *Metodologi Penelitian Pendidikan*. Surabaya: SIC.

Sani, R.A. 2015. *Inovasi Pembelajaran*. Jakarta: Bumi Aksara

Sanjaya, Wina. 2008. *Perencanaan & Desain Sistem Pembelajaran*. Jakarta: Kencana Prenadamedia Group

Slameto. 2010. *Belajar & Faktor-Faktor Yang Mempengaruhinya*. Jakarta: Rineka Cipta

Sudjana, Nana. 2011. *Penilaian Hasil Proses Belajar Mengajar*. Bandung: PT Remaja Rosdakarya

Sugiyanto. 2010. *Model-Model Pembelajaran Inovatif*. Surakarta: Yama Pustaka

Sugiyono. 2010. *Statistika Untuk Penelitian*. Bandung: Alfabeta

Sugiyono. 2012. *Metode Penelitian Kuantitatif Kualitatif Dan R & D*. Bandung: Alfabeta

Sugiyono. 2012. *Statistika Untuk Penelitian*. Bandung: Alfabeta

Sugiyono. 2013. *Metode Penelitian Kuantitatif Kualitatif Dan R & D*. Bandung: Alfabeta

Sugiyono. 2014. *Metode Penelitian Kuantitatif Kualitatif Dan R & D*. Bandung: Alfabeta

Sukmadinata, S.N. 2013. *Metode Penelitian Pendidikan*. Bandung: PT Remaja Rosdakarya

Suprijono, Agus. 2009. *Cooperative Learning Teori & Aplikasi Paikem*. Yogyakarta: Pustaka Belajar

Susilo, Herawati. dkk. 2009. *Lesson Study Berbasis Sekolah. Guru Konservatif Menuju Guru Inovatif.* Malang: Bayumedia.

Syamsuri, Istamar., dan Ibrahim. 2011. *Lesson Study (Studi Pembelajaran)*. Malang: FMIPA UNM.

Tim Perluasan dan Penguatan Lesson Study. 2013. *Buku Panduan Pelaksanaan Lesson Study Berbasis Hirarki Proses*. Selong: STKIP Hamzanwadi Selong

Tondowala & Hanry.2012. *Pengembangan Tes Objektif Pilihan Ganda Berbasis Taksonomi Anderson Dan Krathwohl Untuk Kemampuan Membaca Bahasa Inggris Kelas VIII Smp di Kabupaten Poso, Propinsi Sulawesi Tengah.* Tesis tidak diterbitkan. Singaraja: Universitas Pendidikan Ganesha

Trianto. 2007. *Model-Model Pembelajaran Inovatif Berorientasi Konstruktivistik*. Jakarta: Tim Prestasi Pustaka

Wena, Made. 2008. *Strategi pembelajaran Inovatif Kontemporer*. Jakarta: Bumi Aksara

Winarsih, Aini, dkk. 2008. *IPA Terpadu untuk SMP dan MTs. Kelas VII*. Jakarta: Grasindo

Winarti. 2015. Profil Kemampuan Berpikir Analisis Dan Evaluasi Mahasiswa dalam Mengerjakan Soal Konsep Kalor. *Jurnal Inovasi dan Pembelajaran Fisika*,(Online), 2 (1): 20-21, (http://ejournal.unsri.ac.id), diakses tanggal 23 Maret 2017.

Optimizing The Role of Parenting on Early Childhood Education Trough Lesson Study for Learning Community

Baiq Shofa Ilhami, [1], Muhammad Husni, [2]
[1,2] Hamzanwadi University
[1]shofa.ilhami@gmail.com, [2]mhd_husni@hamzanwadi.ac.id

Abstract

The family is the first former for the earlychildhood education process. As the closest environment where the children have the most interaction with, it required the involvement of parents in the learning process to achieve alignment between the school and home education program.

Optimizing of parent involvement in school can be realized by applying the learning community on learning process. One of the learning model that used the parent invovlment on the learning process is Lesson Study for Learning Community. On this lesson study for learning community, parents as the one who have more understanding about the children development and behavior, can give their learning concept from the preparing of lesson plan, observing the leraning process directly and give any suggestion for improving the learning process on the next steps.

Keywords: *parenting,lesson study, lesson study for learning community*

A. Introduction

In general, learning is basically an educator efforts to help learners in carrying out learning activities, it explores the potential of learners in order to develop in optimally. In this case, it requires the interaction between learners with their invironments, learners with the learning sources, learners with teachers, or lerners with their invironments. Therefore, the creative teacher in designing the learning process is needed as a new paradigm for improving the quality of education.

Similarly learning at level childhood education units, a creative teacher is absolutely necessary to make learninf fun for learners. Early childhood education is an education that conducted on children from birth to eight (Modul 1 Nest, 2007:3). The process of education and learning in early childhood should be done with the aim of providing meaningful concepts for children trough real experiences. It is the only experience that enables child to show the activity and curiousity in optimally as well as the educator is as a mentor, guide, and facilitator for the child. In early childhood,

the child gets the golden years that is the time when children begin to be sensitive to receive various stimuli. Sensitive period is the period and conditions that is ready for the stimulation response provided by the environment. This period is also a ground-breaking period for developing cognitive, motor, linguistic, socio-emotional, religious and moral (Levine & Munsch, 2011).

To optimize the development of cognitive, motor, linguistic, social, emotional, religious and moral abilities of children through the learning process, so the involvement of families, especially parents in the implementation of early childhood education is a very important thing that must be applied.Because the first education a child receives is education from the family, as well as most of the time the child at an early age is mostly spent in the family. So it takes the learning community in which not just involve teachers and early childhood education units, but also involve families, especially parents.

B. Body Text

Lesson Study

Lesson Study in the Indonesian language is defined as a *study of learning*. Lesson Study for Learning Community is a model of education professional development through collaborative learning with the main steps of designing learning to achieve the objectives, carrying out learning, observing the implementation of learning, and doing reflection to discuss the studied learning for improvement in learning plan next (Fernandez, 2002; Saito & Atencio, 2013). The main focus of the implementation of lesson study is the activity of the child in the classroom, assuming that the child's activity is related to the activity of the teacher during the classroom teaching.

In simply terms the purpose of lesson study activities is to improve the ability of educators who will impact on improving the quality of learning. Efforts to improve the ability of educators through Lesson Study can be done on groups of educators in a learning family in the education unit. Lesson Study is not a model or method of learning, but a model built to improve the ability of lecturers in implementing learning. Through Lesson Study lecturers can perform various approaches, methods, learning media oriented to students active, creative and mutually lesson. It is an attempt to achieve a distant goal (ie. the goal of national education).

In doing, lesson study has 3 stages of activities, namely: 1) Plan stage. At this stage, the development of Chapter Design and Lesson Design is carried out. In this step, a lesson plan lesson design was developed. To arrange the lesson plans is done internal workshops which are followed by designated teachers as models and other

teams consisting of teachers and other stakeholders involved in the learning process (such as school principals and others).2) Do stage, the teacher designated as the model (according to the plan that has been prepared) carry out the learning in the classroom in accordance with the agreed learning plan, while the other teachers in the group observe the learning course. If there is additional observer can come from the leader or interested community.The observer takes the observation sheet and the lesson plan takes place on the left, right, front or back of the student seat, which is important to see the student's face and gestures. Observations are emphasized in student learning activities whether by applying the learning plan that has been prepared together, students seem to learn with motivation and high spirits, the class comes alive, or there are students who need special attention, or other important things related to the learning process. 3) See stage, this stage is often interpreted with the stage of reflection. At this stage after completion of the implementation of the learning plan and observation is done as reflection activities, in the form of discussion, reflection led by a moderator and if necessary there is a notary.Teachers who first implement the lesson plan (model teacher) by the moderator are given the opportunity to convey the impression and other things that are considered important in implementing the lesson plan.Observers give responses or important points in the implementation of lessons that need improvement or need to be continued in the next cycle. The point of the observer should be based on the analysis of his observations, not just on the theory or opinion (Fernandez, 2002; Lewis, Perry, & Hurd, 2009; Peng, 2007).

Parenting on Early Childhood Education

The family as a first and main educational institution is expected to always try to provide the needs, both biological and psychological for children, and care and educate. Families are expected to produce children in order to grow into a person who can live in the midst of his community, and at the same time can receive, use and inherit the values of life and culture. Children are prepared by their family environment to undergo their developmental levels as provisions for entering the world of adults, language, customs and all cultural content is the work that families and their families do in survival by family.

Some theories explain about various things that related to the role of the family environment, especially parents in developing the potential of children. Beginning with Dacey's research on some family environmental factors that affect the growth and development of children: a) Genetic factors and parenting that affect child habits; (b) Rules of conduct, parents should not have much to determine the rules of behavior in the family. They define and emulate (model) a clear set of values, and encourage their children to determine what behaviors reflect those values; (c) The attitude of a

humorous parent, joking as a joke that is common in everyday life is admittedly enough to give color to a child's life; (d) Recognition and strengthening at an early age, taking into account signs such as a particular mindset or problem-solving ability before the child reaches the age of three. But most children say they feel a strong push from their parents; (e) Parents' lifestyles, in enough families, children have the same interests as their parents; (f) Trauma, the more traumatized child has the ability to learn from experience (Munandar, 1999).

Parenting Trough Lesson Study for Learning Community

In the era of scientific and technological development now, which has many negative impacts on the emotional and moral development of children (indicated by the increasing crime and decline of the cultural character of easterners in children and adolescents make parents more concerned with the education their children get at school The parents are increasingly competing to provide the best education by choosing the best schools for children from an early age to college.

The most important from parent is providing on education of children, especially in the early childhood education units provide a very positive impact on the development of potential children. However, it is seldom interfere with the innovation and creativity of teachers in learning because parents do not want to entrust their children fully to the teacher or because of parental complain on the learning process due to lack of parental understanding of learning plans that have been prepared by teachers.

These problems can be accommodated by implementing Lesson Study for Learning Community in the learning process which involve parents in collaboration groups starting from the process plan, do and see in the learning cycle. In the process plan, teachers and parents can collaborate on the lesson plans that will be carried out with a parenting pattern when at home so that teachers who will become models can enrich themselves in determining the strategies, models and methods to be used in the learning process. While in the process do, of course, parents can observe directly how the learning activities undertaken model teacher with a lesson plan that has been formulated together before. Furthermore, in the see process, teachers and parents can discuss the learning process that has been implemented in the form of evaluation and reflection on the suitability of the learning process with the lesson plan and how the students' responses and activities with during the learning process take place. This is certainly in accordance with the Law of National Education System no. 20 of 2003 in which the education is a shared responsibility between government, community and family. This role includes the participation of individuals, groups, organizations and so forth.

With applying lesson study for learning community in early childhood learning, the involvement of the community which in this case is the family, especially the parents is not only limited to involve in education but also involve of people know directly in the learning process itself by collaborating with the teacher.

C. Conclusion

The family is the first and foremost institution for the early process of children's education. The family is also a vehicle to develop the potential of a child toward the development of a positive and good personality. The parent involve children's education can be realized in various forms of parent-based activities through collaboration with teachers both at home and at school, to maximize the development and education of children in school for their benefit as parents, children and school programs. It is very important for the continuity of education at home and at school. Implementation of parental involvement will not be realized without the awareness and efforts of parents, especially the school, because parents will be actively involved if the school seeks to provide comfort for parents.

The otimazation of parental involvement in school can be realized by applying the learning process coaching. One model of learning process development in which parents can involve is lesson study for learning community. In this lesson study for learning community, parents can be involved directly and give their ideas as parents who better understand the development and behavior of children from the process of preparing the plan of learning (plan), observing the learning process directly (do), to provide input in order to improve the learning process at the next stage (see). So it is expected that the implementation of lesson study for learning community in early childhood education unit with parents who are involved in this group can build an educational ecosystem that fosters the character and culture of child achievement and make all aspects of child development can develop optimally.

References

Anonym. 2007. *Prinsip dan Praktek Pendidikan Anak Usia Dini*. Jakarta: Direktorat PAUD.

Diadha, Rahminur. 2015. Keterlibatan Orang Tua dalam Pendidikan Anak Usia Dini diTaman Kanak-Kanak. Edusentris, *Jurnal Ilmu Pendidikan dan Pengajaran*, Vol. 2 No. 1.

Fernandez, C. (2002). Learning from Japanese approaches to professional development: The case of lesson study. *Journal of Teacher Education*, 53(5), 393-405.

Levine, Laura E., & Munsch, Joyce. 2011. *Child Development*. London: Sage Publication, Inc.

Lewis, C., Perry, R., & Hurd, J. (2009). Improving mathematics instruction through lesson study: a theoretical model and North American case. *Journal of Mathematics Teacher Education*, 12(4), 285-304. doi: 10.1007/s10857-009-9102-7.

Munandar, Utami. (1999). *Kreativitas dan Keberbakatan*. Jakarta: PT. Gramedia Pustaka Utama.

Peng, A. (2007). Knowledge growth of mathematics teachers during professional activity based on the task of lesson explaining. *Journal of Mathematics Teacher Education*, 10(4-6), 289-299. doi: 10.1007/s10857-007-9041-0

The Development of Series Picture Media on Indonesian Language Subject of Writing Free Poetry Material

Arif Rahman Hakim[1], Saprudin Jauhari[2], Yul Alfian Hadi[3]
[1]*Hamzanwadi University*
[1]arif_geto@yahoo.co.id

Abstract

This study aims at developing Serial picture on the subject of Indonesian language of free writing poetry at five graders at SDN 2 Kelayu Utara in the school year 2016/2017. This study of research and development is done by using Borg and Gall development consisting of 6 stages. The subjects were all students in grade V b consisting of 22 students. The instruments used in collecting data were validation sheet, questionnaire and achievement test. Based on the result of experts validation, it was found that the product media images categorized as "good" with the acquisition of an average score of 4.33 from the actual score of 26 with a range of values of 20.4 <X ≤ 25.2. While the results of the validation subject matter experts found that the products are categorized as "good enough" with the acquisition value of an average of 3.2 out of 22 with the actual score value range 18.24 <X ≤ 23.76. Based on these results, it can be concluded that the product of series picture media development is effective and fit to use on learning in Primary Schools to improve student learning outcomes, particularly the subject of poetry.

Keywords*: series picture media, free writing poetry*

A. Introduction

Writing skills is a very important skill in life, not only important in educational life, but also very important in social life. By writing students can express or express ideas or opinions, thoughts and feelings they have. Writing activities that can be developed and can be implemented in the class include writing poetry. Poetry is one form of writing activities, students can express thoughts and ideas or ideas into the form of writing. For elementary school students writing poems still have difficulty in pouring words into poetry form. Many factors cause students to not express their feelings into poetry writing, one possibility is less optimal use of methods and learning strategies.

Based on the findings in SDN 2 North Kelayu shows that the skills of writing poetry free on students is still relatively low. Many students who write poetry are not his own works but rewrite the work of others. This is due to the teacher in delivering poetry writing material freely only by the method of lecturing and assignment.

Teachers do not use methods or media that can attract students' interest in learning. This is what makes students bored and feel sleepy while undergoing the process of learning in the classroom.

After knowing the problems that have been described above, it needs a solution in improving the quality of learning to be better. The first thing that must exist is the teacher's own awareness to continuously improve the quality of his learning. One of the efforts that can be done by teachers in improving the quality of learning is by developing learning media. Media that I will use the form of a series of media images. Serial drawings are media that can be used to stimulate and improve students' learning ability in writing, where students view them without being persuaded. The media of this series image can make the inspired students pour their ideas coherently and systematically in accordance with the events that occur.

Based on the above description then conducted research and development that the results bring benefits and can be implemented, with the title "Development of Media Pictures Berseri On Learning Bahasa Indonesia Subject Poetry Writing Free Grade Students Class V SDN 2 North Kelayu Year Learning 2016/2017".

B. Research Method

This research is a development research that aims to produce a product in the form of a series of media in the process of learning Indonesian language students V grade SDN 2 North Kelayu. In order for the product to be developed in accordance with the objectives, this development research adapts the development method of the Borg & Gall development model, (1983). Punaji Setyosari (2015: 292), this model consists of 10 (ten) research steps. However, it is simplified to 6 stages. The steps of research and development are as follows: (1) research and collection of preliminary information; (2) planning; (3) the development of initial product formats; (4) product trial; (5) product revisions; (6) field trials.

This preliminary research and gathering of information includes literature review, observation and preparation of preliminary reports. Initial research or needs analysis is very important to obtain initial information for development.

In this planning phase, the researcher formulates the skills, determines the sequence of activities and formulates the specific objectives to be achieved by the developed product. The goal is to provide strong information to develop the product, so that the products tested in accordance with the specific objectives to be achieved.

At this stage of the initial product format development, it includes the development of learning materials, learning process and evaluation tools (tools).

In the initial test phase, conducted on small groups, involving 6-15 subjects by giving pretest and writing free poetry then distributing questionnaires that will be collected and then analyzed. The results of the analysis of this initial test became the input material to revise the initial product.

At the stage of product tests that have been revised from the results of expert evaluation and then tested to the students of class V SDN 2 North Kelayu which amounted to 15 students as the subject. First the students are given an explanation of the variation of Borg & Gall model development learning which then performs the test by giving pretest questions. After completion of the experiment, students write free poems according to the medium of serial images then continued to fill out a questionnaire about the learning that has been prepared. The purpose of this small-scale trial is to find out the initial response of the developed product.

Results of small-scale trial analysis and revision of the first product, then conducted large-scale trials. This large-scale trial was conducted on students of class V SDN 2 North Kelayu, amounting to 22 students. First, students are given an explanation about the variation of learning of serial images, then doing the experiment of learning media development. After completion of the test, students fill out a questionnaire about the learning that has been done then analyzed.

The subjects of the experiment in this study are the serial images and instruments used in the study. While the object of testing is the students of grade V SDN 2 North Kelayu registered in the 2016/2017 learning year as many as 22 students.

The types of data obtained in this study are quantitative and qualitative. Quantitative data are numbers obtained from student learning outcomes at the time of trial, summation of student response questionnaire scores, and scoring of development product scores arranged on a scale (Likert Scale). Qualitative data in the form of responses, criticisms and suggestions are outlined in the questionnaire sheet about the appeal of instructional media and validator responses related to the feasibility or suitability of the product development that is made.

The instruments used in this research and development are validation sheet, questionnaire (student response questionnaire) and test result of learning. The validation sheet is used to collect data about the design validity of the initial product. The validation results are used to revise the serialized media product developed. This instrument consists of content / content validation sheet and media view validation sheet, which will be given to the validation team in their respective fields.

Questionnaire is a technique of collecting data which is done by giving written statement to respondent to answer instrument (Asmani, 2011: 123). Questionnaire given to the students is a questionnaire response to the media to assess the product

developed at the field trial stage. The test is a number of questions that have the right or wrong answers whose purpose is to measure one's ability level (Mardapi, 2008: 67).

Data analysis techniques used in this study using validation sheet where the results of the score of the material expert validation sheet will be done data analysis tailored to the data obtained.

In this research, the minimum feasibility value of product "C", with the category "enough". So the results of the assessment of material experts and media experts if it has given the final research results (whole) with a minimum value of "C" (enough), then the product of the development is considered feasible to use.

Data analysis result of questionnaire of student response can be arranged in the form of numbers that is 5, 4, 3, 2, 1, with the condition "Strongly Agree" is given value 5, "Agree" is given value 4, "Enough" is given value 3, "Less Agree "is given a value 2." Very Less Agree given the value 1. The numbers are then recapitulated so that it can be summed up the quality of the media. Therefore, the sheet filled by the student is marked (√) if the aspect has been fulfilled. So, the questionnaire is used to find out the student activity that describes the response to the developed product. While the test sheet of learning results used to collect data about student learning outcomes before and after doing learning using the media of a series of image learning.

C. Results And Discussion

The development undertaken in this research is developing learning media in the form of series image which will be used in writing free poetry which is also equipped with Master Book and Student Book.

Based on the foregoing, that prior to use in learning activities should be learning media beamed images already have the status of "valid". Validation is intended to get feedback and suggestions for improvements as assessment of learning media prior to the trial. The input or suggestion of each validator is related to the material aspects in which the validator suggests to reduce the existing theory in the teacher's book. However, the validator material also suggests adding examples of poetry along with an image related to the material. Furthermore validator with feedback from media display that is associated with the writing of the name of the media should be made for the sake of ease of understanding for the students at the sight of the media, made a numbered boxes in each place to hang a picture, as well as make image storage area along with supporting products.

The results of the data evaluation learning experts, as well as small-scale trials were analyzed. Furthermore, as a reference for revising the products have been made.

The revised product is then carried out with a test on the subject the greater the results improved from the results of previous trials.

Based on the data from the validation of the expert team from the material aspect showed that from 7 aspects of the assessment used to obtain an average score of 3.2 from the actual score obtained is 22. From the data, it can be seen that from the material aspect if calculated using quantitative data conversion formula to a five-scale qualitative data indicates that the product developed falls into the "reasonably good" category within the range of $18.24 < X \leq 23.76$.

Data validation of material experts from the media aspect shows that from 6 aspects of the assessment used in media product validation developed to get an average score of 4.33 from the actual score obtained is 26. From the data, it can be seen that from the aspect of the media if calculated using the quantitative data conversion formula to the five-point qualitative data indicates that the developed product belongs to the "good" category in the range of $20.4 < X \leq 25.2$.

Based on a questionnaire distributed to 22 respondents regarding their response to the serialized media, more learners said strongly agree if they learn to use the medium of the series image, in addition to fun, they also look enthusiastic in learning, active and vibrant. So that the student's response can be said positive to the learning. The achievement of student score reaches the highest value 95,5%.

From result of analysis of student learning evaluation at SDN 2 Kelayu obtained result from 22 student that if see result of objective test then 21 student is in complete category and 1 student is in category Unfinished. However, if you look at the results of the rubric writing score for the students of class Vb SDN 2 Kelayu Utara, the average student gets more results than the predefined KKM standard that is 55. From the result of writing free poem in accordance with the theme of the series, it can be stated that the maximum score was 95 and the minimum score was 65.

The final product review of the results of validation and revision of learning media in the form of media images of the series berkategori "good". Based on observations during the trial process also shows that students are so enthusiastic in learning when using the media image series that researchers develop. The following description of the results of the final product review is about the validity of the media and the effectiveness of the learning process.

Kevalidan Media Berseri from media experts stated that the average validation result is 4.33 with the category of "good". While the validity of the Book of Teachers the subject of free poetry gives an average of 3.2 results with the category "good enough".

D. Conclusion

Based on the result of the research, it can be concluded that the product of the development of the media of the series image is effective and feasible to be used in learning in elementary school to improve student learning result, especially poetry writing subject.

As for suggestions for students, hopefully the results of this study can help students in overcoming difficulties encountered in learning writing free poetry. In addition, with this study, students are expected to add sufficient insight into writing free poetry.

For teachers, it is better to give variations in learning, using new methods or interesting media, which can increase student enthusiasm. By using a variety of media it will make students happy and not bored in following the learning activities. For example, such as using a series of media images that can also be developed on sub-subject of the other.

E. Refrences

Arikunto, Suharsimi. (2010). *Prosedur Penelitian suatu Pendekatan Praktik.* Edisi revisi2010.Jakarta: PT Rineka Cipta.

Asmani, Jamal Ma'mur. (2011). *Tuntunan Lengkap Metodologi Praktis Penelitian Pendidikan.* Jogjakarta: DIVA Press

Mardapi, Djemari. (2008). *Teknik Penyusunan Instrumen Tes dan Nontes.* Jogjakarta: Mitra Cendikia Press.

Setyosari, Punaji. (2015). *Metode Penelitian Pendidikan dan Pengembangan.* Edisi ke-4.Jakarta: Kencana

Widoyoko, Eko Putro. (2011). *Evaluasi Program Pembelajaran Panduan Praktis bagi Pendidik dan Calon Pendidik.* Yogyakarta: Pustaka Belajar

Challenges of Teacher Collaboration to Improve Language Teaching: a Constructivist Perspective

Baiq Suprapti Handini
Hamzanwadi University
Sue.anh14@gmail.com

Abstract

Many english teachers in indonesia are not incompetent but the methods they use are several limited peer colaboration method. Collaboration among teachers paves the way for the spread of effective teaching practices, improved outcomes for the students they teach,and share the method they used. Raising the quality of teaching and boosting student achievement in high-needs schools require an intensive focus on a range of working conditions, including effective principals and appropriate teaching assignments. But what may be most important is adequate time to work with colleagues (with the same major, not only in the same school) and professional development that focuses on systemic, sustained, and collective study of student work where peers critique and help each other teach more effectively.

Keywords:*challenges of teacher collaboration, language teaching, and constructivist Theory*

A. Introduction

Nowadays teachers are both subject and object of learning (Avalos, 2010). They need to cooperate with each other to develop themselves professionally. While traditionally they waited for the educator to bombard them with externally imposed methods and techniques through crash teacher training courses, teacher now collaborate and learn from each other's experience. Since the outdated "master" role has changed (Avalos, 2010), teachers can learn from each other reciprocally. Societies of teachers that have gathered together to teach will create a helpful learning atmosphere which will change their practice (Fuolger, 2005). While it was formerly believed that theory improves practice, within this new paradigm, it is practice that improves practice and as such teachers no longer wait for externally imposed initiatives. Not only does collaboration improve teachers' professional knowledge and experience, but also it significantly improves student learning and achievement. Studies show that in schools where teachers collaborate on issues related to their teaching (e.g. curriculum, syllabus, teaching methods, etc.), students' achievements is higher. In other words, peers influence instructional practices which consequently

influence students' learning (e.g. Goddard & Goddard, 2007; Supovitz, Sirinides, May, 2010).

Teacher professional development efforts are often criticized by educators for their lack of continuity and ability to produce effective change in teacher practice and student learning (Loucks-Horsley, Hewson, Love, & Stiles, 1998). Collaboration is the "mutual engagement of participants in a coordinated effort to solve a problem together." Collaborative interactions are characterized by shared goals, symmetry of structure, and a high degree of negotiation, interactivity, and interdependence. Vygotsky's teaching and learning framework views students and teachers as collaborative partners who unite and work for common goals. Second language applications in the teaching perspective involve collaborative interactions as a meaning-making process between teacher and students, the teacher and the class, and students and students.

The roles of both teacher and student play an important part in the meaning – making process in the classroom. The teacher should recognize and take its role as a facilitator in his/her student's co-creation of knowledge. The teacher's guided assistance through his or her experiences and expertise of the subject is seen as a significant and influential factor in providing a challenging and stimulating learning environment. It must also be noted that the students' role in this meaning-making process takes a valuable contribution to learning. In other words, teacher's guidance and assistance and the meaningful input that students share during the discussions or interactions provide the basis of a more enhanced level of understanding. John-Steiner and Mahn (2011) states that in classroom learning, the student plays an active role and constantly informs the teacher as their mutual negotiation and collaboration build knowledge.

If the teachers really want to grew they have realized that: the era of isolated teaching is over. Good teaching trives when teachers and school leaders work together in strong professional learning communities 2. teachers thrives when they feel connected to their school and colleagues. They want more than a job they want to contribute to a group to make a difference3.the trademark of effective school is a high performance culture, in which all teachers take responsibility for the learning of all students

Literature review

Roschelle (1992) frames collaboration as an exercise in convergence or construction of shared meanings and notes that research on conversational analysis has

identified features of interactions that enable participants to reach convergence through the construction, monitoring, and repairing of shared knowledge. Convergence occurs gradually, but tends to include four elements: a) construction of an abstract understanding of the problem's deep structure; b) the interplay of metaphors; c) an iterative cycle of displaying, confirming, and repairing conceptions; and d) application of progressively higher standards of evidence for convergence. Similarly, Roschelle and Teasley (1995) define collaboration as "coordinated, synchronous activity that is the result of a continued attempt to construct and maintain a shared conception of a problem"

They define the joint problem space as the shared knowledge structure that supports problem-solving by integrating goals, descriptions of the current problem state, and awareness of potential strategies, as well as the links between these things. According to Roschelle and Teasley, collaboration takes place within this joint problem space, which provides the structure needed to allow meaningful conversations about the problem. To construct a joint problem space, partners must have ways to introduce and accept knowledge, monitor exchanges for evidence of divergent meanings, and repair any divergences identified.

Challenges of Collaboration teacher as a Model

There are inherent challenges of teacher collaboration. The dynamic relationships of teachers with diverse personalities consisting of independent belief systems can create unproductive collaborative models. Scribner et al. (2007) suggests that groupthink (Janus, 1982) and "unduly convergent thinking" (p. 72) are impediments of effective collaboration. In this vein, collaboration is both beneficial to teachers as effective, meaningful professional development, and is also meaningful as the influence of a school leader on student achievement.

There is also a challenge of attaining a common understanding of the concept of collaboration. Barth (1990) says that collaboration does not simply imply congeniality, rather it suggests collegiality, as one suggests simply getting along "in the tradition of method and strategy and little professional challenge," while the other "is about the tough work of examining student needs" (ctd. in Reeves, 2006, p. 87).

Collaboration, as a part of the professional learning community concept, is a recently popular school reform model. Collaboration must also be designed by school administrators and teachers who understand Schmoker's (2004) paradigm so that teacher collaboration groups are *communities of practice*. These communities of

practice allow educators to develop shared understandings and engage in cycles of inquiry around common purposes.

Collaborative learning is broadly defined as "a situation in which two or more people learn or attempt to learn something together," and more specifically as joint problem solving (Dillenbourg, 1999, p. 1). Roschelle and Teasley define collaboration more specifically as "mutual engagement of participants in a coordinated effort to solve a problem together," (as cited in Dillenbourg et al., 1996, p. 2).

Teacher collaboration in language teaching

There are two modalities to consider in the collaborative approach. On the one hand, teachers from different areas of knowledge collaborate in order to offer learning tools to students. On the other hand, students work collaboratively in the classroom to carry out the tasks proposed by the teacher. In both modalities, the roles of the teachers and students are different. In the first one, the teacher is central to the learning activity, facilitating the interdisciplinary tasks to the passive students. The teacher's role is more facilitative; to guide and channel the students in their learning. In the second, the teacher's role is less active, helping the students but not interfering in the learning process. We propose a third modality which combines these two, in which teachers and students collaborate in the design and evaluation of the teaching-learning activities, thereby taking into account individual and group needs of the students (Carrió Pastor, 2006). Collaboration implies interaction among the different members of the group and the different proposals should act as webs of knowledge that combine to offer unique results (Strijbos, Martens and Jochems, 2004: 403).

Nunan (1991: 1) suggests a number of reasons for collaborating: In language education, teachers, learners, researchers and curriculum specialists can collaborate for a number of reasons. They may wish to experiment with alternative ways of organizing teaching and learning; they may be concerned with promoting a philosophy of cooperation rather than competition; they may wish to create an environment in which learners, teachers and researchers are teaching and learning from each other in an equitable way […]; or they may wish to experiment with ways of incorporating principles of learner-centredness into their programs.

Constructivist theory

Driscoll (2000) explains that constructivist theory asserts that knowledge can only exist within the human mind, and that it does not have to match any real world reality. Learners will be constantly trying to derive their own personal mental model of

the real world from their perceptions of that world. As they perceive each new experience, learners will continually update their own mental models to reflect the new information, and will, therefore, construct their own interpretation of reality. According to Jonassen (1994), constructivism is also often misconstrued as a learning theory that compels students to "reinvent the wheel." In fact, constructivism taps into and triggers the student's innate curiosity about the world and how things work. Students do not reinvent the wheel but, rather, attempt to understand how it turns, how it functions. They become engaged by applying their existing knowledge and real-world experience, learning to hypothesize, testing their theories, and ultimately drawing conclusions from their findings.

Constructivism is basically a theory which is based on observation and scientific study, about how people learn. It says that people construct their own understanding and knowledge of the world, through experiencing things and reflecting on those experiences (Bereiter, 1994). When we encounter something new, we have to reconcile it with our previous ideas and experience, maybe changing what we believe, or maybe discarding the new information as irrelevant. In any case, we are active creators of our own knowledge. To do this, we must ask questions, explore, and assess what we know.In the classroom, the constructivist view of learning can point towards a number of different teaching practices. In the most general sense, it usually means encouraging students to use active techniques (experiments, real-world problem solving) to create more knowledge and then to reflect on and talk about what they are doing and h ow their understanding is changing. The teacher makes sure he/she understands the students' preexisting conceptions, and guides the activity to address them and then build on them (Oliver, 2000).

B. Method

It is necessary for the qualitative researcher to consider his or her own paradigms and worldviews as these will act as information filters that inform the researcher's interpretations of data in the writing of qualitative research (Creswell, 2007).The accepted methodological structure for constructivis. Qualitative research requires the researcher to "spend extended periods of time interviewing participants and observing them in their natural settings in an effort to reconstruct the constructions participants use to make sense of their worlds" (Hatch, 2002, p. 15).

Constructivists believe that multiple realities exist within the same context, as each individual has his or her own unique perspectives through which occurrences are filtered. Guba and Lincoln (1994) believe that "realities are apprehendable in the form

of abstract mental constructions that are experientially based, local, and specific" (Hatch, 2002, p. 15). Further, for the constructivist researcher, Hatch (1985, p. 161) says that "knowledge is symbolically constructed and not objective; that understandings of the world are based on conventions; that truth is, in fact, what we agree it is" (Hatch, 2002, p. 15). Because of this epistemological stance in qualitative constructivist research, it is neither practical nor desirable for the researcher to be distant and objective from the participants and phenomenon being studied (Hatch, 2002, p. 15). Further, Teddlie (2005) reports "values play a large role in conducting research and in drawing conclusions from studies, and they see no reason to be concerned about influence"

C. Finding and discussion

All teacher or collaborators felt that open-minded and conflict-avoiding personality traits are the secrets of a successful collaboration. They were willing to play their role in a flexible manner, sometimes as a team player or sometimes as a leader by complying with the team's goal and direction, providing feedback on system design or leading the team to explore the problems respectively. They believed that when there was collaboration, collaborators should be willing to listen to comments, study problems arising from various domains and go for a winwin situation.

Collaboration works well when collaborators have the same goal and there is mutual understanding. Teachers' beliefs, practices and attitudes are important for understanding and improving educational processes. They are closely linked to teachers' strategies for coping with challenges in their daily professional life and to their general well-being, and they shape students' learning environment and influence student motivation and achievement.

Make a teacher study group may become a solution, A teacher study group (TSG) is defined as a group of teachers who meet on a regular basis to share and discuss professional topics and issues based on their shared interests, beliefs, and practices (Pfaff, 2000). Much research has documented that a TSG can be an effective avenue to support modern teachers who need to emphasize their ongoing lifelong professional development and can have a great impact on teaching effectiveness (Clair, 1998). Freeman (2001) believes that in a TSG "the content can be generated through reflection and discussion, or journal writing, or it may be triggered by a reading or other external input" (p.76). Forming local TSGs that get together to present the teaching problems they sense, stating them, and finally solving them through collaborative reflection and

discussion is an efficient alternative to the once popular teacher training courses, where teachers were at the consumer end of the initiatives.

Teachers report that the reflective conversations they have with other teachers – both in team meet-ings and informally with peer teachers - are critical to improving their classroom practice.Teachers will discuss particular students with colleagues, explore new pedagogical techniques, and review curricular materials, when working with other teachers.As one teacher notes, "We spend an hour fine-tuning teaching and dif-ferent protocols we use in the classroom.We have a direct discussion of how to make something better." Fundamentally, collaboration presents opportunities to try new skills or techniques in service of student learning.

How do teachers best increase their knowledge and skills?

1. Form: According to a study, teachers learn more in collaborative teacher networks and a study groups than with mentors or in traditional classes and workshop

2. Duration:sustained and better programs are better than shorter ones.

3. Collective participation: activities design for teacher in the same school grades and subjects are better than programs that target group of teachers who do not work together.

4. Content : program that focus on how to teach and also what to teach - content knowledege are key

5. Active learning: teachers need to observe and be observe to plan for classroom implementation to review students work and to be involved in cohort groups where they are actively writing, presenting and leading

6. Coherence :teachers need a to percieve professional development as a coherent part of other activities at their school such as meeting state standard or adoption of new textbook.

Constructivist notions of collaborative construction, context, and conversation (Jonassen et al., 1995) are crucial components in teacher study group communication. TSGs build up a community in which teachers interact with a small group of people (ideally four to six) to share their hopes and concerns. In study groups, the teachers bring their specific needs and explore their profession together to identify problems and engage in ongoing professional development dialogue. By doing so, teachers can further comprehend their own experiences and the insights of other teachers, which

leads the group to a new vision (Freedman et al., 1999). This reflects Darling-Hammond and McLaughlin's (1995) professional development model that entails providing circumstances for teachers to reflect critically on their experience and to fashion new knowledge and beliefs about content, teaching, and learners.

Teacher effectiveness has less to do with individual attributes, and far more to do with the extent to which teachers work with each other and provide collective leadership for their schools and communities. Mentoring has been shown to increase new recruits' pedagogical practices, teaching effectiveness, and retention. However, new studies suggest that teachers *at any experience level* stand to gain from collaborative work. Teachers who have consistent opportunities to work with effective colleagues also improve in their teaching effectiveness.

Collaboration may build the knowledge base among teachers in a school or professional network, adding value to the education students receive. But precisely how much value does that peer learning have, measured in terms of student outcomes? Studies show that students perform better on tests of mathematics and reading when they attend schools characterized by higherlevels of teacher collaboration, creating a tipping point for sustained school turnaround.

D. Conclusion

How teachers collectively refine their teaching strategies in order to ensure that low-performing students reached their achievement growth targets. A master teacher within their grade level tested out new ideas for instruction that were generated by the whole team, to be sure that the innovations were effective before introducing them more broadly: Teachers who work in trusting environments have a basis for inquiry and reflection into their own practice, allowing them to take risks, challenge and critique each other, and collectively solve tough problems.And teachers who feel valued by their principals, and believe they are afforded professional respect, are also more likely to stay in teaching and produce whole school improvement (including student achievement gains).

E. References

Alesha Daughtrey, Barnett Berry and Alan Wieder (2009). Collaboration:Closing the Effective Teaching Gap, journal vol. 1 December CTQ. New york

Bereiter, C. (1994). Constructivism, socioculturalism, and Popper's World 3.Educational Researcher, 23 (7), 21-23.

Burns, Avalos (1999): Collaborative Action Research for English Language Teachers. Cambridge: Cambridge University Press.

Cynthia lee. (2008). interdisciplinary collaboration in english language teaching: some observation from subject teacher reflection. Journal vol7 no.2 . hongkong baptiste university

Creswell, J.W. (2007). *Qualitative Inquiry & Research: Choosing Among Five Approaches*. Thousand Oaks, CA: Sage.

Driscoll, Marcy. (2000). Psychology of Learning for Instruction. Boston: Allyn& Bacon

American educational research journal 2002 eisenhower

EdVestors.(2011).Embracing change: How outside support can set low performing schools on the path to success.Boston, MA.Retrieved from: http://www.edvestors.org/wp-content/uploads/2013/07/2011_Embracing_Change.pdf.

Hatch, J.A. (2002). *Doing Qualitative Research in Education Settings*. Albany, NY:SUNY Press.

Jenifer L roe.2007. Teacher collaboration the key to students succes, new york brocport college

Nunan, David (1991): Language Teaching Methodology. Hemel Hempstead: Prentice Hall.

Oliver, K.M. (2000). Methods for developing constructivism learning on the web," Educational Technology, 40

Roschelle, J. (1992) Learning by collaborating: Convergent conceptual change. *Journal of the Learning Sciences, 2*, 235–276.

Roschelle, J. & Teasley, S. D. (1995). The construction of shared knowledge in collaborative problem-solving. In C.E. O'Malley (Ed.), *Computer-supported collaborative learning* (pp. 69–97). Berlin: Springer-Verlag.

Scribner, J., Hager, D., & Warne, T. (2002) The paradox of professional community: Tales from two high schools. *Educational Administration Quarterly*, 38(1), 45.

Teddlie, C. (2005*). Methodological issues related to casual studies of leadership: A mixed methods perspective from the USA*. Educational Management Administration & Leadership, 33(2), 211-227.

Influence of Use of Project Based Learning (PJBL) LearningModels to Ability Think Creative Students of Ecosystem Materials Class X Sma Al-Hamzar Tembeng Putik Lesson Year 2016/2017

Indra Himayatul Asri
Hamzanwadi Universitty
zulkarnainindra97@gmail.com

Abstract

The purpose of this study was to determine the effect of the learning model Project Based LearningonCreativeThinkingAbility through activities Lessonn Ecosystem Study Material class X SMA AL-Hamzar Tembeng pistil in the academic year 2016/2017.
This type of research is peneliitian experiment with using quasy Experimental Design in the form of a pretest-posttest control group design. The subjects were students of class X SMA AL-Hamzar Tembeng pistil in the academic year 2016/2017 study was conducted over 2 meetings in May, the population in this study class X smester II shall be composed of two classes with the number of students by 51 students . Instruments in this study a creative thinking ability test in the form of an essay test, amounting to 5 items.
Based on the results of data analysis obtained by value - average posttest experimental classes namely 69.28 and 56.98 the control class. While the average value of post test of each indicator creative thinking is to think fluently (Fluency) = 80, think supple (Flexibility) =72, thought the original (Originality) = 49.27, while the control class average indigo post test perindikatornya of thinking smoothly (Fluency) = 63.57, think supple (flexibility) = 61.67, original thinking (Originality) = 42.62. While based on the hypothesis test using statistical analysis with t-test formula at the level of 5% was obtained t-count of 6. When compared with t_{table} *(2.01), then the* $_{t\text{-}count}$ *(6)>* t_{table} *(2.01) so the conclusion in this research is There is influence of Model Learning Project Based Learning Creative Thinking Ability toContent Ecosystem students of class X SMA AL-Hamzar Tembeng pistil in the academic year 2016/2017.*
Keywords: *project based learning, creative thinking skills, and lesson study*

A. Introduction

Learning is an activity that a person undertakes to gain change in himself through training or experiences. Thus, learning can bring change to the perpetrator, either a change of knowledge, attitude or skill. With these changes, surely the offender will also

be helpful in solving the problems of life and can adjust to the environment (Baharudin and Wahyuni 2015: 13-15)

In contrast to the results of observations in SMA Tembeng Putik Al-Hamzar. Based on the results of interviews with teachers, students are less active in learning activities, especially biology learning. The method used by teachers is still less varied (conventional) so that students are still less in issuing ideas / ideas, not infrequently the students just heard the lecture and recorded from the teacher explanation, especially on the material ecosystem Sub Flow Energy. Generally students are given Student Worksheet (LKS) which is cognitive (memorization / memory). As for the problems or tasks done in the LKS are still within the limits of low thinking, have not reached high-level thinking such as solving problems, especially in Creative Thinking. Such learning methods lead to the lack of attention, interest, and motivation of students in following the lesson, because in the pursuit of students rely more on the ability to memorize and memorize. It can also have an impact on the low development of students' abilities, so that when students are faced with a particular problem related to the environment, students will have difficulty in finding solutions to solve problems or find alternative solutions to problems.

One of the problems facing our education is the weakness of the learning process. In the learning process, children are less encouraged to develop a level of creative thinking. The process of learning in the classroom is directed to the child's ability to memorize information, the child's brain is forced to remember and hoard information without being required to understand the information he or she remembers to connect with daily life. As a result, when our students graduate from school they are smart theoretically, but they are poor applications (Sanjaya, 2010: 172).

Project Based Learning (PPA) is a learning model that provides the opportunity for teachers to manage the classroom with project involves work. Through project work learning, creative thinking skills and student motivation will increase. Work projects can be seen as a form of *open-ended contextual activity-based learning*, and is part of the learning process that gives a strong emphasis on problem solving as a collaborative effort undertaken in the learning process in a given period. Project work load tasks - complex tasks based on questions and problems *(problem)* is very challenging, and requires students to design, solve problems, make decisions, conducting investigations, as well as providing opportunities for students to work independently. The goal is for students to have independence in completing the tasks it faces (Wena, 2009: 144).

From the exposure necessary to study the "Influence Model-Based Learning *Project Based Learning* (PPA) to Creative Thinking Skills Students With Pattern *Lesson Study* On Content Ecosystem Class X Sma Al-Hamzar Tembeng pistil in the academic year 2016/2017.

Lack of professionalism of a teacher in the learning process can affect the student learning process. Thus, in this study also used a pattern where *Lesson Study Lesson Study* in Indonesia has a different name is replaced with the name of the study of learning in which the activities of this simple *lesson study* aims to improve the professionalism of teachers that will have an impact on improving the quality of learning. Efforts to improve teachers' capacity through study can be improved in teacher work groups, ie teacher work group (KKG) and subject teachers meeting (MGMP). Thus the development strategy of the learning studies in the two is certainly different. (Syamsuri and Ibrohim 2008: 69). Indirectly will provide andpak the teaching and learning process in the classroom that provides maximum results and increase keperofesionalan teachers in the class so that what you want to achieve in the learning process can be achieved.

Formulation of the problem

The problem of this study is whether there is influence learning model using *Project Based Learning* (PPA) to the creative thinking ability of students to use *the Lesson Study* pattern on the material of the Ecosystem in the academic year 2016/2017?

Purpose of Research

The purpose of this study was to determine the effect of the use of the learning model *Project Based Learning* (PPA) to the creative thinking ability of students to use *the Lesson Study* pattern on the material of the X-class ecosystem SMA AL-Hamzar tembeng Lesson pistil year 2016/2017.

Benefits of research

This research will provide information on project-based learning and cognitive thinking skills. The benefits include research is expected to be used as input / alternative for teachers and prospective teachers in implementing the teaching models that vary in order to improve the quality of learning.

B. Methods

Research Design

Quasi-experimental research design *used.* As for the form of *quasi-experimental* design used in this study is a *pretest-posttest control group Desaign.* In this design, there are two groups were selected at random, then given a pretest to determine the initial state is there a difference between the experimental group and the control group (Sugiyono, 2009: *112-113).*

Research subject

The *subject* of the study is limited to the X class of SMA T-shirt Tembeng Putik Lesson 2016/2017 with 51 students in two classes.

Instrument

Instruments are provided to students in the form of the test description *(essay)* as much as 5 questions about the subject matter sub Ecosystem Energy Flow. Each question contains indicators of creative thinking that fluency *(fluency),* flexibility *(fleksibility) and*authenticity *(originality).*

Data Analysis Technique

Data collected through the *pre-test* and *post-test* test test test for normality prerequisite that homogeneity of data, on average, and the t-test *(t-test).*

C. Results And Discussion

Based on this research, creative thinking abilities of students that learned with Model-Based Learning Project *(Project Based Learning),* the average value of 40.79 *pre-test* and *post-test* on the obtained increase in value by an average of 56.98. While the experimental class, the value of the average *pre-test* of 43.38 and the *post-test* is obtained increase in value by an average of 69.28.

As for the value perindikatornya tilapia *post test* for the experimental class, namely, to think fluently *(Fluency)* = 80, think supple *(Flexibility)* = 72, thought the original *(Originality)* = 49.27 and the value of *pre-test* is to think fluently *(Fluency)* = 47.24, think supple *(flexibility)* = 47.82, original thinking *(Originality)* = 34.78, while the control class indigo average *post test* perindikatornya namely, to think fluently *(Fluency)* = 63.57, think flexibility *(flexibility)* = 61.67, original thinking *(Originality)* = 42.62 and for grades *pre-test* on a control class that is, to think fluently *(Fluency)* = 45.71, think supple *(Flexibility)* = 43.57 original thinking *(Originality)* = 31.1.

Based on the results of t test analysis, the experimental class that has been given treatment with *Project Based Learning* learning model that is in class X MIA 2. After analyzed by t value *Pree test* and *post test* obtained by value $_t$ 6, while the known value of t $_{table}$ with df = N-1 = 22 at the 5% level is 2.02. sehingg, obtained THAT $_{t>}$ t $_{table}$ (6> 2.02). thus, Ha which reads " Denagn Learning *Project Based Learning* Model *LS* Berpengerauh With *Pattern* Against ability to think creatively Class X to Content Ecosystem SMA AL-Hamzar Tembeng pistil in the academic year 2016/2017.

Not only the learning model that gives a good influence in this research the application of the pattern of lesson study in this study also provides benefits especially in the improvement for the next learning and help the teacher to more professional in the learning process. As was the case with the research we conducted at the high school-AL-Hamzar Tembeng Putik school in class X in this study we used two classes: control class and experimental class by equally applying the lesson study pattern but using different model as for the findings found by observers in both the control class and in the class of different experiments.

The results of the data analysis, shows that creative thinking abilities of students after learning applied to the model of project-based learning *(Project Based Learning)* influence higher than conventional learning (lecture and question and answer). The existence of this effect can occur is possible because each stage of the project-based learning model *(Project Based Learning)* support the development of creative thinking abilities of students.

D. Conclusions And Recommendations

Conclusion

Based on the analysis of data and the above discussion it can be concluded that there is significant influence learning model *Project Based Learning* Students Creative Thinking Ability Of Material *Lesson Study* Ecosystem With Pattern SMA AL-Hamzar Tembeng pistil 2016/2017 school year. The average value of creative thinking of the experimental class is higher than the control class. In the experimental class students appear more active, creative and earnest in following the learning process because it uses a model of learning that is new and has never been applied before so that students are more enthusiastic in following different learning process denagn in control class that uses only lecture method so that students are seen less active and creative in the learning process and looks bored.While based on the results of testing the hypothesis

shows that t-count> t-table, then Ho is rejected and Ha accepted. So it can be concluded that learning by using *Project Based Learning* model of the *LS* pattern berpengeruh to creative thinking abilities of students.

Suggestion

Based on the findings and experience in the field, the selection of less precise learning model for a competence can affect student's biology achievement. Therefore, it is necessary to pay attention to the advantages and disadvantages of the learning model approaches so as to select the appropriate model for a particular competency.

This project-based learning can be applied to other subjects in optimizing students' creative thinking skills. However, the material to be projected should be tailored to the characteristics of the subject itself.

E. Bibliography

Sanjaya, Vienna. 2010. *Planning and Design of Learning Systems.* Jakarta: Kencana

Sugiyono. 2009. *Methods of Education.* Bandung: Alfabeta

Wena, Made. 2009. *Contemporary Innovative Learning Strategies.* Jakarta: Earth Literacy

The Effcet Of Problem Based Learning (Pbl) Model Through Lesson Study On Students' Critical Ability

Laxmi Zahara[1], Norma Yunita[2]
[1, 2]Hamzanwadi University
[1]laxmi_zahara@yahoo.com, [2]ynorma76@gmail.com

Abstract

This study aimed at detemining the effect of Problem Based Learning Model on the ability of students' critical thinking through lesson on the topic of effort and energy. The method of research was an experimental research by using post-test-one control group design. Experimental class was treated by problem based learning, while the control class was taught by conventional learning through lesson study. Population of this research was the high school at Al Hamzar, Tembeng Putik of the X grade which consisted of two classes. Those were X Mathematics and natural science 1 and X Mathematics and Natural Science 2 with the total number or students was 58. The sampling thechnique applied was saturated sampling technique. Then, the instrument used in the present research was essay test which contained 6 items. The test arrangement followed the indicators of critical thinking with a variety of possible answers. Having implemented both in the experimental and in the control class, there were improvements in learning process in tems of managing the time, the students and doing aperception. Testing hyphoteshis result by uisng t-test showed t-test = 1. 25 and t-table in signifance level was 5% was 0. 07, so t-test> t-table which meant the alternative hyphothesis (Ha) was accepted and null hyphothesis (Ho) was rejected , it could be concluded that problem based learning thorugh lesson study was significantly effective in students' critical ability on the topic of effort and energy for the tenth garade students at Al Hamzar high school in the acdemic year 2016-2017.

Keywords:*problem based learning, lesson study, critical thinking*

A. Introduction

The progress of knowledge is growing rapidly demands development in every aspects especially in education. In accordance with the concept and implementation of 2013 Curriculum, reasonable and critical thinking ability was the background to arrange a curriculum which described on future competence. According to Ennis (1995) was "thinking reasonably and reflective by focussing on decision making about what to beliave and do. Ennis states there are five indicators of students' critical thinking ability, those are :1) Offering elmentary clarification, 2) starting basic support,

3) making inferences, 4) making advanced clarification, 5) arranging strategies and tactics. One of innovative learning models to gain knowledge is problem based learning model. Lloyd-Jones, Margeston and Bligh (as cited in Miftahul Huda, 2013: 271) explain main features to do problem based learning, namely: to initiate trigger, observing identified issues previously, and taking benefits to learn the further problem situation.

In doing optimal learning process, an activity which could imprive teacher's professsionalism is needed. According to Manabu Sato (2012) at a community learning school, Lesson Study was held from 30 times to 100 times in a year. Sato Masaki (2012) states that " Lesson study is a phyloshophical activity. Lesson Study covers certain activities such as arranging lesson plan, open class, reflection activity and making record of learning activity.

The aims of this research was to know the effectiveness of problem based learning model through lesson study in critical thinking of the X grade students at *Al Hamzar* senior high school *Tembeng Putik* in the even term of the academic year 2016-2017. Based on the theory previously stated, the author states hypothesis as follows: problem based learning model through Lesson Study was significantly effective in critical thinking ability of the X grade students at *Al Hamzar* senior high school in the even term of the academic year 2016-2017.

B. Method

This research belonged to experimental method which applied posttest only control group. This research was conducted at Al Hamzar senior high school Tembeng Putik in May of the academic year 2016-2017. The research population was all the tenth grade students at Al Hamzar Tembeng Putik which consisted of 2 classes with 58 students. Sampling technique of this research was all population sampling technique, because all population was taken as sample (Sugiyono, 2010: 68). Experiment and control class applied lesson study pattern, the difference was experiment class was taught by problem based learning model and control class was taught by conventional learning method. Independent variable of this research was problem based learning model learning through lesson study, while dependent variable of this research was critical thinking ability. The test used was only posttest critival thinking ability test. Furthermore, instrument used in this research was essay test which contained 6 items which was got form validity and reliability test. The test arrangement referred to critical thinking test with various possible answers. Data calculation in this reseach used

Normality test and homogeinity test, then to know whether the hypothesis was accepted or rejected the author used t-test.

C. Data Findings and Discussion

Lesson study at *Al Hamzar* Senior High School Tembeng Putik in academic year 2016-2017 was done in May 2017 with the observers were as follows 1) Ayu Rosalina Nasan, 2) Eka Sulistyaningsih, 3) Rifqi,S.Pd. 4). M. Salim Rahmatullah, 5). Maghfur Wahid, 6). Bq. Ariani Yuliastuti, 7). Sari Suharti Zumratul'aini and 8). Rabiyatul Hasanah.

Cycle 1 lesson study in experimental class

Plan of the first cycle was held in Thursday in 11th May 2017. The suggestion from the lesson study team which the author got were;1). Basic Competence included in lesson plan was the only main points of the basic competence which will be done in the instructional process, 2).discussion method was not included because it was summarized in the learning model; 3). There are too many indicators involved; and 5) The syntax of learning model was still too general.

Do and see/ reflextion was conducted on 12th May 2017 in mathemathics and natural X^2 room. Next, the inputs from observers among others were: 1) good. communication between students and teacher, 2) students' sitting position was not too in order; 3) learning process was good enough. 4) aperception was not too interesting or appropriate. 5) teacher give less attention to students, and there were some students who were unactive in group discussion. 6) the available was not used maximally and longer than the lesson hour; 7) good response from most students toward the lesson explanation from teacher models.

Cycle 1 lesson study control class

Plan was done on Friday 12th May 2017 in the mathemathics and natural science X2 room with the inputs among others were ; 1) there were too many Indicators and learning purposes in one meeting. 2) the activity and learning time were still general, they needed to be specified in order to make them clear.Do and see were conducted on Saturday 13th May 2017 in mathematics and natural science X1 room. While, the inputs proposed by the obervers at open class were: 1) in the beginning of lesson, students are allowed to be noise. 2) The students were busy wit themselves and inactive.

Lesson study cycle 2 experiment class.

Plan was done on Thursday 18th May 2017 with some inputs from the observers as follows: 1) indicators and learning purposes have been improved. 2) steps which would be done by the students have been noted in the activity and lesson time. 3) there was character observation form. Do and see were conducted in the 19th May 2017 in mathemathics and natural science X2 room and the inputs from the observers were as follows: 1) learning process was good enough. 2) interesting aperception because of the improvement from the previous meeting. 3). The students were getiing active during the main activity; 4) time management was good. 5) the students gave positive respond to the teacher and showed slight improvement from the previous meeting.

Lesson study cycle 2 control class

Plan was done on Monday in the 15th May 2017 at the campus park with the inputs proposed were : 1) indicator and learning purposes stated have been appropriate already. 2) activity and learning time have been stated in detail. 3) assessment has been adjusted to the learning purposes. 4) technique and content of the lesson plan which would be used in learning process have been improved.

Do and see were conducted on Tuesday in the 16th May 2017 in the tenth grade mathemathics and natural science 1 with the inputs from the observers were as follows: 1) students started to pay attention on the lesson which was taught by the model teacher, it was different from the first meeting, in the second meeting the students were organized well. 2) the students paid attention on the model teacher's explanation. Thus, from the explanation described from the first cycle to the second cycle then there was improvement of the experimental and control class in learning activity, in time management and students as well as improvement in aperception activity.

Cycle 1

Based on the research which was conducted at Al Hamzar senior high school Tembeng Putik, evaluation results of experimental class showed that the highest score was 70 and the lowest score was 50 with the mean score was 54. 3 in cycle 1. Whereas, from class or control class, the highest score was 60 and the lowest score was 25 and the mean score got was 49. The evaluation result of cycle 1 could be seen in following table 4.1 :

Table 1 Evaluation Result Data Of Experiment And Control Group

Class	Data number	The highest score	The lowest score	Mean score
Eksperiment	28	70	50	54. 3
Control	30	60	25	49

Cycle 2

Based on the research and data collection from the experimental class, the highest score got was 88 and the lowest score was 66, with the mean score was 77. Meanwhile, from the control class, the highest score was 75 and the lowest score was 46 with the mean score was 60. Evaluation result data of the experimental and control class could be seen in the following table 4.2.

Table 2 Evaluation result data of experimental and control group

Class	Data number	The highest score	The lowest score	Mean score
Experimental	28	88	66	77
Control	30	75	46	60

Normality testing was done by using chi kuadrat (x2). The calculated data were taken from the result of critical thinking evaluation from each class as what it was in the appendix. Normality testing result was shown in the following table 4.3.

Table 3 normality testing result in class experimental and control

Class	X test	X table	Criteria

Experimental	10.398	11.070	Distributed normally
Control	2.034	11.070	Distributed normally

From the table 4.3 above, it could be seen that x test of each group was lower than t table with the significance level 5%, thus it could be concluded that the two groups derived from distributed normal population. F test was used to know the data homogeinity in this research. Based on the testing result by using F test which divided the highest variant and the lowest variant, it was found that F test data = 1. 30 and F table= 1. 88 in the significant level 5% with dk denominator 28- and dk numerator 30-1 with F test< F table = 1. 30 < 1. 88.

Thus, the students' ability of both group was homogen. Hypotheses proposed in the previous sub heading would be testes by t-test while the criterion was if t-test > t-table then Ha proposed were accepted and Ho were rejected. It was obtained that t-test score = 1. 25 and t-table score = 0. 07 in significant level 5 % with df = 56. It meant that " problem based learning through lesson study was significantly effective in students' critical thinking on effort and energy topic for the X grade at Al HamzarTembeng Putik in the academic year 2016-2017.

Based on the constructivistics theory, Vigotsky states that " students should be independent to overcome their own problems in learning process start from identifying problem to drawing conclusion. Those abilities belonged to students' critical thinking which could be trained through learning activity with problem based learning model thorugh lesson study. Finally, instructional process which has been accomplished by the students would be more menaingful.

D. Conclusion

Based on the research result, data analysis and discussionas well, the conclusion drawn was "problem based learning learning model through lesson study was signifcantly effective in the students' critical thinking abillity on effort and energy topic at X grade *Al-Hamzar* senior high school *Tembeng Putik* in the academic year 2016-2017"

E. References

Arikunto, Suharsimi. (2010). *Prosedur Penelitian Suatu Pendekatan Praktik.* Jakarta: PT Rineka Cipta.

Arikunto, Suharsimi, dkk. (2012). *Penelitian Tindakan Kelas*. Jakarta: Bumi Aksara.

Baharuddin, and Esa Nur Wahyuni. (2015). *Teori Belajar dan Pembelajaran*. Yogyakarta: Ar-Ruzz Media.

Ennis, Roberh. (1995). *Critical Thinking*. Universitas of Illinois.The New York Times Company. United States of Amerika.

Hamruni. (2009). *Strategi dan Model-Model Pembelajaran Aktif Menyenangkan*. Yogyakarta: Fakultas Tarbiah UIN Sunan Kalijaga.

Hasbullah.(2005) *Dasar-Dasar Ilmu Pendidikan Edisi Revisi*. Jakarta: PT Raja Grafindo Persada.

Hakim, Lukman. (2012). *Perencanaan Pembelajaran*. Bandung: CV WACANA PRIMA.

Hamalik, Oemar. (2001). *Proses Belajar Mengajar*. Bandung : Remaja Rosdakarya.

Hanafiah, Nanang dan Cucu Suhana. (2012). *Konsep Strategi Pembelajaran*. Bandung: Rafika Aditama.

Huda, Miftahul. (2013). *Model-Model Pengajaran dan Pembelajaran*. Yogyakarta: Pustaka Pelajar.

Konsep dan Implementasi Kurikulum (2013). *Paparan Wakil Menteri Pendidikan dan Kebudayaan RI Bidang Pendidikan*. Jakarta: Kementrian Pendidikan dan Kebudayaan.

Kowiyah. Kemampuan berfikir kritis. *Jurnal pendidikan dasar,* (online), 3 (5): 175-177, (http://www.um.ac.id), diakses 27 februari 2017.

Masaaki, Sato. (2012). *Dialog dan Kolaborasi di Sekolah Menengah Pertama Praktek* Learning Community. Pelita.

Nur, Muhammad. (2011). *Model Pembelajaran Berdasarkan Masalah.* Surabaya: Pusat Sains dan Matematika Sekolah UNESA.

Purwanto. (2008). *Evaluasi Hasil Belajar.* Surakarta: Pustaka Belajar.

Raharja, Bagus dkk. (2014). *Panduan Belajar Fisika 2A SMA kelas XI* . Jakarta: Yudhistira

Riyanto, Yatim. (2010). *Metodologi Penelitian Pendidikan*. Surabaya: SIC.

Sato, Manabu. (2012). *Mereformasi Sekolah Konsep dan Praktik Komunitas Belajar*. Pelita.

Sugianto. (2010). *Model-Model Pembelajaran*. Surakarta: Yuma Pustaka.

Sugiyono. (2010). *Statistika Untuk Penelitian.* Bandung: Alfabeta.

Sugiyono. (2011). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R & D.* Bandung: Alfabeta

Sugiyono. (2012). *Metode Penelitian Kuantitatif Kualitatif Dan R & D.* Bandung: Alfabeta.

Sugiyono. (2012). *Statistik Untuk Penelitian.* Bandung: Alfabeta.

Sugiyono. (2013). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R & D.* Bandung: Alfabeta.

Sugiyono. (2014). *Metode Penelitian Kuantitatif Kualitatif Dan R & D.* Bandung: Alfabeta.

Suprijono, Agus. (2009). *Cooperative Learning. Teori dan Aplikasi Paikem.* Yogyakarta: Pustaka Pelajar.

Syamsuri, Istamar dan Ibrahim. (2008). *Lesson Study (Studi Pembelajaran)*. Malang: FMIPA UNM.

Yuliana. Penerapan *Model Pembelajaran Problem Based Learning (PBL) Berbasis Local Material (LM) Melalui Lesson Study (LS) Untuk Meningkatkan Keterampilan Metakognisi, Keterampilan Inkuiri Dan Hasil Belajar Siswa Kelas X5 Sman 1 Mojo Kediri Pada Materi Tumbuhan,* FKIP UNS, 22 April 2015. (Online), (https://www.google.co.id), di Akses 23 Februari 2017.

Trait Based Assessment on Teaching Writing Skill

For EFL Learners

Maman Asrobi
Hamzanwadi University
mmnasrobi@gmail.com

Abstract

This study was conducted in order to investigate the effectiveness of trait based assessment on teaching writing skill for EFL learners. Designed as pre-experimental study with one group pretest and posttest design, it examined 20 students of the second semester of English Department of Hamzanwadi University in the academic year 2016/ 2017 as the samples. Purposive sampling technique was used in determining the samples. Writing test and analytical scoring rubric were the instruments used to collect the data. Then the data were analyzed by using descriptive statistics and paired sample t-test to test the hypothesis. The result of descriptive statistics analysis revealed that trait based assessment is effective on teaching writing skill for EFL learners since the mean score of posttest 60 was higher than mean score of pretest 28.20. While for hypothesis testing by using paired sample t-test at significance (2-tailed) value level was .000, it was lower than .05. Therefore, it means that the hypothesis of this study was accepted. In other word, trait based assessment was significantly effective in improving students' writing skill.

Keywords: *writing skill, trait-based assessment*

A. Introduction

Writing is the least popular language skill and most students consider writing is the least useful or necessary for them to be mastered. This is due to their assumption that writing has very little advantages for them in real life. However, they may miss that the skill of writing has special status in language skill. It is via writing a person can communicate a variety of massages to a close or distant, known or unknown reader (Murcia, 2001: 323).

Most EFL learners might agree when we say that writing is the most difficult skills for them to be mastered. The difficulty lies not only in generating and organizing ideas but also in translating these ideas into readable text and understandable. The skills involved in writing are highly complex. Brown (2001) and Hatta (2009) see that EFL writers have to pay attention to higher level skills of planning and organizing as well as lower skills of spelling, punctuation, word choice, accuracy, i.e. using the correct

forms of language. Writing accurately involves spelling correctly, forming letters correctly, writing legibly, punctuating correctly, using correct layouts, choosing the right vocabulary, using grammar correctly, joining sentences correctly and using paragraphs correctly. The difficulty then becomes more pronounced if their language proficiency is weak.

However, the need for hard work in writing should not be simply interpreted that more and more practice is further expected because a lot of practices in writing without any feedback do not always a guarantee of successful outcomes (Gere, 1992; McCrimmon, 1984). This view is approved by the result of the study held by Latief (1990) that showed the students' low paragraph quality, despite the numerous exercises on writing paragraphs and grammatical courses. Thus, hard work and plenty of exercises in writing must be completed with awareness that writing should be thought and assessed in an efficient way.

In accordance with the view that writing is a difficult skill to be mastered, the results of the preliminary observation were conducted to the students who take writing for general communication class in Hamzanwadi University showed that they had poor skills in writing recount text. Their problems covered the following aspects: (1) creating completeness, (2) formulating the claim/ proposition, (3) maintaining unity, (4) keeping coherence, (5) diction, and (6) grammar and mechanics. Besides, the students were observed to have poor habits of writing, as they were not used to writing regularly instead of fulfilling the assignments given by the teacher. They were observed that they did not consider seriously what to write and how to write the ideas as they concerned most on finishing their papers. As an addition, they were also observed to have poor participation and unconfident to their writing.

Through the preliminary observation, it was also discovered that the writing practice was emphasized on the end result or product based writing without any feedback to the students about their writing. During the writing practice, the lecture firstly introduced the concept or pattern of writing that was going to be practiced in the class. After the concepts were clear, he gave the students a model paragraph to be discussed usually in terms of the development and organization of the ideas, the shift of the ideas, grammar and mechanics. Then, he asked the students to write paragraphs of the same kind of pattern. Finally, the paragraphs were collected for grading. These activities failed to improve the students' ability in writing skill.

However, several solutions can be proposed in order to improve the students' skills in writing. One solution is by using an assessment. Assessment is an important

component in teaching writing skill. Here, to improve the quality of students' writing ability can be reached not only through improving the quality of teaching but also through the quality of assessment. Assessment in writing skills needs to be done professionally and appropriately, so that the teacher is able to diagnoses the weaknesses and strengths of the students in writing. So, the result of writing assessment can be used as a basis for making decisions in the teaching writing process in order to achieve the teaching and learning process more optimal. This is the idea to put forward by trait based assessment that tries to analyze and diagnoses the students' weaknesses and strengths more detail about their writing. Thus, it is expected that they can improve their writing skill after solve their weaknesses and develop their strengths.

Dahl and Farnan (1998) state that as an assessment, trait based assessment offers the most proper information because each elements in writing is assessed separately by every characteristics marked with scales which show how good the texts are produced. Then, trait based assessment enables objective measurement and assist teachers to decide which parts of the students' writing must be improved (Steineger, 1996). As an addition, by assessing students' writing separately, a teacher could provide positive feedback to the parts which the students understand (Isernhagen & Kozisek, 2000).

Based on the complex difficulty faced by the learner in learning writing skill, this study attempts to investigate the effectiveness of trait based assessment on teaching writing skill. Based on the illustration above, the researcher **is** quite sure that trait based assessment can meet the challenges and weakness of EFL learners' writing ability and may improve it. Thus, the results of this study provide (1) the descriptions of the model of trait based assessment that can improve the students' skills in writing recount text, (2) the descriptions of the students' performance after the implementation of trait based assessment and (3) the descriptions of the students' responses to the implementation of trait based assessment.

B. Method

This study used pre-experimental with pretest-posttest design since this study concerns with investigating the effectiveness of trait based assessment on teaching writing skill for EFL learners. Even though there were 102 students altogether in the writing for general communication class of the English Department of Hamzanwadi University in the academic year 2016/ 2017, only twenty of them were selected as the subjects of the study. This decision was made in order to allow the researcher to make

a detailed observation and assessment on the students' performance and on the teaching and learning process, which further allow them to make a detailed analysis of the results of the observation and assessment. As an addition, the twenty selected students were those who were considered to perform the poorest in the writing class, particularly in composing recount text.

To obtain the data, the researcher used writing test in form of essay test and the scoring system was determined by an analytical scoring rubric. The criteria of evaluation used the scale (1-5) by Brown (2007) in which writing ability was valued from 5 variables, namely: content, organization, grammar, vocabulary, and mechanics.

Then, the data obtained from pretest and posttest was analyzed using descriptive statistics and paired-sample t-test to test the hypothesis. Based on the result of data analysis, the highest score on pre-test was 36 and the lowest score was 24. While, on post-test, the highest score was 72 and the lowest score was 52. In addition, the mean score of pre-test was 28.20 and standard deviation was 3.995, meanwhile the mean score of post-test was 60.00 and standard deviation was 6.358.

Meanwhile, for the hypothesis testing by using paired sample t-test, the researcher determined the confidence interval of the difference was 95% and the standard significance (2-tailed) value level was .05. The result of paired sample t-test showed that the sig (2-tailed) is much lower (.000) than .05, it means that the hypothesis of this study is accepted. So, trait based assessemnt is significantly effective on teaching writing skill for EFL learners.

C. Findings

The preliminary observation on pretest confirmed that most of the students had problems in writing recount text in terms of content, organization, grammar, vocabulary, and mechanics. From 20 subjects under studied, the result of pre-test proved that they have problems in writing ability. The data showed that their writing ability before accepted treatment was at level of "very poor" it can be seen from the mean score obtained (20.28) that was categorized into "very poor". Detailed data on students' achievement in pre-test can be shown as follows: 18 students (90%) fall into category of "very poor", and 2 students (10 %) were categorized as "poor", and no one of the students achieved category of sufficient, high, and very high. Therefore, from the above data it can be concluded that all of the samples (100%) still have problems in writing ability and they need to be helped to improve their writing ability.

The result of students' writing provides clear descriptions of the problems encountered by the students in writing recount text. Besides, it was also observed that they did not have good writing habits and were not well motivated to do their writing activities.

The findings showed that the assessing activity using trait based assessment was in general good and smooth, since the researchers could carry out the writing practice on the basis of the already developed plans. In carrying out the practice, the researchers employed the steps, such as (1) Prewriting, which covers making a discussion of what recount text is, making a discussion of what trait based assessment is, selecting a subject to write, determining the audience and determining the purpose; (2) Planning, that is through brainstorming; (3) Drafting, which covers drafting a scratch outline, the hypothesis, a discovery draft, a descriptive outline and the formal outline; (4) Revising, which covers the sharing for global and proofreading for local revision; (5) Writing the paragraph; and (6) Evaluation.

In addition, the post-test results further demonstrated that their writing ability improved significantly, it can be proved with a total mean score 60 that categorized into "average". Detailed data on students in the posttest can be displayed as follows: 0 students (0%) that goes into the category of " very poor", 13 students (56%) obtained a score of 56-64 and categorized into "average", 3 students (10%) obtained a score of 68-72 and categorized in the "good", and 0 students (%) categorized into "very good". Therefore, from the above data it can be concluded that the majority of students 16 (73.09%) have achieved an "average" category on their writing ability.

Table 01: Detail number of errors on students' writing

Aspect	Pre-Test		Post-test	
	Total Error	Percentage	Total Error	Percentage
Contents	81	13 %	28	9 %
Organization	65	10 %	29	10 %
Grammar	246	38 %	100	33 %
Vocabulary	160	25 %	102	33 %

Mechanics	89	14 %	44	15 %
Total	**641**	**100**	**303**	**100**

The subjects' skills showed improvement in the post test as shown on their evaluated writing papers. They could select the subjects to write, decide their audience, determine their purpose, draft their paragraphs, revise them and at last rewrite them. Table 02 verified that their writings improved in terms of completeness, topic sentence, unity, coherence, diction, grammar and mechanics.

The students' responses in teaching and learning activities were positive, as they participated in the teaching and learning activities well, paid attention on the teacher-researcher's explanation closely and did the instructions given to them enthusiastically. They also admitted that they were happy in joining the class.

D. Discussion

The result of this study revealed that trait based assessment was significantly effective on teaching writing skill for EFL learners. This type of assessment is significantly effective because the information on learning progress was collected in detail and comprehensively in an enjoyable athmosphere, and always offer opportunity for students to show not only what they know, understand and what they can do but also the problems and difficulties which they often face in learning writing.

In writing skill, students are demanded to be able to explore and to motivate themselves to produce their ability in responding, and solving all problems they found. By applying trait based assessment, those things can be done since students and teacher discuss about their texts directly. In discussion process, a teacher could provide suggestion and motivation on students' writing detail and comprehensively.

In addition, by applying trait based assessment, students' learning achievement was not be compared to the group progress, but it was compared to the prior ability, so the students were motivated to revise their errors and improve their writing quality. In other word, trait based assessment helped the students to achieve what they wanted, instead of to judging them. Trait based assessment was also very effective to determine whethet there was learning progress or not and whether planned and on going assistance was needed or not, based on accurate facts or proofs.

Furthermore, by applying trait based assessment the teachers could improve learning system based on students' need because during learning process with trait based assessment, a teacher could know well what the students need to make their writing better. Having conducted trait based assesment, scoring and discussion result by the studenst offered suggestion for the teachers to improve learning program in the classroom.

E. Conclusions and Suggestions

On the basis of the above discussions, it is concluded that (1) the effective model of trait based assessment that can improve the students' skills in writing argumentative paragraphs consists of six main activities described in the discussion section; (2) the students' performance in writing argumentative paragraphs can be improved, as they can write with completeness, good and effective formulation of claim, good unity, good coherence, appropriate diction, and correct grammar and mechanics; and (3) the students were happy and joined the writing class actively, as they could master process approach well and get seriously involved in the teaching and learning process.

Finally, it is suggested to (1) the lectures-researcher and the other writing instructors in Hamzanwadi University to adopt or to consider the model of trait based assessment developed in this study in order to teach the students writing or to improve their writing skills; (2) other lectures-researchers that might be interested in the results of this study to see trait based assessment to teaching writing and the model of trait based assessment developed in this study as another possibility or alternative that requires deep consideration in conducting their study.

F. REFERENCES

Arnaudet, M. L. & Mary E. B.1990. *Paragraph Development: A Guide for Students of English.* New Jersey: Prentice Hall Regent

Basuki, Imam, Agus. 2012. *Pengaruh Penilaian Sejawat Dalam Pembelajaran Menulis Terhadap Kualitas Karangan Siswa Madrasah Tsanawiyah*. Jurnal Pendidikan dan Pembelajaran, Volume 19, Nomor 1, April 2012. Available online at: http://journal.um.ac.id/index.php/pendidikan-dan-pembelajaran/article/viewFile/3127/553.

Brereton, J, C. 1982. *A Plan for Writing*. New York: Holt, Rinehart and Winston.

Dahl, K. & Farnan, N. 1998. *Children's Writing: Perspectives from Research.* Newark,DE:.International Reading Association .

Dueraman, Bayatee. 2015. *The Crucial Point in Time Where Thai Students Are Introduced English Language Writing*. Avalaible online at: http://dx.doi.org/10.5539/elt.v8n9p96

Gay, L. R. Mills, G. E, Airasian, P. W. 2009. *Educational Research: Competencies for Analysis and Applications*. Ninth Edition. Ney Jersey: Pearson Education, Inc.

Gere, A, R. 1992. *Writing and Learning.* New York: Macmillan Publishing Company

Jodaie, Mina. 2011. *A Comparative Study of EFL Teachers' and Intermediate High School Students' Perceptions of Written Corrective Feedback on Grammatical Errors*. Available online at: http://dx.doi.org/10.5539/elt.v4n4p36

Latief, MA. 1990. *Assessment of English Writing Skills for Students of English as a Second Language at IKIP Malang Indonesia.* Unpublished Ph.D Dissertation. Iowa: Iowa University.

Moedjito. 2014. *Basic Statistic for Research in Language Education.* Unpublished Modul: STKIP Hamzanwadi Selong, Nusa Tenggara Barat, Indonesia.

Nguyen, H,T. 2016. *Peer Feedback Practice in EFL Tertiary Writing Classes*. Available online at: http://dx.doi.org/10.5539/elt.v9n6p76.

Sundem, G, M.M. 2006. *Practical Strategies for Successful Classrooms: Improving Student Writing Skills*. USA. Shell Education

Syakur. 1987. Language *Testing and Evaluation.* Surakarta: Sebelas Maret University Press.

Tabatabaei, Omid. 2012. *The Effect of Portfolio Assessment Technique on Writing Performance of EFL Learners*. Avalaible online at: http://dx.doi.org/10.5539/elt.v5n5p138

The Effectiveness of Team Pair Solo Method on Students' Creative Thinking Ability through Lesson Study

Muhammad Gazali
Hamzanwadi University
gazali_muhammad28@yahoo.co.id

Abstract

This research aims at knowing the effectiveness of team pair solo learning method toward students' creative thinking ability of mathematics class VII MTs NW Tebaban. This research used pre experimental design with one shot case study. Population of this research was seventh graders of MTs NW Tebaban, meanwhile, the sample of this research was students of class VII A. Technique of taking the sample was simple random sampling and used lottery system to decide the sample as experiment class. Meanwhile technique of collecting data, the researcher used questionnaire data and test. Both of the instruments were analyzed by descriptive statistics technique. Based on the data analyses for questionnaire, the average score was 60.5 and post-test was 59.9. While, to know the effect of both of the variables were obtained r-count >r-table (0,82>0,344) with standard of significant 5%, H_a was accepted. So, it could be concluded that there was positive effect and significant of team pair solo learning method toward students' creative thinking ability of mathematics class VII MTs NW Tebaban with coefficience of determination $r^2 = (0.82)^2 = 0.6724$. It means that the creative thinking ability of mathematics (67%) was affected by the use of team pair solo learning method and 23% was affected by another factor.

Keywords: *team pair solo learning method, creative thinking ability.*

A. Introduction

Mathematics is one subjects that must be mastered by students in learning process. Mathematics has a role as tool to develop the way of creative thinking and logic. "Creative behavior is result of creative thinking. Because of that, the education system should stimulate the thinking, attitude, and creative-productive behavior, beside logical thinking and reasoning" (ElihSolihat, 2010: 5). Studying of mathematics has important role to develop thinking system of students to master science and technology.

Based on the result of the observation and interview at school, the result of study and interaction between the teacher and students are still low. When the teacher gave the test, many students waited the answers from other students. In this case, the role

of teachers one of learning components is very important to determine the learning success. The involvement of students to do the test is still low, because there was a few students had learning motivation and summarize the material. So, the teacher should determine the form of learning activity which is able to activate the students in learning process (ElihSolihat, 2010: 6-7).

Diligence, accurateness, seriousness and creative thinking in studying mathematics is much needed. In this case, related to the learning approach that be used by the teacher, which helped the students to understand the material of learning and to solve the problems that had been faced in learning process.

One of methods could increase the creative thinking of students to solve a problem is team pair solo method. Riza said that in team pair solo learning method, the students that had a difficult to achieve the learning purpose that have been decided will obtain the additional subject from the group. So, the students will reach the result of learning suited with learning purpose that had been decided. This method stressed on aspect of social relation of students in group and stressed on individual cognitive aspect (Riza, 2013:2). Marilyn also stated that, this method was designed to help the students solving the challenging tasks that they could not do by individual. After small team was formed, the teacher gave a challenging problem. All team solved the problem. After some of the problems done, the team divided into separated partner. The teacher gave another challenging problem and the students solved it in partner. Next, the teacher gave new problem and asked every student to solve it individually. The reason of this strategy was every student built their self-confident in their ability to solve the challenging problem that the students could not individually. Then they could do it.

Team pair solo method was expected to increase cognitive ability of students to solve the problem that they faced in learning mathematics. In addition, the using of team pair solo learning activated students in learning mathematics by group and individually. So, mathematics was not felt like difficult subject. But, mathematics was a fun subject that made students interested to learn it and increased creative thinking ability of students.

B. Method

This study used pre experimental design with one shot case study. In this design, there was a group that got a treatment (X), then it was observed to determine or assess the effect of treatment. Sampling technique that be used in the research was sample random sampling that included sampling probability sampling technique. Simple

random sampling is the way to take the sample from population by randomly without looking the level of population. The researcher chosen to use lottery system to determine the sample that would be researched. The population in this research was whole of the students of class VII MTs NW Tebaban. There were four classes and 129 students. Meanwhile the sample used as the treatment was class VIIA, 34 students.

In this research, the researcher used two kinds of instruments to collect the data, which was a test (question in essay form). There was 8 question to obtain the data or value creative thinking ability of students in comparison material and closed-questionnaire data (question) there was 25 questions to get students response in team pair solo learning method.

Before the instruments of the test was used, firstly, the researcher did the instruments testing by validity testing capacity, difference, hard level, and reliability testing. For data analysis technique, the researcher analyzed it by descriptive statistic technique. Next, the researcher did analysis rules testing that included from normality testing by used chi-quadrate and linearity testing to know the data had pattern or not. After rules testing was conducted, the researcher did the hypothesis testing by using t-test.

C. Result and Discussion

Planning

In the process of the "plan" was done by all teams of lesson study of study program that lead by a moderator. Next, the model of teacher was gave a chance to describe the design of learning that had been made. Then, another team gave a comparison of the design that would be used. This plan was conducted 3 days before open class to discuss the role of learning that was used. In this occasion, the team of lesson study of program study was agree with team pair solo model that was used. In this case, lesson study team was agree with creative thinking of students became a focus on open lesson learning of algebra subject.

Doing

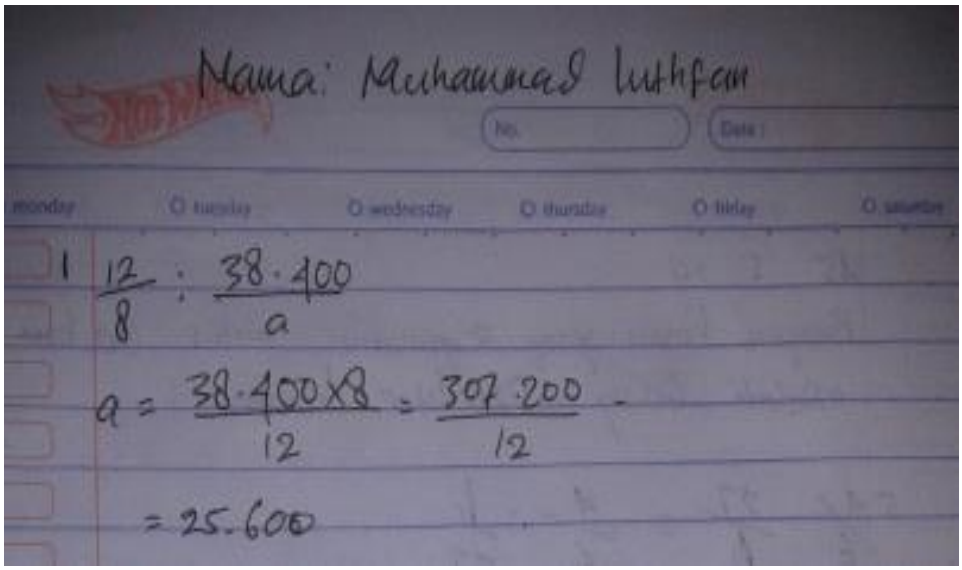
Nowadays, most of plan that was planned have a good result, the students discussed about the question that teacher gave in the middle of explanation. Some of questions were did by the students in part of study. Based on the observation, there were some students were not active to discuss in their group. The researcher found that one of them only stayed in the classroom and got nothing in their subject. In addition, the students also difficult to solve the problem that was gave by the teacher.

The next meeting, study was focused on what the teacher found in the classroom. Those are some students that did not understand and interested about what the teacher decided for them. This way was planned by the teacher with manipulate some problem that will be given by the teacher, the problem that was gave is open ended, so that way, the students have not active before, they can analysis the problem with another way than their group's. There is one interesting thing that was happened in this case. One problem that will be solved by the students have a different perception even they are in the same side. This did by the students who did not active in the teaching learning process before. The good design that was planned by the teacher look like that every student active and give their argument for the problem that was given.

The one of way to evaluate do in teaching learning process was every do that was conducted always doing the reflection. Teacher utterance the observation result that was did in reflection that was led by the moderator. Commonly, the effective condition was did, the students was seriously to see the teacher explanation and active in discussion, the strong pressured should be gave for the students, so that why they can active and creative to think about the problem that they faces.

The last evaluation from do in this lesson study was doing post-test, the next step is doing the data analysis by statistic descriptive. Based on the data that was gotten from the questioner by the students or the students response after did the team fair solo, the researcher got average value 60,5 and deviation standard deviation 11. Based on the data, the researcher can conclude that the questioner result was positive enough. In the other side, as the result of comparison material the researcher got the average value was 59, 9 and deviation standard was 13, 38. Based on the data, we can conclude that post-test students in average category. The suspension of the test refers to 4 indicators of students' creative thinking in mathematic ability that is frequency, flexibility, originality and elaboration. Following the example of analysis answer that students gave at each indicator question.

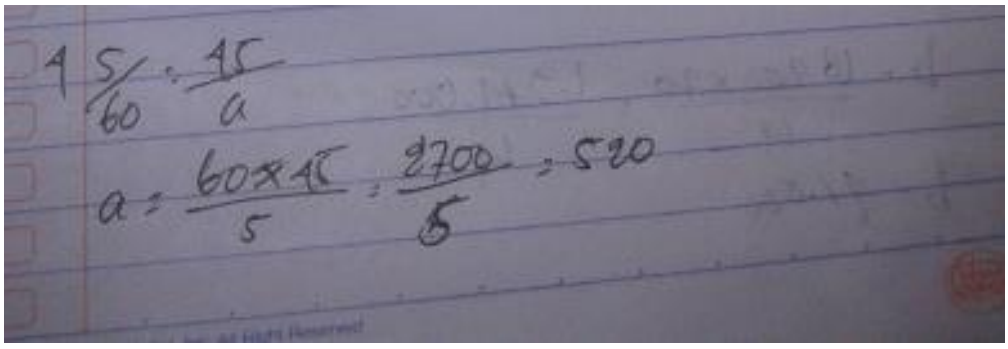
1. Analysis example of students' answer at 4 fluency indicator.

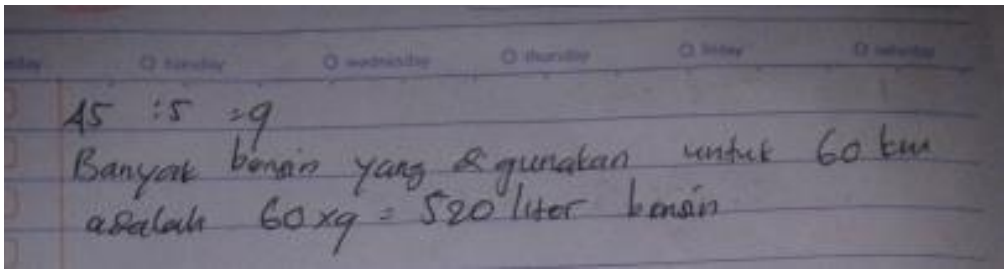


Question number 1, if price of 1 dozen pen is Rp. 34.400.00 how much price of 8 pen.

The resulted in analysis answer in picture above, students have wrote based on what they one to wrote and they got right result. The first step, the students wrote the shape price and doing the process that was counted for many prices from 8 pen with given by "a" symbol. The purposed by this symbol is for easing the process solving from the question that was gave. The students also gave the answer with the recount process and the right result that was got 10 points score.

2. Analysis the example of the students answer in the indicator flexibility

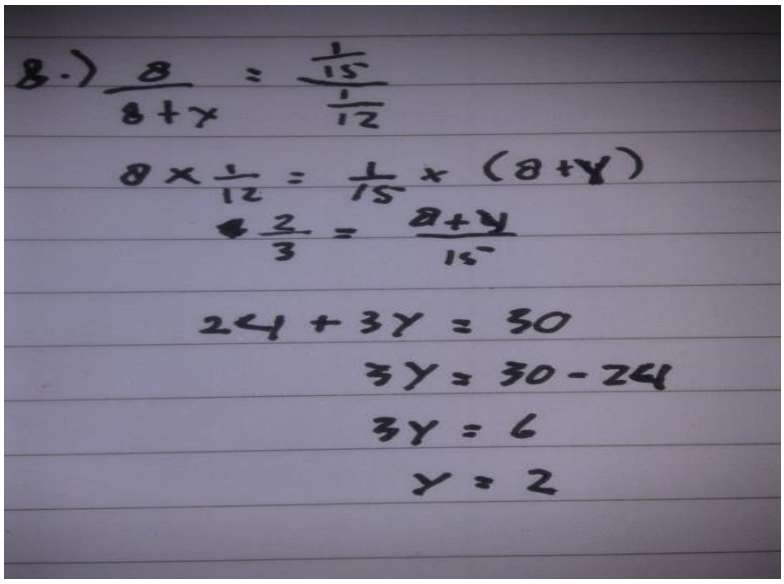




Question number 4, there is a car that 45 km that was trough, it has spent 5 L. the car continued until spent 60 L gas oil, how far that car can be gone?

The resulted of analysis in picture number 2, the students was answer the question the two steps. First one is, the students wrote the prices comparison shape with spent the gas oil 520 L. second step is, the students divided 45 and 5 and result time to 60. The students answer was two different steps but with the same result. The last result is not as what the question need. The other word, the students gave two steps but with wrong answer, because the students was wrong recounted process and got only 16 points.

3. Analysis the example of the indicator originally



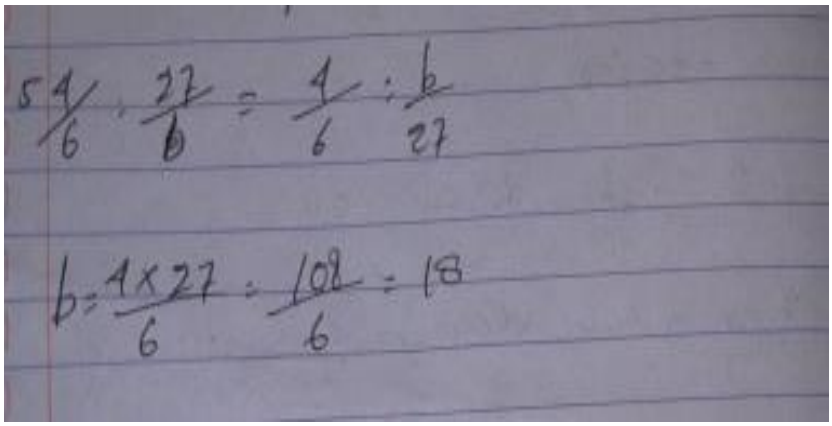
Question number 8, based on the Table 01

Workers	Loan
8 peoples	15 days
8 + y peoples	12 days

How many worker that need to finish the project since 12 days…

The result of analysis in picture number 3 is, the students answer the question with the finishing steps prices comparison material. In this case, they can answer the question with the prices comparison feedback. But the students answer the question with the different way, it has answer the question with the prices comparison. This way can be attract the students to answer the question based on what the question need. Based on the score that got by the students is 20 point, because they are gave the answer with their own way, the good process and right answer.

4. Analysis the students answer based on the elaboration indicator.



Question of number 5, train A move from Surabaya to Jakarta for 4 hours with speed 27 km/hour. If train B passed same line and same direction in 6 hours, the average of the train B…km/hours.

The result of analysis of the answer on picture 4, the students formed comparison by changed the position of numeral 27 with letter "b". Next, students did the counting process to know the result of the average speed of the train. In writing the answer, there was mistake in writing the symbol "=" before changed the position of numeral 27 with letter "b". it was better for the students to write the arrow symbol or continued the writing of answer in new line. From the counting process and result that right or suit with question, the result of score that be achieved by students was 10 points.

The result of accomplishment percentage in every indicator of creative thinking ability that be obtained from 34 students was 75% of students that had fluency thinking ability, the students had flexibility thinking ability was 41%, the students had originality thinking ability was 73%, the students had elaborative thinking ability was 47%.

Table 2: Accomplishment percentage of indicator of creative thinking ability

Indicator of creative thinking ability	percentage
Fluency	75%
Flexibility	40.59%
Originality	72.75%
Elaboration	47%

Next, the researcher did analyses rules testing (after did post-test) that was normality testing by chi-quadrate and linearity testing to know the data were normal distribution and linearity rules. Based on normality testing that had been conducted, the result was:

Table 3: The result of normality testing of questionnaire data and post-test

Research Variable	Statistics		Explanation
	χ^2 count	χ^2 table	
Questionnaire	6.5	11.070	Normal
Post-test	5.5	11.070	Normal

Based on the table 3 for the value of questionnaire of treatment group that was obtained $\chi^2_{hitung} < \chi^2_{tabel}$(6,5<11,070) so, the data were distributed normal. Meanwhile, the value of post-test of treatment group was $\chi^2_{hitung} < \chi^2_{tabel}$(5,5<11,070) so, the data were distributed normal. As the purpose of linearity to look for the similarity of regression of variable X to variable Y, so, the similarity was Y=11,9 + 0,82x. from the result of counting, the researcher found the sum of error quadrate (JK_E) = 294,34, total of quadrate tuna (JK_{TC}) = 1371,87, the average of total quadrate (RJK_{TC}) = 57,16, the average of total error quadrate (RJK_E) = 36,79, F_{hitung} = 1,55, and F_{tabel} at standard of significance 5% was obtained F_{tabel} 3,12. Because of $F_{hitung} < F_{tabel,}$ so, the data were linear, ,so, it was appropriated with rules of hypotheses testing.

After rules testing had been done, the researcher did hypotheses testing. It was made to know that the hypotheses was accepted or rejected. To know there was an effect or not, the researcher needed to do correlation testing used correlation formula *r-product moment.* Based on the data analyses, the result was r_{hitung} = 0,82 and r_{tabel} 0,344. Because of $r_{hitung} > r_{tabel}$ (0,82 >0,344) at standard of significant 5% and the degree of freedom df = 34-1 = 33, so, it could be concluded that null hypotheses testing was rejected and alternative hypotheses was accepted, it meant that there was a positive effect of team pair solo learning method in creative thinking ability of students and the coefficient value of correlation between team pair solo learning and creative thinking ability of students mathematics was 0.82. Meanwhile, the result of counting was $t_{count} > t_{table}$ (8,10> 2,035) with significant standard 5%.

Coefficient of determination was 67%, it meant the Varian that happened to variable of creative thinking ability 67% could be explained through variant 67%, that happened to variable of team pair solo learning method or creative thinking ability of mathematics was 65%, it was affected by using team pair solo learning method and 23% was affected by another factor. So, it could be concluded that there was positive effect and significant used team pair solo learning method in mathematics creative thinking ability of students MTs NW Tebaban.

D. Conclussion and Suggestion

Based on the result of research and discussion, it was obtained r_{count} = 0,82 with standard of significance 5% coefficient of determination r^2 = 0,6724 creative thinking mathematics 67% was affected by team pair solo method and 23% was affected by another factor. So, it could be concluded that there was positive effect and significant used of team pair solo learning method in creative thinking ability of mathematics students class VII MTs NW Tebaban. So, lesson study that had been conducted was able to increase the process of creative thinking of students.

Based on the explanation above, the researcher proposed some suggestions for the students. The students should accustomed their self to ask and learn how to cooperate with other friends, so, it appeared the dependence and needed each other. And to the teachers (especially to mathematics' teacher) should introduced and used new learning method, so, the students would easier to adapt and they were not bored, so, mathematics would be fun to learn.

E. Refrence

Arifin, Zainal. (2009). *Evaluasi Pembelajaran*. Bandung: PT Remaja Rosdakarya.

. (2011). *Evaluasi Pembelajaran*. Bandung: PT Remaja Rosdakarya.

Arikunto, Suharsimi. (2010). *Manajemen Penelitian*. Jakarta: PT Rineka Cipta.

. (2010). *Prosedur Penelitian Suatu Pendekatan Praktik*. Jakarta: PT Rineka Cipta.

Oermann, Marilyn H. & Kathleen T. Heinrich. (2006). *Annual Review of Nursing Education*. New York: Springer Publishing Company

Solihat, Elih. (2010). Pengaruh Pendekatan Open-Ended Terhadap Kemampuan Berpikir Kreatif Siswa Dalam Belajar Matematika. *Disertasi tidak dipublikasikan*. Jakarta: Program Sarjana Universitas Islam Negeri (UIN) Syarif Hidayatullah

Sugiyono. (2010). *Statistika untuk Penelitian*. Bandung: Alfabeta

Zahrah, Riza Fatimah. (2013). Penerapan Model Cooperative Learning Tipe Team Pair Solo untuk Meningkatkan Kemampuan Pemecahan Masalah Matematis Siswa. *Jurnal Pendidikan* Matematika. Vol. I, Nomor 1, hal. 2-3

Benefaction Values in Sesenggak Sasak of Dasan Lekong

Muh. Irfan
Hamzanwadi University

Abstract

In traditional phrases such as Sasak or proverb many use the figurative meaning in the disclosure that describes the mindset of society. Therefore, it should be noted that there are virtue values contained in each of the sesenggak Sasak because each Sasak proverb has certain virtue values. Based on this background, problems can be formulated into: How is the form of virtue values contained in Sesenggak Sasak in Dasan Lekong Village. The goal of this research is to know the meaning and value of virtues contained in sesenggak Sasak in Dasan Lekong village. This research is descriptive qualitative. While the data collection techniques in this study are observation, interview, and documentation. The recorded data then transcribed in written form and analyzed through descriptive analysis, then conclusion are drawn. Based on the results of data analysis, the meaning and value sesenggak can be seen from the forms of the sesenggak exists in Dasan Lekong village such as sesenggak about animals, plants, tools, and limbs.

Keywords: *meaning and value of virtue in Sasak*

A. Introduction

Literature is part of the culture because the work of literature is born from the creativity, taste, and human initiative embodied in the form of beautiful language arrangement, both oral and written. Literature presents a picture of life, and life itself is a social reality. Literature as a medium that some people use to convey information, mandate or advice in living the life of this world, literature also presents a picture of our interaction with fellow human beings how we play, mingle and communicate with each other.

According to Endaswara, (in Rafiek, 2010: 53), oral literature is a work that the spread is delivered from mouth of mouth is down and down. Through the story or phrase from mouth to mouth is not possible there will be addition or reduction in the delivery, although the contents and messages are not gray. Oral literature includes folklore, puzzles, proverbs (*sesenggak* Sasak), folk songs, mythology, and legends.

The focus of this research is about Sasak which is one of the forms of oral literature in the form of short sentences with solid content with advice and advice.

Because of the content of the counsel, the universal value as a feature of oral literature is not too difficult to observe. The more so in a brief but solid sentence because what is required in this Sasak is what is implied behind the explicit.

This study examines the virtue values contained in *sesenggak* Sasak in Dasan Lekong village. Given the village has the competence *sesenggak* Sasak still living in the community. The purpose of this research is to know the meaning and value contained in *sesengggak* Sasak in Dasan Lekong Village. In the same way as the proverb, the proverb is a traditional phrase consisting of concise but compact sentences containing contradictions, imagery, advice and life principles or rules of conduct (Budhi Santoso: 2010: 20).

Snuggle is a sentence in Sasak language that is used to convey something purposeful (Bahri et al, 2009: 48) .Sakkak is a symbol or satire of human circumstances or also compared to the state of things, animals or deeds (Mursip, 2004: 3). According to Alaini and et al (in Shubhi 2012: 6), when viewed in terms of contents, the forms *sesenggak* divided into several groups, namely a) *Sesenggak* about animals. This takes a simultaneous or comparison of animals in the form of nature, behavior or anything related to animals. b) *Sesenggak* about the plants. c) Something about tools (agriculture, household and others). d) *Sesenggak* about the limbs.

As according to Brunvand (in Danandjaja, 1891: 29) *sesenggak* (proverb) can be divided into four major groups namely; a) The actual Sesatak (Pribahasa) is a traditional expression that has properties; (1) the sentence is complete, (2) its form is less changed, (3) contains truth or wisdom. For example "sweet fruit wrestling in it" that likens the person who is smooth but actually his heart is rotten. b) The incomplete phrase (Pribahasa) also has distinctive traits, such as: (1) the sentence is incomplete, (2) the form is often changed, (3) rarely reveals wisdom, (4) is usually figurative. For example *"Terajuk kecewa, tersaukkan ikan suka, tersaukkan batang masam"*, which likes people who want to profit alone. c) The paraphrase (proverb) is a traditional phrase, which usually begins with the words "like" or "like" and others. For example "like eggs on the horns", likens a very serious situation. d) Similar phrases *Sesenggak* (Pribahasa) are expressions used for insult, retort, or a short, sharp, funny answer, and an annoying warning.

Based on the conception of Mahsun (in Shubhi, 2012: 7), it is classified into four classes of cultural values. 1. Cultural oration related to the nature of life. Cultural values related to the nature of life. The parables used, such as animals, plants, and tools. The values obtained are quality of life, peace, prudence and overlap, persistence, belief

in death, humility, exploitation of potential, and self-introspection. 2. Cultural incentives related to the nature of human relationships with others. Some atrocities related to the nature of human relationships among human including relationships with family, relationships with leaders, and relationships with others. 3. Cultural oration related to the nature of the work. In terms of cultural values related to the nature of the work, at least many use the name of the animal and the name of the tool to give an idea of how life should be and satire for those who are lazy at work. These values are optimistic, consequent, division of tasks, effectiveness and precision in work, work ethic. 4. Cultural oration related to the nature of human relation with nature. Taking a while as a literary work of Sasak, extrinsically, is the result of a work born from the closeness of Sasak community relationship to its nature. The relationship is a relationship that not only positions nature as a source of livelihood in the form of material, but nature is used as a place to learn. The nature and behavior of animals, the process of cultivating the plants, the tools they use, and the process of changing their own nature serve as their noble values. Thus, Sasak community relations with nature is very close. Nature for Sasak people is a gift. Grace is either in the form of wealth contained by nature and nature that can be used as a place to learn so that born noble values that serve as the philosophy of life Sasak people.

According to Bascom (in Danandjaja, 1991: 32) the function *sesenggak* (Pribahasa) namely; as a projection system, as an instrument of legalization of institutions and cultural institutions, as a tool of children's education and as a tool of coercion and supervisor of the norms of society to always be obeyed. Furthermore, like oral language in general, *sesenaggak* also as communication, especially in terms of community control (Social control), which concretely to criticize a person who has violated the norms of society.

B. Methode

This research is descriptive qualitative because the type of data collected in the form of words instead of numbers. This is due to the application of qualitative methods (Moleong, 2013: 11). Guidance of the implementation of research using qualitative approach, because the data obtained will not describe the number or number but the data in the form of opinions, concepts, explanations, responses and information in the form of a description in expressing the problem.

This research was conducted in Dasan Lekong Village, Sukamulia District, East Lombok Regency. This location is suitable where the researchers to get the desired data because people in the village of Dasan Lekong including Sasak people who are still very thick with the culture *sesenggak* Sasak.

In this study there are several data sources used by researchers to collect data that is primary data and secondary data. Primary data source is data that directly provide data to data collectors sourced from the head of Village or Village. Religious figures, community leaders, indigenous leaders, and local communities who use *sesawak* Sasak. The secondary data are obtained from the information source or sources of literature, community reports.

Technique of collecting data in research that is observation, interview and documentation. Observation is one of the most widely performed techniques in research, interviews or interviews are conversations conducted with the specific intent of Moleong (2011: 186). The conversation was conducted by two parties, namely the interviewer (interviewer) who asked questions and who interviewed (interview), which provides answers and documentation in the research is a way taken to collect data by way of all kinds of documents either from writing, reports and others. Such as village profiles, village monographs and others. From here researchers get data on population, social circumstances, cultures of society, especially in relation to its existence with *sekasak* Sasak on the community of Dasan Lekong Village Sukamulia District East Lombok regency.

Data analysis technique is "the process of searching and arranging systematically obtained from data collection techniques that have been done (Sugiyono, 2011: 244). Based on the data collection techniques used, this research is analyzed by using descriptive analysis. Descriptive technique is a technique in researching the status of human groups, an object, a device condition, a system of thought in the present. The purpose of this method is to make descriptive, picture or painting systematically, factually and accurately about the facts and the relationship between the phenomena being investigated. Descriptive research studies the problems in society, the ways of society and certain situations, including the relationships of activities, attitudes, views, and processes of reality.

The result of data analysis will be presented by using formal method. The formal method is the formulation by using signs or symbols (Mahsun, 2011: 224). The use of this formal method of presenting the results of data analysis based on the formulation by using words in the form of *sesenggak* used in social context. Ihwan the

use of words in the form of *sesenggak* which is the description of the use of *sesenggak* to know the form of virtue values in *sesenggak* Sasak so that the data generated in this study can be understood easily.

C. Findings and Discussion

Based on the results of interviews conducted by researchers on informants, meaning and value of virtues contained in *sesenggak* according to the people of Dasan Lekong Village are found.

Regarding animals

a. *Alus-alus tai jaran* (as smooth as fine horse dung). This describes the nature of a person who says soft, gentle and friendly, but actually in his heart full of lies and hatred. This symbolizes a different attitude between what appears outside and what is in the heart. Its impact in society is hypocritical attitude to self and to others. Therefore with this we expect that we should be both outside and inside. The value contained in this moment is moral value, it is said to be moral value because it is included in my behavior. The value of the virtues we can take from this atrocity so that we ought to foster our behavior and attributes. Speak according to conscience, act on the basis of thought, lest words are not in line with deeds. Because honesty is a commendable nature that needs to be maintained within a person.

b. *Banteng belaga jerami rebak* (the bull that competes in the fields causes the hay to fall). This insignificant meaning occurs in two leaders who seized the seat of power that caused misery and suffering of the people. This is in the form of advice to a leader in the struggle for power to compete with healthy. Means that it is reflected in this episode which is a reflection of politics that includes social values. The virtue that we can take from this as a leader is ‘do not be greedy’.

c. *Miong nyebok kukuk* (the cat hides his nails).This has the meaning of low self-esteem, does not show off or show what is in possession. Abilities and advantages possessed is not something that must be exhibited and removed except at the time that it requires to remove the ability. Vice versa if people who like to show off-show off the excess will give danfak that can harm himself and others. Expectations that are expected to not be arrogant with the advantages possessed. The value contained in this episode is a moral value, because it includes one's character or character. The value of virtue that we can take from this moment should not be arrogant with the ability possessed and must always low self.

d. *Manek mate berombok tarok* (dead chickens increase bets).This has the meaning of people who are getting difficult and trying to overcome them. However, the effort he took was not to lighten the burden that bears the weight of his suffering. This in the form of lessons and advice that everyone is not rash. a reckless attitude can not solve the problem. Despite the problem, as much as possible we should keep thinking clearly. All that will be done must we calculate with the ripe and carefully considered and thorough. In addition, we must be very clever to read the situation so that the decisions taken are not wrong and harm that in turn adds to the burden of life that we are in charge. The value contained in this *sesangggak* is social value. The value of virtue we can take from this moment in making decisions must be thought through.

e. *Marak miong lek begang* (like cat and mouse).This has the meaning of two people who like to quarrel. In suppose with cats and rats because we know that the two animals will never be able to unite. This *sesenggak* in the form of satire as well as advice for people who like to quarrel so that in the community away from the nature of the quarrelsome or fighting between sessions. The value that is reflected in this episode of moral value. The value of the virtues we can take from this moment to keep good relations with others.

Regarding plants

a) *Gitak ilmu pade, seke berisi seke nundu* (see rice tree, the more contained, the lower they stoop). This has the meaning of attitudes possessed by people who have the knowledge and ability to always maintain good manners. This form of *Sesenggak* advices us not to be arrogant with the science and skills and have always use science in good terms lest science we have a disaster for yourself and others because putting something that is not in place cause something we do not expect to happen. This sinks into the moral value. The value of virtue we can take from this moment is that we should not be arrogant with the knowledge we possess.

b) *Marak nyiur seke toak seke bawak* (like coconut getting older and lower). This insignificant meaning of a person who grows older will be more and more knowledge and experience, but getting cleverer or humble yourself. Similarly, an older person is more useful and less humbling. This *sesenggak* parent advice the eldest son to be able to be wise. The value contained in this *sesengggak* is a moral value. The value of virtue we can take from this is ‘be wise’.

c) *Manis-manis tanduran gunung* (as sweet as mountain light shadow). This has the meaning of a person whose life looks good, but actually has many complicated problems that must be faced. In general, people only judge the things that look outside only. This is in the form of admonition not to believe in everything that appears outside. Not necessarily that looks good, tasty, and fun, once enjoyed completely visible. This is in the form of advice in order not to judge everything from its appearance solely. This means that everything that looks it needs to be studied and scrutinized in depth in order to avoid miscalculation. The value contained in this *sesenggak* is social value. The value of virtue we can take from this atrocity do not fall asleep with something unclear.

d) *Pait-pait pepedu bau jari owat* (as bitter gall, yet could be a medicine). This insult contains the meaning of something that is considered trivial and can sometimes cure disease. That is a potent medicine is not expensive, but that fits with the disease. If we underestimate, as well as underestimate the creation of God Almighty. Therefore, you should start learning to know the things that are hidden behind the intricacies of objects and events in the world. The value contained in this episode of religious values about God's creation. Sesenggakk this entry in the value of religion. The value of virtue that we can take from this bunch do not underestimate all creation of Allah SWT because all inserted would be useful.

e) *Ndrak buak urak jauk lengan lolona* (no fruit fall far from the tree). This *sesenggak* as a picture of parents and children. Trees as parents and fruit as a child. Fruit will not fall far from the tree as a picture of parents who reduce the nature and character that is in him to the child. This insists that the importance of a family. This in the form of advice to parents so that they can be good role models in being good and bad in guiding his children and his own family. This sinks into the moral value. The value of virtues that we can take from this parent's role is very important to serve as a role model of a child; the bad or good nature of parents will affect their children.

Regarding tool

a. *Marak daceng Cina*(like the scales of Chinese people). Everything must be precise or in accordance with the specified situation and conditions. It means that something should not be too much. That is the meaning of this insult. Nevertheless, indirectly this is in the form of satire for people who are too stingy or do not care about others. In other words, he is only selfish. This insisted advice that in selling or connecting with people, do not be too miserly (stingy). Buyer needs to be served

well but not to lose because in the trade there is also a social relationship between humans. The value contained in this bite is the social value. The value of the virtues we can take from this we must be away from being too stingy.

b. *Buek asak, buek ladeg* (exhausted, finished knife)This has the meaning of two friends who help each other-help one another in realizing the desired one, because we know life-help is needed in hopes and desires. This is in the form of advice to anyone who wants to do a job of the same purpose. This sinks into the social value. The value of virtue we can take from this episode is that everyone should always help each other.

c. *Yak berakal marak songkok*(have no mind like a hat). This *sesenggak* contain the meaning of prohibition like a cap that only overshadowed one person only. This one describes the nature of someone who is selfish –do not care about others. This *sesenggak* in the form of satire to people who want to win themselves and do not want to know the suffering of others. The value contained in this episode is a moral value. The value of the virtues we can take from this atrocity is that we should not be selfish and pessimistic.

d. *Kesilok rai ketempo karang* (granary burnt, pumice stone is visible). This insult contains the meaning of a trait that is owned by someone who is only seen from the good side of it but behind it, there is evil thought that can harm others. This *sesenggak* in the form of satire is for people who like to judge nature of a person without seeing the good and bad side of a person. This sinks into the cultural values. The value of virtue we can take from this moment is that everybody should be considerate.

e. *Marak peruk lek sendek*(like a pot and spoon). Symbol *pruk* and *sendek* mean that every family must have a bickering that occurred. This insult contains the meaning of the bickering that occurs in a family sometimes there is sweet and bitter. This is in the form of satire to a family to avoid the quarrels that occur in a family. If the quarrel is not avoided in the family, something that is not desirable will happen. Therefore, in solving the problem well without any disagreements. This snag is included in the cultural values. The value of the virtues we can take from this is that a family must live in peace.

Regarding the limbs

a) *Mate lima idep todok* (die the hand, live the mouth). The meaning of the proverb is that one who should not rule alone, but he himself never does what he has commanded. This one describes someone who does not want to work but wants to get a share. This *sesenggak* is a form of advice to the lazy people who want to be sluggard. The virtues that we can take from this atrocity is that nobody should take the rights of others.

b) *Ndrak duri lek elak* (no thorn on the tongue). This has the meaning of someone who speaks without thinking about the feelings of others. This is often used to insinuate people who often speak or say their own way without any sense of responsibility to the words that have been spoken, as if his tongue is so slippery and so easy to issue a sentence after sentence. In addition, if words that are not in accordance with the fact, it can be regarded as fraudsters and agitators. Slowly, this results the person will not gain the trust of others. The value of the virtues we can take from this atrocity is that everybody must keep polite and honest in speaking.

c) *Bantel tolang ndrak isi* (maintaining bones without flesh). This insight contains the meaning of maintaining something useless which gives no profit. So much cost, thought, and energy that has been issued, but something desired cannot be realized. This is in the form of advice so that we always be careful and considerate before acting. This means that all possibilities that will happen should be considered well in advance for the results achieved in accordance with the hope. It must be done so that the sacrifices we have given are not in vain. Moreover, the sacrifice is at stake cost, thought, energy and our good name. The value we can take from this moment is social value. The value of the virtues we can take from this proverb is that everyone should behave properly.

d) *Talo ate menang perasak* (lose heart; win feeling). This insult contains the meaning of consideration of the feeling of conquering the mind (reason). For example, people are jealous, his mind has been defeated or overpowered by his feelings. This is aimed at a person who feels jealous of the cruelty or accomplishments of others beyond himself. It teaches us not to be jealous of the success of others. This sinking into the social value because of the social jealousy in society. The value of the virtues we can take from this atrocity is that people should keep away envy because envy can actually trigger slander.

e) *Sikut kelambi leq awaq diriq* (measure the clothes on the body itself). This proverb contains the meaning of all actions or our behavior to others we should measure on ourselves. Therefore, we must always enliven a sense of tolerance to anyone. This sinks into the social value. The value of virtue we can take from this proverb is that anyone should do self-introspection.

D. Conclusions and Suggestions

Based on the analysis results, it can be concluded that *sesenggak* Sasak in Dasan Lekong village is very influential because *sesengagak* used in Dasan Lekong community as is reference of behavior and every activity undertaken by society can be expressed by using *sesengagak*. *Sesenggak* will still be preserved because it has hidden meanings and values that can be understood logiclly and has its own function which is very useful for the community. *Sesanggak* in Dasan Lekong society contains hidden meaning or virtue values if it is traced. *Sesengagak* actually contains advice and teachings to be obeyed, while the implication *sesengagak* in Dasan Lekong society is at least something spoken by Dasan Lekong people in their daily activities. The inevitability that develops in society is a reflection of the culture in society, and it is preserved for future generations to know the various atrophy that develops in society. Nowadays, it seems to fade away by the other cultures. However, *Sesengagak* is a valuable asset in an area which is a reflection of the culture of society, so it must be preserved although it is rarely used. In addition, *sesenggak* has a special meaning that is good for improvements of morals and behavior that exist in society.

E. References

Bahrie, dkk.,2003. *Bahan Ajar Muatan Lokal Gumi Sasak Terintegrasi Budi Pekerti*. Prima Guna.

Danandjaja, James, 1991.Folklor Indonesia*; Ilmu Gossip, Dongeng, Dan Lain-Lain.* Grafika.

Mahsun, 2005. Metode Penelitian Bahasa: *Tahapan Srategi, Metode, Dan Tekniknya*. PT. Raja Grafindo Persada, Jakarta.

Moleong Lexy, 2013. *Metodologi Penelitian Kualitatif*. PT Rosada Karya Bandung.

Mursip, BA, dkk., 2010. *Satak sesenggak sasak*. Pustaka widya.

Rafiek, M. 2010. *Teori Sastra Kajian Teori Dan Praktik*. Malang: Refika Aditama.

Santoso Budhi Iman, 2010. *Pribahasa Nusa Tenggara Barat*. Caraka Darma Aksara.

Sugiono, 2011. *Metode Penelitian Kuantitatif, Kualitatif Dan R & D.* ALFABETA.

Shubhi Muhammad, 2012. *Sesenggak Sasak*. Prima Guna.

Economic Development Based on Life Skill in Management Material in Improving Student Learning Interest of MA NW Gereneng

Susilawati[1], Muh. Fahrurrozi[2],Jalaluddin Akbar[3]
[1,2,3] *Hamzanwadi University*
[1]susi.maniezzz@yahoo.co.id, [2]ozyalu@gmail.com, [3]akbargreen34@yahoo.co.id[3]

Abstract:

This Development Research aims at producing the development of entrepreneurship learning materials model of Borg and Gall that can improve the interest of economics learning in Madrasah Aliah (MA) NW Gereneng. Thus, learning can be done effectively and efficiently and can optimize the achievement of learning objectives. This type of research is Research Development by developing economic teaching materials with life skills based on the school environment. This model consists of ten steps. However, in this research development the researcher uses only five research procedures, due to limited time, effort, and cost of the researcher. And the five steps are: (1) Introduction, (2) Initial Product Development, (3) Initial product test, (4) Test of end product, and (5) Final product. This research took place at Madrasah Aliah (MA) NW Gereneng where the population is all the students of class X in school which amounts to 28 students. Based on the results of pretest and post test conducted The results of the data analysis concluded that with the effective level.So there are differences in learning outcomes after using the teaching materials Economy class X (ten) developed with Borg and Gall model in Gereneng.This means that the results of learning before and after using the teaching materials are not the same. So it can be said that there is a significant difference between student learning interest in mark with student learning outcomes before and after using the package of learning. Looking at the mean or post-test mean that is greater than the average pre-test value using the value of the midterm odd test results, it can be seen that this package of instructional materials is effectively used in the learning process in Madrasah Aliah (MA) NW Gereneng.

Keywords: *development of economic resources, management material*

A. Introduction

Development of teaching materials must be based on the signs that have been determined as well as delivering at one point of objectives to be achieved. Because the focal point is the goal, the development of teaching materials conducted by teachers varies widely. This is due to the experience of teachers and the condition of different learning environments. Competency-based curriculum is expected to take advantage of

this moment in order to process, design, diversify teaching materials with a foothold on the goals and needs in accordance with the conditions of learning. Teachers are given the flexibility of not only selecting and sorting, but designing and designing their own learning materials in accordance with the culture model in which the teacher teaches. This flexibility must be seen from the development of teaching materials that rests on the goals that have been outlined.

Development of teaching materials is given to teachers to be able to fully prioritize the principles of goals to be achieved. Because of the flexibility given that teachers have to creatively design the teaching materials with Borg and Gall model. Here the role of creativity of our educators is much needed. In the future we must change the mindset and culture that is instantaneous and general to be 'acting and thinking global'.

Based on observations in MA NW Gereneng, BSE Books publishers of Bookkeeping Center of Depdiknas and other publishers used by these teachers as the main source book turned out to have some weaknesses. The weaknesses among others have not been able to meet the diversity of learning needs, such as the following:

1. Books in use published by book publishers and others are still not able to relate the lesson with the life of students in need by students, so that students are able to learn themselves from their own lives and will be more independent.
2. Economic teachers have not been much work to develop instructional materials for economic learning based on life skill or characteristic based on students. Teachers still use less teaching materials that are less suitable with students' life skills and student characteristics, so adjustments should still be made.
3. There is no teaching material for life-based economic life skills as a student guide, the available teaching materials generally contain general material that has actually been developed in many textbooks.
4. Low interest in student learning because students find it difficult to understand and explore material that suits their lives. As for the causal factor that is less interesting use of teaching materials that are used, because the less teaching material leads to life skills of these students.

Based on the above description, development of life skill-based economic resources is needed to support the achievement of learning objectives at MA NW Gereneng. Therefore, the researcher is interested to conduct research to develop eoknomi teaching materials entitled "Development of Life Skill Based Life Skill Material On Management Material In Improving Student Interest of Ma Nw Gereneng

B. Methods

This research is a type of research and development Research and Development. According Sugiyono (2012: 407) research and development (R & D) is a research method used to produce a particular product and test the effectiveness of the product. Research and development of this research using 5 procedures research. Due to the limited time, effort, and cost of the researcher, the 5 steps are: (1) Introduction, (2) Early Product Development, (3) Initial product test, (4) Test of end product, and (5) Final product. The experimental subject of this research is for small group trials ie students of class X MA NW Gereneng as the target of field trials. However, before reaching the test phase, the teaching materials must be validated by several experts. The experts selected have the following criteria: Expert Material / Content, Language Expert and Expert Tekhnologi.Instrument data collection in this study used in 3 stages of research, at the stage of preliminary research, validation and product trials.

Techniques in this study were analyzed by using qualitative descriptive analysis technique. Qualitative descriptive analysis techniques used to process qualitative data in the form of description / exposure of observations, questionnaire needs and conditions of teaching materials available at the preliminary research stage. In addition qualitative data in the form of responses, criticisms, suggestions and improvements from material experts and Experts of teaching materials as well as student responses related to the level of legibility in the development stage, student responses and teacher responses in the form of criticism, suggestions, and improvements in the testing stage of teaching materials are also analyzed descriptively qualitative.

C. Results of Development Research

In developing these teaching materials, researchers developed several instruments to support the implementation of validation and experimentation of teaching materials. The instruments in question include: a) instrument validation of teaching materials by experts;

Initial Product Trial

a. Content Validation Data / Content Expert content

Validation is very necessary to evaluate the content / material in teaching materials that have been developed before it is declared eligible for use by students and teachers. The contents / material or validator selected in this research is Mr. Muhamad Juaini, MM. Validator is given a draft I teaching materials along with assessment instruments or validation sheet. As for the data obtained is quantitative data in the form of scores on teaching materials materials and Qualitative data in the form of responses, criticisms, suggestions, and improvements for the teaching materials tersebut.Ali

material to validate the 4 items, namely 1) student teaching materials; 2) teacher's grip; 3) syllabus and 4) RPP.

The result of data analysis to the validation of content / material materials obtained by the average value of 80%. After converted to the table of validity level, the material in the teaching materials included in the category is quite valid.Ahli content / content also perform analysis of the validation of teaching materials Teachers who showed an average acquisition of 80% and included the category is quite valid.

b. Data of Expert Technologies Validation Result

The design validation of instructional materials aims to evaluate the physical quality of teaching materials, such as size, design, typography, illustration use, drawings and colors on teaching materials. This teaching materials design validator is entrusted to Mrs. Fatmawati, S. Kom.

The results of the analysis on the validation of learning technology shows the acquisition of 85%. After converted to the table of validity level, the learning technology included in the category valid.In addition, the validator also provides some notes of responses and suggestions related to consistency in the presentation of drawings and writing and the use of color Which is more appropriate.

c. Language Validation Result Data

The validation of instructional material design aims to evaluate the conformity aspects of the use of language with good and correct Indonesian rules, the consistency of the use of terms, symbols, and the legibility and comunicatif of teaching materials, by Mr. Muhammad Jaelani, S.Pd, Indonesian language teacher.

The result of data analysis to the result of language validation shows the average acquisition equal to 74,1%. After converted to table of validity level, linguistic aspect of the teaching material is included in category quite valid. Teach related to spaces between sentences, consistency of table writing, and reference list.

Final Product Test

a. Product Test Results Data

1) Data on Small Group Test Results

The small group trial aims to determine the level of legibility of the experimental materials that have been validated before the experts used by class X. Small group trial conducted on Wednesday, June 18, 2017 by giving a questionnaire to 6 students of class X Madrasah Aliah (MA) NW Gereneng.

After doing the analysis of the data, got the percentage of literacy of the material equal to 82,3%. Besides giving score, the test subject also give comment and suggestion to improve the teaching materials. Some notes in the form of

comments and suggestions which summarized from six sheet of questionnaire legibility ie material In the module should be reproduced so that students who read it more knowledgeable.

2) Limited Scale Trial Data Result

A limited-scale trial was conducted on 18 June to 18 July 2017 on 28 students of grade X MA NW Gereneng through activities. Field trials through learning as the schedule of economic subjects with aims to determine the level of practicality and effectiveness of teaching materials.

b. The effectiveness of teaching materials

The effectiveness of teaching materials analyzed in this study is the learning outcomes of the cognitive domain. Assessment of student learning outcomes done in 2 ways, namely assessment pree test and post test.

The table frequency distribution of student learning results can be seen in Table 3:

Table 3. Frequency Distribution Of Student Learning

No	Interval Kelas	Frekuensi	Frekuensi Relatif(%)
1	69 – 73	2	7,14
2	74 – 78	1	3,57
3	79 – 83	7	25
4	84 – 88	7	25
5	89 – 93	9	32,14
6	94 – 98	2	7,14
Jumlah		28	100

The average score of students' learning outcomes in the post test is 86, then the post test has increased to 89.5. The description of the data is presented in Table 4.

The table frequency distribution of student learning results can be seen in Table 4.

Table 4. Frequency Distribution Of Student Learning

No	Interval Kelas	Frekuensi	Frekuensi Relatif(%)
1	70 – 75	2	7,14
2	76 – 81	5	17,85
3	82 – 87	3	10,71
4	88 – 93	9	32,14
5	94 – 99	7	25
6	≥ 100	2	7,14
Jumlah		28	100

2. Material Validity

The validity of teaching materials data is obtained from the assessment by 3 expert lecturers, ie materials experts, design experts and linguists. The validation results indicate the validity level or validity of teaching materials from the content / materials, learning technology, and language aspects of teaching materials.

The validity of the resource can be determined from the match of the validation result of the expert with the specified validity criteria. The validity criteria referred to in this study are presented in Table 5.

Table 5. Validity Criteria Referred To In This Study Are Presented

No	Kriteria Validitas (%)	Tingkat Validitas
1	85,01 - 100,00	Sangat valid, atau dapat digunakan tanpa revisi.
2	70,01 – 85,00	Cukup valid, atau dapat digunakan namun perlu revisi kecil.
3	50,01 – 70,00	Kurang valid, disarankan tidak dipergunakan karena perlu revisi besar.
4	01,00 – 50,00	Tidak valid, atau tidak boleh digunakan.

Here is the recapitulation of the validation results obtained.

Table 6. Recapitulation of Expert Validation Results

No.	Expert Content / Content	Technologist of Learning	Linguist
	80%	85%	74,1%
Rata-rata	80%		

Based on the data in Table 6. it is known that the percentages obtained from the validator for each aspect are 80% for the teaching materials materials, 85% for teaching materials design, and 74.1% for the language in the teaching materials. The average acquisition of these three aspects is 80% .After the average score is included in the conversion table, LifeSkill developed life-based economic resources are categorized as valid enough, or can be used but require little revision.

The effectiveness of teaching materials

Teaching materials are categorized effective if able to increase learning interest in mark with learning result and science process skill of class X MA NW Gereneng student. Data on the effectiveness of teaching materials obtained from the analysis of the questionnaire given to students of class X after reading the material that has been validated expert.

Table7. Percentage and Skill Level of Student Learning Process

No	Persentase (%)	Tingkat Keterampilan Proses Belajar
1	85,01 - 100,00	Sangat baik
2	70,01 – 85,00	Baik
3	50,01 – 70,00	Kurang baik
4	01,00 – 50,00	Tidak baik

Adapted from Akbar(2013:41)

Based on the trial of the limited class through the learning in the class, the result of learning scores and the students' process skills as follows.

Table. 8. Recapitulation of Student Learning Results

No.	Nama Siswa	Nilai Akhir	Keterangan
1	AGUS SEPTIAWAN	80	Mencapai KKM
2	AMRUL HADI	70	Mencapai KKM
3	ANDI RAHMAN	97	Mencapai KKM
4	ANGGA SAPUTRA	70	Mencapai KKM
5	ANIS ADANI	90	Mencapai KKM
6	ANISA PERGINA	90	Mencapai KKM
7	ARDIAN	90	Mencapai KKM
8	BQ. FINUTRI UTAMI IRWAN	98	Mencapai KKM
9	DONI SAPUTRA	80	Mencapai KKM
10	EMAYANTI	90	Mencapai KKM
11	GIOVANI	98	Mencapai KKM
12	HENI WIDIAWATI	80	Mencapai KKM
13	IRMAYANTI	90	Mencapai KKM
14	LAELI LATIFA	98	Mencapai KKM
15	LILIANTI	90	Mencapai KKM
16	M. ABDUL KHALIK	90	Mencapai KKM
17	M. JAELANI	90	Mencapai KKM
18	M. ZAKRONI	100	Mencapai KKM
19	MAR'ATUSSOLIHAH	100	Mencapai KKM
20	MARINI NOVEMBRIANI	80	Mencapai KKM
21	MUHAMMAD RANDI	87	Mencapai KKM
22	PINA YUNITASARI	98	Mencapai KKM
23	SAMSUL RIZAL	90	Mencapai KKM
24	WIDAYANTI	98	Mencapai KKM
25	YANTO	97	Mencapai KKM
26	YUDAENI	85	Mencapai KKM
27	YUDANDI	90	Mencapai KKM
28	YUSRIL	90	Mencapai KKM
Skor rata-rata		89,5	

Based on the data in Table 8 it is known that the average score of student learning outcomes of 89.5. In addition, 100% of students have achieved minimal mastery criteria (KKM) of 72. In accordance with predetermined criteria, local potential entrepreneurship-based teaching materials can be categorized as effective

because the average learning achievement of students is more than 89.5 and more than 80% Students have reached KKM.

Tabel. 9. Recapitulation of Student Learning Results Comparison

No.	Student's name	Final Student Values	Value of test pree
1	AGUS SEPTIAWAN	80	88.5
2	AMRUL HADI	70	69
3	ANDI RAHMAN	97	85.5
4	ANGGA SAPUTRA	70	70
5	ANIS ADANI	90	80
6	ANISA PERGINA	90	87
7	ARDIAN	90	80
8	BQ. FINUTRI UTAMI IRWAN	98	81.5
9	DONI SAPUTRA	80	94
10	EMAYANTI	90	87
11	GIOVANI	98	90
12	HENI WIDIAWATI	80	95.5
13	IRMAYANTI	90	87
14	LAELI LATIFA	98	81.5
15	LILIANTI	90	80
16	M. ABDUL KHALIK	90	89
17	M. JAELANI	90	87
18	M. ZAKRONI	100	92.5
19	MAR'ATUSSOLIHAH	100	97
20	MARINI NOVEMBRIANI	80	75
21	MUHAMMAD RANDI	87	85
22	PINA YUNITASARI	98	87
23	SAMSUL RIZAL	90	90
24	WIDAYANTI	98	90
25	YANTO	97	88.5
26	YUDAENI	85	80
27	YUDANDI	90	87
28	YUSRIL	90	90

Average score	89,5	86

D. Conclusions And Suggestions

In this chapter, the development conclusion of the study of development products presented is an economic resource model of Borg and Gall.Based on the data collected in the analysis of the development of economic resources after some experts validators (content experts, learning technology experts and linguists) to revise the tool materials teaching Economic model Borg and Gall (syllabus, RPP, teacher manual and student module) and then tested in the field (teachers and students) can be drawn conclusions development of economic resources of Borg and Gall model of this it can be seen that this economic resource is effectively used in Learning process at Madrasah Aliah (MA) NW Gereneng.

In general Research development of economic resources Borg and Gallini model can be used as an alternative for the development of teaching materials for MA NW Gereneng kleas X. This learning package can be developed for class X. As for the same classes and semesters this package needs to be equipped with enrichment program.

The suggestions proposed by the research based on the above conclusions are to the students, with the results of research obtained after doing this research is expected the students can be more active and motivated to learn to improve learning outcomes in MA NW Gereneng, to the teacher, by looking at the results obtained After doing this research is expected to improve and develop teaching materials so that can give stimulus to students to study hard. To the School, it is expected to improve the provision of economic teaching materials such as syllabus, lesson plans, teacher manuals and modules for students so that students can actively learn in school and can encourage students to learn independently and to readers and further researchers, is expected to try and improve This research report to produce better research.

E. References

Akbar, S. 2013. *Instrumen Perangkat Pembelajaran.* Cetakan Pertama. RemajaRosdakarya. Bandung.

Amri, Sofan dan Iif Khoiru Ahmadi.Konstruksi Pengembangan Pembelajaran. Jakarta:Prestasi Pustaka. 2010.

Amin, M. 2006. Panduan Pengembangan Bahan Ajar IPA. Jakarta: Depdiknas.

Borg dan Gall. 2003. Educational Research An Introduction, Seventh Editions. University Of Oregon.United State of America.

Departemen Agama RI, ‘’ Pedoman Integrasi Kecakaoan Hidup....’’ 2011.hlm.13.

Departemen Pendidikan Nasional.2008. Pengembangan Bahan Ajar Dan Media. Jakarta. Deprtemen Pendidikan Nasional.

Mbulu, J. dan Suhartono.2014. Pengembangan Bahan Ajar. Malang: Elang Mas.

Nana Sudjana, dan Ahmad Rivai.Media pengajaran, (Bandung: Sinar Baru Algensindo, 2002)h. 2.

Nurwanti.2015.Pengembangan Modul Bahasa Indonesia Berbasis Life Skill Untuk Kelas X SMK Di Kota Metro

Nur Khoiri.2011.Pengembangan Perangkat Pembelajaran Fisika Berbasisi Life Skill Untuk Meningkatkan Minat Kewirausahaan Siswa

RM.Suryo Surajo Dwita Dony Putranto.2008.Majalah Pelangi Pendidikan.

Sugiyono, 2011.Metode Penelitian Kuantitatif, Kualitatif dan R&D. Jakarta: Alfhabeta.

Tjipto Utomo dan Kees Ruijter. 1994. Peningkatan Dan Pengembangan Pendidikan.Jakarta : Gramedia Pustaka Utama.

Widodo, C. dan Jasmadi.(2013). Buku Panduan Menyusun Bahan Ajar. Jakarta: PT Elex Media Komputindo.

Soenarto.2008.Perkembangan Peserta Didik.Jakarta:Rineka Cipta

Literature Learning Based On Gender Perspective

Titin Ernawati
Hamzanwadi University
titinernawati@gmail.com

Abstract

Literature learning is appreciation learning in literature that aimed to grow the empathy and sensitivity of human to many problems of life in several aspects socially and individually. One of the problem is the gap between male and female are sharper. The gap is called gender unequaled in feminism movement. Gender is a topic of study which developed continously and be an interesting study for woman observer. Gender is the study which focused on the equal between male and female in all of the aspect of life. Because of the importance of the concept to be implanted and understood for the student through the literature learning, the researcher used literary works in gender perspective to grow their awareness in facing gender issues in school, society, and their surrounding. The literary work used as the object of the research was a novel by Abidah El-Khaliqy entitled "A Woman Wear Neclake Turban". The researcher used qualitative approach by applaying two methdes, descriptive analytic and action research methode. The technique of collecting data were observation and interview technique. The result of the research showed four issues of gender in the novel. Those are 1) gender and woman marginalisation, 2) gender and subordination, 3) gender and stereotype and 4) gender and violence. While the reaction of main character faced gender issues in the novel happened in the phases of her life. The phases are 1) children phase, 2) teenager phase and 3) adult phase. Meanwhile literature learning based on gender perspective in the novel "A Woman Wear Necklake Turban" by Abidah El-Khaliqey and presenting gender equal material is effective to change the attitude of eleventh students of SMAN I Pringgabaya in understanding gender equal.

Keywords: *literature learning, feminism, gender equal*

A. Introduction

Literary work was a portrait or reflection of real life. A writer expressed all of phenomenon happened in society through a literary work. The phenomenon and the social product be an entity of society which related to pattern, structure, function and activity and social culture as the background of social life while the literary work was created. The statement meant that literary work help individual formation that was suitable with norm of life. A literary work invited us to know other people so that the people has a big role in the life. The literary work was social reality (all of the aspect of human lfe that have arranged in rapidly and beautyful in concreate formation.

(Quthb, in Sangidu, 2004: 38). The literature did not include in language skill in education, because it did not in similar type. Nevertheless literature learning have done integrated with language learning. Practically literature teaching was the development of writing literature ability, reading literature, listening literature, and speaking literature. Several problems can be the theme in the literary works. The problems will open students' knowledge and to dig out students' emphaty. Those problems will become education in social, law, religy, and the edocation itself. One of the interesting social problem to analyze was feminism problem. It talk about how put woman position in society. The ism was exist because of providing woman rights and woman role in society developed equally with structure and culture of society who created the gap between male and female were sharper. The gap will become a discrimination that caused violence and insulting to women. Historycally, gender did not new thing in woman life because around 1980, gender have been a familiar concept in feminism movement. The gender concept was different with sex concept that biologically it the must from God so that it was not exchanged. While gender concept direct to social symbols that have given by certain society. Exactly, Fakih (1999: 7-8) states that gender was a characteristic that adheres in male and female that have constructed socially and culturely. Clearly, gender was behavioral differences between male and female that costructed socialy, not God will. But it created by human in along socio and cultural proces. In accordance with the thing, hopely, the students were not forget gender perspective in Indonesia language and literature learning at senior high school so the students knew the concept of gender equal rightly that they have good understanding since they are studying at school. The students will have right concept about equal position between male and female in many aspect of life except a thing that God will. Learning of literture in gender perspective was a edocation proces that spirited by awareness of gender equal. In Indonesia which dimonated by pathriarchy culture, the understanding of gender equal value must give earliar especially for the senior high school students so all of people aware to gender equal that they respect each other. We can do the thing through literature learning in gender perspective. In Indonesia literature development, Indonesian literature writers have written many novels in gender perspective that can use by teachers as the material for literture learning. *Woman Necklake Turban by Abidah El-Khaliqy* was one of it. Because of the importance of the material the students at senior high school so the researcher wanted to make a material of literature learning of gender perspective conceptually that will being the barometer of inovative material and help te students know gender equal earlier that their understanding will be right and accurate.

Therefore, the researcher interested to analyze those problem and tried to give alternative concept of gender equal through literature learnig in gender perspective.

B. Methodology

The researcher used descriptive qualitative approach by using two methodes, qualitative analitic and action research methode. Qualitative analitic methode used for analyze first and second problems while the third problem analyzed by using action research methode.

The Souce of Data

Based on the prblem, the souce of the data was the literary work that have feminism value and the students who have tough literature learning in gender perspective. The literary work used the novel by Abidah El-Khaliqy tittled Woman Necklac Turban and the eleventh students of IPA 1 of SMAN 1 Pringgabaya.

The Instrument of The Research

The primer instrument of the research was the researcher. Sugiyono said that qualtative researcher as human instrument who determine focus of the research, choose informant as the souce of the data, data analysis, data interpretation, and arranged the conclusion of the research (2011: 306).The researcher is the key instrument (Sugiyono, 2011: 306).The otherinstrument was interview which the material gave in beginning observation and last observation. The material of interview that gave to the students focused on :

1. The students knowledge of gender and feminism
2. The students knowledge about literary works that contented feminism perspective value
3. The students attitude to the issues of gender in family, social life, education, and job world.

Data Collecting

To collect the data, the researcher used observation technique of discourse, unstructured interview, and observation. The steps of collecting data was:

1. Discourse observation have done to the novel as the primer source of data to analyze the data need by using theory of gender. This step answered the first and second problems.
2. Unstructured interview and obsevation have done to get the data about the attitude of othe students about their opinion to the gender in their life. By using

this technique, the informations got the proces og learning happened. The data thaen hve descrepted and analyzed to answer the third problem.

Data Analysis

The analysis of the data in this research used content analysis methode with inductive and deductive approach. Krippendorf (2004:18) defined *"a research technique for making replicable and valid inferences from texts (or the other meaningful matter) to the context of their use".* The researcher in content analysis related the literary work with the real life, idea, social issues, politic issues, and some phenomenon in our life.

The Analysis

Based on the analysis of the data, the result can be explained:

1. There are four issues of gender unequal in the novel Woman Necklac Turban:
    a. Marginalisation woman
    b. Subordination of woman
    c. Stereotype of woman
    d. Violence of woman.
2. The reaction of woman character (Annisa) to face gender issues in the novel Woman Necklac Turban devided into three phases of her life:
    a. Children phase
    b. Teenager phase
    c. Adult phase
3. Based on the result of beginning and the last observation, the eleventh students of IPA 1 SMAN 1 Pringgabaya have changed in their attitude in gender equal. Literature learning in gender perspective in the novel Woman Necklac Turban by Abidah El-Khaliqy and presentation of gender equal material was effective to change the attitude of eleventh students of IPA I SMAN 1 Pringgabaya. We can see the changing at table below:

No.	The aspect of life	Beginning Observation	Last Observation
1	Family	84% woman have to faithful to what her husband said	All of sample egreed that male and female have equal obligation and right in their family but it was

			suitable and proporcional with with their situation
2	Social life	The sample agreed that female not overacting because it destroied norm and culture arrangement of nation. So there is no domination between male and female but equally	A The sample till have similar attitude with beginning observation.
3	Education	68 % of the sample said that the women have not permit to sudy in advanced education because if the women have a high degree in education they will demand more for their rights as a woman.	The sample agreed that women continue their study in advanced education and more active in public space.
4	Job world	All of the sample agreed that women worked in a location with a little risk and not demand heavy responsibilities	The sample said that women worked in anywhere they wanted but not against what God will as a female

C. Conclusion

Based on the result of the research, we found that there are four gender perspective in the novel Woman Necklac Turban by Abidah El-Khaliqy: 1) marginalisation of woman who presented by Annisa as the main character and have not care by her husband (Syamsudin) and also not get similar chance with man, 2)

subordination of woman, Annisa was just a slave for her husband than a wife based on her husband attitudes. For Syamsuddin, Annisa was a woman who have not similar human rights with man, 3) stereotype of woman, labelization of Annisa as a woman has have to face oppression since she was child till she married with a monster who used a mask as a kindman 4) violence of woman, she often faced oppression in her life and she also was holdup her freedom as awoman since she ws child. But Annisa was not a weak woman. In her phases of her life Annisa showed her rejection to the violences and oppressions. Gender equal awared Annisa that she has similar human rights with man. Annisa tried hard to aware her parent, her brother, and her society that woman was not second sex (second human being). Bulglarizing of Annisa happened in three phases: 1) phase of children, 2) phase of teenager, and 3) phase of adult.

D. Reference

Fakih, M. 2007. *Analisis Gender dan Transformasi Social.* Yogyakarta: Pustaka Pelajar

Lips Hilary M. 2003. *Sex and Gender: An Introuduction*. London: My Field PublishingCompany.

Potter, J.L. 1967. *Elements of Literature*. New York: The Odyssey Pres Inc.

Ruthven, K.K. 1985. *Feminist Literary Studies: An Introduction*. Cambridge University.

Sugiyono. 2011. *Metode Penelitian Pendidikan: Pendekatan Kuantitatif, Kualitatif danR&D*. Bandung: ALFABETA.

The Use of Puppets In Teaching Speaking For Junior High School Students

Ari Prasetyaningrum
Hamzanwadi University
arumdalu15@yahoo.com

Abstract

This purpose of this research is to find the effectiveness of teaching speaking by using puppet for the junior high school students and how effective the use of puppet in teaching speaking for the junior high school students. The method applied in the present research was pre-experimental with one group pre test and post test design. The population of the test was 28 and all the students were the sample as well. To collect the data, a pre test and post test were administered with oral test as the instrument. The results of pre test and post test were used to determine the mean score and standard deviation score. In analyzing the data, a paired sample t-test was used to analyze whether the alternative was accepted of rejected. To analyze the data, the present researcher applied SPSS 17 for windows. Based on the result of data analysis, the mean score of pre-test was 50.00 and that of post test was 68. 75, meaning that there was a difference in the mean scores between the pre test and post test. In tetsing hypothesis, the present researcher found that t (df=27) = -7.232 at p= 0. 000, meaning hat the alternative hypothesis was accepted. It was concluded that puppet usage was significantly effective in teaching speaking for the junior high school students.

Key Words:*teaching speaking, puppet*

A. Introduction

Language is commonly divided into four language skills, they are listening, speaking, redaing and writing. One of the skills which can be aparted from human's life is speaking. It happens when oral communication involves the negotiation of meaning beiween two or more people. Speaking is one of four languages skills which is considered as a basic of language as communication instrument. Speaking is an active usage of language to express meaning so the other people can make sense of them. According to Richards and Renandya (2002, p. 210) speaking is " one of the central skills of communication". Speaking is the interaction between two people or more to receive information in which there is a speaker and listener. speaking is an

active usage of language to express meaning so the other people can make sense of the meaning. Unfortunately, related to the language teaching, students usually get difficulties in speaking English which is caused by condition of school envoronment and media that is used to teach them. Generally, there are some speaking problems which the researcher can come across in getting students to talk in the classroom. These are inhibition, lack of knowledge about topics, low participation and mother tongue use.

Based on the problems stated previously, the present researcher decided to choose an interesting media in teaching speaking to help teacher and students in teaching and learning process. Wright (1997, p. 48) states that "there are some media that can be used in etaching speaking. Some ways in prompting the speaking skill are a sequence of picture which prompts their memory" . Then, a sequence of picture can be card picture of paper. A sequence of key words, in addition, mimein which students try to speak based on the gesture. Finally, tecacher can use figurines or puppet. Puppet could be used as an effective media to improve speaking. Puppet is an inanimate figure that is made to move by human effort for an audience (Baird, 1973, p. 13). Puppets includes in visual media because it is an imitation of real thing. It can be played as a model in front of the class. Then, the students can see the performance of the model first and then they can imitate the performance. Through this media, the students can speak freely and enjoyable without feeling afraid and shy when they speak in front of the classroom.Nuril Khrirshenbaum (1997, p. 44) states that " when a person creates a puppets, he can only creates a character about which he knows something." Puppet as one of teaching media shows characters of something and their detail, it offers fun too. Puppets also provide benefits to the teacher because she/he has an example model in presenting lesson to the students. Suyanto (2010, p. 103) states that " the teacher can use puppets for all activities. By moving it, the teacher can make puppets speak, move and walk. The procedures of using puppet to teach speaking could be divided into three phases, they are pre-teaching, whilst-teaching and post-teaching activity. Pre teaching activity is done at the beginning of teaching and learning process, it is administered to provide students background knowledge an dbuild their confidence. Pre–teaching activities have several benefits, such as giving new information, stimulating the students' concentration and increasing curiousity. Furthermore, pre-teaching activity makes the students understand about what they are going to study. In whilst-teaching activity the teacher first of all shows puppet to keep attention of student. In this case, teacher uses a hand puppet as media. Second, teacher introduces the topic of the lesson,. Third, the ssmto talk further about the topic. Fourth, the teacher asks the students to repeat what the teacher say. Fifth, the teacher invites one or two of the

students to have a dialogue about personal information using hand puppet. Sixth, the teacher asks teh students to discuss about asking personal information in pairs. Seventh, teh teacher asks the students to practice in front of class by using hand puppet and make a conversation about personal information with their own topic. Finally, in post-teaching activity, the teacher led the students to conclude the lesson and told what they will learn next week and close the lesson. Having taught the students, there must be evaluation to measure how far the students master the lessson. There are some ways in evaluating on teaching. According to Harmer (2007, .p. 135) those are like comment, marks & grades and report. Commenting on students' performance happens at various stages both inside and outside the class. The teacher can say, very good, good, and that is not quite right; marks and grades: when students gain good grades, their motivation is often positively affected. However, bad grades can be extremely unheard and reports: at the end of year, some teacher write reports on their students' performance. Such reporst should give a clear indication on how well the students accomplish their achievement the past and a reasonable assessment in their future prospects.

Syakur (as cited in Pipin, 2010) defines that there are five components of speaking skill concerned with comprehension, grammar, vocabulary, pronunciation and fluency which may be assessed: (1) Comprehension for oral communication certainly requires a subject to respond to speech as well to initiate it; (2) grammar, it is needed by the students to arrange a correct sentence in conversation; (3) vocabulary, vocabulary means the appropriate choice of words which are used in communication; (4) Pronunciation, pronunciation is the way for students to produce clearer language whenthey speak, and (5) Fluency, fluency can be defined as the ability to speak fluently and accurately. There are several types of puppet which can be used by teachers as medium of teaching. Here are several types of puppets taken from Chetna (1995, p. 5) glove puppet, string puppet, rod puppet, shadow puppet, sock puppet, finger puppets, paper bag puppets, stick and ball puppets and shadow puppets. In order to limit the discussion of research, the present researcher stated that the subject of the research was the seventh graders of junior high school and the object was the effectiveness of tecahing speaking with puppet. The present researcher focussed in applying hand puppet in teaching speaking. Based on the explanation previously, the researcher investigated the use of puppets in teaching speaking for the junior high school.

The purposes of this research were as follows:

a. To know whether the use of puppet is effective in teaching speaking to students for the junior high school.

b. To know how effective is the use of puppet in teaching students' speaking for the junior high school.

B. Method

Pre experimenntal method was used in this research. Ary et al (2010, p. 301) states that " experimental method is the general plan for carrying out research with an active independent variable". A design is very important because it determines the researcher's internal validity, which is the ability to reach valid conclusions about the effect of experimental treatment on the dependent varaible. Furthermore, One group pre test and post test design was applied in this research which meant that only an experimental group without control group was applied. The experimental group was then tried out by puppet media and pre test and post test were administered to experimental group.

Participants

The population taken here was all of the seventh grade of a junior high school which consisted of 28 students in one class. Then all of the population was taken as sample because the number of students in the clasroom was less than 100.

Data Collection

Instrument is an integral part in a research because it is needed to measure the variable investigated. (Sugiyono, p.102). To know the effectiveness of puppet media, the students were administered oral test. The present researcher divided the score into five criteria namely, comprehension, grammar, vocabulary, pronunciation, and fluency. After that to get the mean score , total score all from all criteria were summed. Next, the present researcher administered pre test, treatment and post test as the technique of collecting data.

Data Analysis

Descriptive Statistics

Descriptive statistics is used in analyzing data. Descriptive statistics is a generalization testing process of the result of research which consists of one sample (Sugiyono, 2007, p. 80). As the first step, the present researcher measured the mean score to find out the score which provide the indication of the students on an achievement test. The mean score was got from the result of pre test and post test. The mean score of students' tests both pre and post test was calculated by SPSS Statistics 17 for windows. The next step was finding out standard deviation. It was needed to calculate the degree to which the group of score deviated\from the mean score.

Testing Hypothesis

In testing hypothesis, the collected data should be nornal and homogenous. There were two required statistics needed, namely normal distribution and homogeneity were tested by using SPSS statistics 17 for windows. In calculating normal distribution, the present researcher used one sample kolmogorov Z smirnov test. After calculating normal distribution of the data, the present researcher checked homogenity of the variable variance. If the values of the significance level of the investigated variables are greater than 0.01, the distribution of the data is normal (Moedjito, 2014, p. 111)

C. Findings and Discussion

Findings

Descriptive statistics

Having calculated the data, the present researcher found that the result of the lowest score of pre test was 12 and the highest score was 16 while in the post tets the lowest score was 13 and and the highest score was 22. The result of the data calculationshowed that the mean score of the experimental group in the pre test was 50. 00 and in the post test was 68. 75. Meanwhile, the standard deviation of the pre test and the post test were 1. 79 and 2. 46 respectively. Based on the data gained on the students' speaking skill it is indicated that the mean score after having the treatment was higher than before doing the treatment in which the mean score of post test was higher than the mean score of pre test.

Normality Testing

To check the data finding whether the distribution of pre test and post test was normal or not, the present researcher used normality testing. If the value of significant level of the investigated variable was higher than 0. 05at the significant level value, it implied that the distributionof the investigated data was normal. Having obtained the data from the research field, it was found that the distribution of data was normal. It could be seen from the result of asymp. Sig (2-tailed) on the pre test and post test was higher than 0. 05. In pre test, it was 0. 359 and higher than 0. 005 as a significant level. Meanwhile, post test was 0. 718 higher than 0. 005.

Homogeneity testing

Further that the data dr, this test was conducted to know that the data is homogenous. Moreover, the data is said to be homogenous if the values of the level

significance is greater than p=0. 05. The homogeneity test by using one way ANOVA showed that the data was homogenous, Levene's statistics test = 3. 546, at p = 0. 65.

Testing Hyphothesis

Testing hyphothesis was conducted to know whether null hyphothesis is accepted or rejected. To analyze whether there is a significant dofference in the mean score between the pre test and post test, the present researcher used a paired-samples t-test to get answer of the hyphothesis. After performing a paired-sample, the present reseracher found that there is a significant difference in the mean scores between the pre test and post test t(df=27) = -7. 232 at p = 0.000, is meaning that the null hyphothesis was rejected and alternative hyphothesis was accepted. Then, it is concluded that puppet was significantly effective in teaching speaking by using puppet for the seventh graders of junior high school.

Discussion

Based on the research method, teaching and learning process was divided into three steps. First step is preliminary study where the reseracher conducted a preliminary study to know the students' speaking ability by administering pre test without puppet. The second step was giving treatment to the students. The treatment was teaching speaking by using puppet media. The students were given material about descriptive (description about person, animals/things. For the first treatment, the resaercher told about animals/things (name of animals/things, mention the name and kinds of colour) by using puppet. Then, the researcher asked the students to have a conversation about animals, people, and things around teh classroom with their pair by using puppet media. The students also spoke with the researcher by using puppet media. After having treatment, teh students become active and enthusiast to speak because they enjoy the media.

Based on the research finding, puppet media was effective to improve speaking ability. It was because puppet could encourage the young learners to speak actively.

The result above is also in line Richard and Renandya (2002, p. 210) " speaking is one of central elemens of comunication" . It means that speaking is very important. Speaking which is the interaction between two people or more to gain information could happen when there is a speaker and listener. By speaking, someone can express his or feeling, emotion and ideas. Unfortunately, some teachers still teach English by using classical teaching technique which later affect students' achievement. Puppet

media also offers fun activities in speaking and simulates to speak. The young learners can speak English easily and relax without much barriers. The comfortable situation of teaching and learning will make the students enjoy learning and ger good result. It could be done because by fun learning, information could be understood and maintained in memory well.

D. Conclusions and Suggestions

Conclusions

Based on results, the present researcher concludes briefly some conclusions as follows:

1. The Puppet media was significantly effective especially for the seventh graders of junior high school. The figure of t-test was also higher than the value of t-table. It meant that the standard deviation and mean score were significant.

2. Puppet media was success on teaching students' speaking for the seventh grade student of junior high school.

Suggestion

Based on the results of this study, the present researcher has some suggestions,such as:

1. To Apply puppet as media in teaching and learning process, the teacher should pay more attention to the students' ability in making conversation with their friends.

2. Using puppet in teaching and learning process makes students become more active in classroom.

3. The English teacher has to give more opportunity to the students in order to practice their speaking skill to increase their fluency in using the target language.

4. The English teachers should motivate their students to speak English either inside or outside the classroom.

E. REFERENCES

Ary, D. (2010). Introduction to research in education. (8th. Ed). Canada :Wardsworth Cengage Learning.

Brown, Douglas. (2001). Teaching by principles "An interactiv approach to language. San Francisco: Addison Wesley Longman.

Brown, Douglass. (2004). Language assessment 'Principle and classroom practice". New York: Pearson Education.

Burns, Anne and Joyce, Hellen. (1997). Focus on speaking. Sydney: Macquari University Press.

Brown, W. James. (1983). An instruction technology media. USA: Mc Graw Hill.

Frankle, R. Jack and Wallen, E. Norman. (1996). How to design and evaluate research in education. USA: Mc Graw Hill.

Harmer, Jeremy. (2007). *How to teach English.* China: Pearson Education.

Harmer. (1991). *The Practice of English language teaching*, 3rd Ed. New York: Pearson Education limited.

Juhairiyah.(2010). Using puppets as media for teaching speaking at the first students of SMPN 1 Tambak. Malang. University of Muhammadiyah Malang. East Java. Article: 04 ISSN 1309-6249.

Khrishenbaum,Nurit. Do you speak puppetry. Nrw York: Longman London NY. Retrieved at 17th April 2017 from http:/www.speaking puppetry.com/index.php.

Moedjito. (2017). Basic statistics for research in language education. Unpublished Modul: STKIP Hamzanwadi Selong. Nusa Tenggara Barat. Indonesia.

Nunan, D. (2003). Practical English language teaching. New York: Mc Graw.

Paul, David. (2003). Teaching English to children in Asia. Hong Kong: Pearson Longman Asia ELT.

Prabowo, Aris Indrianto. (2010). Upaya meningkatkan kemampuan speaking menggunakan media ajar puppet: suatu penelitian tindakan kelas pada siswa

kelas 6 SDN 02 Jetak Kidul tahun ajaran 2009-2010. Tegal. Universitas Pancasila Tegal. Vol 1. No. 3 Desember 2016 ISSN: 2186-8492

Renfro, Nancy. (1979). Puppetry and the art of story creation. Austin, Texas: Nancy Refro studios.

Schmidt, Richard. (1992). Methodology. Cambridge: Cambridge University Press.

Suharsimi. (2006). Prosedur penelitian: Suatu pendekatan praktik. Jakarta:

Sugiyono: (2007). Metode penelitian pendidikan. Bandung : Alfabeta.

Suyanto. (2010). Metode penelitian sosial " seni pertunjukan wayang sebagai wahana pendidikan. Jakarta: Prenada Media Group.

Syakur. (1987). Language assessment principles and classroom practices. Surakarta : Sebelas Maret.

Syakur. (1987). Language testing and evaluation. Surakarta : Sebelas Maret.

Thornbury, Scott.(2003). Toward an international pronunciation of English. Oxford: Oxford University Press.

Winski. (1998). Handbook of standards and resources for spoken language systems vol, 1: spoken language systems and corpus. New York: Bonanza books

Yesterberg. (1999). Teaching English to children. New York: Longman

Approaches To Teaching English Composition Writing At Senior High Schools in East Lombok Regency

Usuluddin
Hamzanwadi University
Usuludin15@gmail.com

Abstract

The aim of this study was to examine the approaches to the teaching of English composition writing in East Lombok Regency classrooms and to produce models that might enhance the effective teaching of composition writing at the junior secondary school level. The aims of the study triggered the objectives of identifying the challenges posed by the use of such approaches to teachers; determining if the approaches used by teachers inhibit students' performance in composition writing; and proposing possible solutions or models to the challenges in the teaching and learning of English composition writing in the classroom context. Relevant theoretical and practical literature germane to the study was reviewed and descriptions of the conceptual framework/the research design, and methodology provided. The study utilized the qualitative technique through interviews, observations, reviews, examination of documents and students' artifacts. Based on the aforementioned methodologies, the major findings were that: (i) Teachers utilized mainly the product oriented approach to the teaching of English, composition writing. (ii) Teachers were confronted with challenges emanating from the use of the product oriented approach to writing such as surface level errors, wrong grammar/tense, lack of vocabulary and organization skills, and inability of students to compose and communicate effectively in writing. (iii) The teachers' use of the product oriented approach is believed to have among other things, contributed greatly to the students' poor development of writing skills such as wrong spelling and punctuation, lack of organization, lack of ideas and vocabulary, and inability to compose and communicate effectively in writing. (iv) A model to improve the teaching of English composition writing was developed based on the major findings above. Finally, on the basis of the findings and the conclusions made, pertinent recommendations were made to enhance the effective teaching of English composition writing at the senior high school in East Lombok Regency.

Keywords:*teaching approach, teaching models, composition writing*

A. Introduction

Teaching English for EFL learners emphasises proficiency in the use of English, as a tool for effective communication, study and work, as well as an important goal of Senior High School Curriculum. This being the case, there is tremendous pressure on the students of senior high schools to have competency in English language

speaking and also develop the skills of writing effectively in the language. As stated above, the importance of English within the entire school curriculum cannot be over-emphasised. As well as being an official language in Indonesia and in most of the provinces in Indonesia, more specifically in East Lombok Regency, West Nusa Tenggara Province, English is also a major language of communication and commerce, not only internally, but regionally and in the wider global context. It has significant importance in the field of education and functions as a medium of instruction across the curriculum. It is also an access language in technology and information services. In addition, it facilitates the acquisition, creation and documentation of knowledge. It is the medium of instruction and the language through which a great deal of learning takes place, and thus has a significant and prominent place in East Lombok Regency, West Nusa Tenggara Province, Indonesia.

Teachers of English as a foreign language (EFL) grapple with the problem of students' inability to do extended writing, especially at the senior high school level in East Lombok Regency. The English. .
syllabus (2013) details the objectives and expected outcomes for learners of the English language as follows:

1) Communicate accurately, appropriately and effectively in speech and writing, both in and outside school;
2) Understand and respond to what they hear, read and experience in a range of situations, settings and media;
3) Enjoy reading a range of literature, not only fiction but also general interest works and materials;
4) Convey information, and logically order and present facts and ideas based on other subjects of the curriculum; and
5) Recognise and use different registers, implicit meaning and non-verbal communication appropriate to the situation (English Curriculum used in Indonesia, 2013).

The above five outcomes are directly linked to the development of language skills which includes the ability to write effectively. The Senior High School English Syllabus (Indonesian Curriculum, 2013) states in part, that, ' the work involved enables pupils to gain further practice in the key areas of listening, speaking, reading and writing, consolidating these skills in interesting and communicative ways that enrich students' day to day language.

Literature and experience of the researcher indicate that both teachers and students face problems in the teaching and learning of English composition writing at

the senior high school level, and that the difficulties have been persistent over the years. In fact, there is continued noticeable poor performance of students in written English as highlighted by various government documents. The annual report of the Senior Certificate (SC) English Examination in 2015, recommended among other measures, that: (i) Teachers expose learners to varied reading materials and topics in order to enhance their creativity, develop vocabulary and generally enhance language acquisition and learning. (ii) Teachers equip the learners with all the sub-skills of writing, giving lots of practice (Ministry of Education, 2013).

Moreover, a survey project report of the learning achievement of Standard Four Students produced by the Indonesian Ministry of Education (2015) indicates that, even at the secondary school level, only 21.9% of the students tested reached the competency level in literacy in English domains. Actually, for composition writing, the percentage competence was 7.2%. Furthermore, the Indonesian Ministry of Education Report of the Senior Certificate for English Paper (2015), which consists of composition and letter writing, notes that some centres attained a pass rate of just below 50% and that there were persistent errors arising from the problem of limited vocabulary; and presumably lack of exposure to wider reading. As a result, the following were recommended for composition writing: (i) Candidates be exposed to varieties of writing such as narrative, descriptive, persuasive and argumentative, to cite a few examples. (ii) There is also a need to equip candidates with adequate skills and training in the area of continuous writing. (iii) Other intervention strategies may include language games, essay competitions, debates, vocabulary log books etc. (Ministry of Education, 2013).

Another important factor in students' inadequate writing ability is the entry-level competence of Standard Seven School leavers admitted to form one of senior high schools. Arthur (1993) cited in Mooko (1996) in one ethnographic study which pertains to the type of writing practice that Standard Six students received in three secondary schools in East Lombok Regency, observed that most of the writing was confined to copying notes from the board. Other activities involved guided writing in which students did cloze exercises and sentence completion. Arthur further argues that students' writing tended to vary only with respect to surface level accuracy, otherwise, students' work tended to be quite homogenous as students stick to teacher controlled form and content. It is believed that the inability of students to develop the skill of composition writing at the earliest stages of education, has contributed in no small measure to poor performance in writing through senior high school, and consequently, beyond that level.

Mooko (1996) that the problems encountered in the ways composition writing is taught, lack of practice. In other words, students are not given enough writing practice. Fuller and Snyder (1990) observe in their classrooms study of writing that only one percent (1%) of the time allocated to English in secondary and senior high school classrooms was devoted to writing essays. They also noted that although teachers consistently assigned written work, only a small proportion was devoted to writing short essays in class. Rowell (1991) again deduces that senior high school students are not given adequate instruction on composition writing. She further reports that her study revealed that instances where students were given the opportunity to write paragraphs and compositions were quite rare as teachers felt that students were not capable of performing such tasks.

This situation has contributed a great deal to the difficulties students are having in the learning of composition writing in schools. Besson-Molosiwa (1990) suggests that the reason why few writing exercises are assigned is because there are too many students in each class. It is also observed that many teachers avoid giving students compositions to write, citing class size as an excuse. It can be deduced that teachers are discouraged by the amount of assessment that they will have to do if they were to give more written work. As a result of this, teachers restrict the amount of continuous/extended writing that students do and avoid doing a lot of marking or grading.

The issue of class size in most government owned public schools is real and needs to be addressed. However, the use of the traditional approach to composition writing may be accountable for this situation as it emphasizes mistakes in marking, as opposed to the process approach to composition writing that eliminates mistakes/errors in the process of writing, and thereby eliminates any tedious assessments that the teachers may have to do. In addition to the various challenges encountered in the teaching of composition writing, especially at the junior secondary level, is the factor of the teaching and learning of English as a foreign language (EFL) which has always been a challenge to teachers. As a result of all these constraints, it becomes important that educators find ways of exploring the difficulties of teaching and learning of English composition writing in senior high schools in East Lombok Regency, with a view to coming up with solutions that would help improve students' performance in that aspect of English language education.

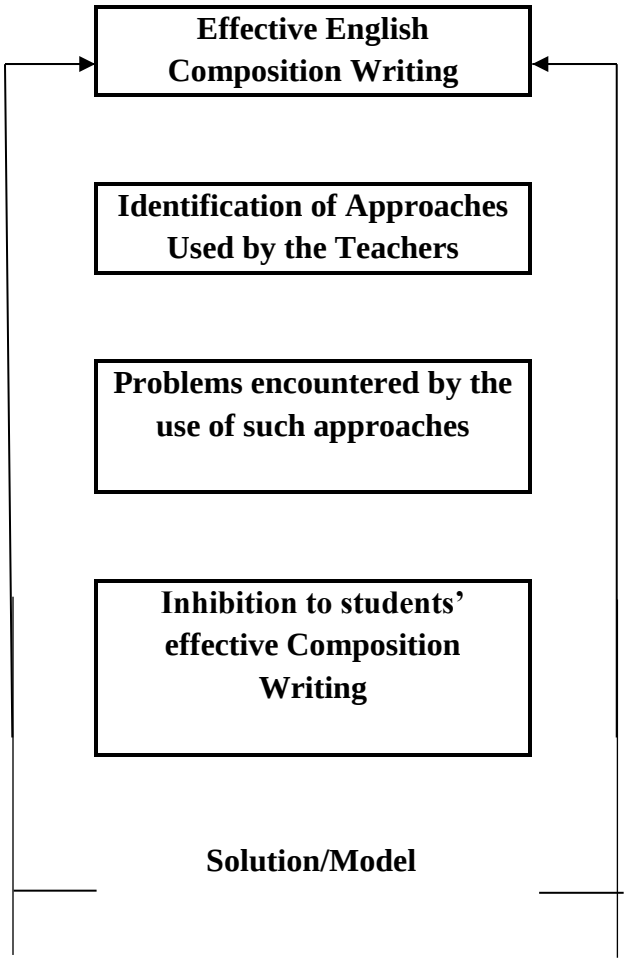
Based on the elaboration of the above phenomena, there were four research problems could be formulated

1. What approaches do teachers utilize in the teaching of English composition writing in the three classrooms?
2. What are the challenges or problems associated with the use of the approaches?
3. Are the teachers' approaches to teaching composition writing responsible for the poor writing skills of learners?
4. What possible models would improve the teaching and learning of composition writing by students at the junior secondary level in Botswana?

B. Research Method

This study was designed to embrace a plan which described the conceptual framework, gaining entrance into the field, the school settings and the sample, and the background ofStudents. Other issues discussed included the students' second language background and the background of the three teachers in the investigation. Finally, the strategies of data collection and analysis in conjunction with the elements mentioned in this section, are believed would help to answer the research questions. This study was also conceptualized on the basis of the framework shown in Figure 01. The English composition teachers were conceptualized to want to teach the Form One students to write English composition effectively and with greater ease. In doing this, the teachers of English utilized some approaches in teaching the anxious learners to enable them to compose effectively. What are these approaches? The identification of these approaches enabled the investigator to answer Research Question One. In using the approaches during the teaching-learning situations, did these teachers encounter problems or challenges that impinged on the effective teaching and learning of English composition writing in the classroom? Answers to this question have enabled the investigator to answer Research Question Two. Further, did these approaches as used by the teachers constitute inhibitors to effective development of composition writing skills? The answer to this question helped explain Research Question Three. Finally, the suggested solutions or models advanced by the researcher after discovering the 'gaps' in the teaching learning process that could help to enhance the effective teaching of composition writing in senior high schools in East Lombok Regency have helped to provide the answers to Research Question Four.

Figure 01. Design of the research



The study adopted the qualitative research methods. Since the focus of the investigation was to study the approaches, challenges, suitability of approaches used by teachers and the proposal of solutions/models to the problems inhibiting effective composition writing, the researcher observed students and teachers in three classroom settings. In addition, the study employed different research strategies such as observations, interviews, examination of artifacts and document reviews.

The following research procedures used for this study were (a) Observation Guide for Teachers, (b) Interview Guide for Teachers, (c) Interview Guide for Students, (d) Marking Rubric for Examining Students' Written Work, and (e) All available documents in terms of materials used for English Composition writing – textbooks,

students' exercise books, marking rubric and other related artifacts on English composition writing in the classroom setting.

Three senior high schools in Selong (*SMAN 1 Selong, SMAN 2 Selong*, and *SMAN 3 Selong*) were used in this study. The choice of Selong City high school was purposive. The high schools were also government public schools with complete facilities. It also has the most population of EFL learners. The choice of Selong city was necessary to minimize costs and inconvenience. There was also the factor of proximity of location to home and workplace that enabled the researcher to spend adequate time on the study, comfortably. In addition, three senior high schools were randomly chosen from Selong City to make up the schools under study.

Form One class was also randomly chosen from each of the three schools to form the three classes under investigation. The student population was made up of students from government public secondary schools and private secondary schools. The three classes with a total of 121 students, formed the sample of average form one classes experiencing the problem under study. Also, there were three participating teachers who automatically were the teachers of English language in the randomly selected classes in the three schools.

The study adopted the qualitative approach, using a variety of methods or triangulation. As earlier noted, Cohen, Manion and Morrison (2005) define triangulation as the use of two or more methods of data collection in the study of some aspect of human behaviour. Triangulation also includes the use of various sources (using more than one stakeholder group or representatives of stakeholder groups, such as teachers, students, curriculum developers, school inspectors and so on).

A qualitative approach, with a variety of methods or triangulation was used in this study. This involved the use of two or more methods of data collection in the study of human behaviour. Triangulation by its nature also includes the use of various sources (using more than one stakeholder group or representatives of stakeholder groups, such as teachers and students as reflected in this study). Triangulation in other contexts may also involve the use of different researchers collecting data, such as researcher and different research assistants, as well as the triangulation of theories or paradigms. Specifically, observations, interviews, examination of documents and artifacts were used in this qualitative research as earlier indicated. It is assumed that these would reduce the risk of biased conclusions drawn from using one specific method of data collection, and to ensure validity and reliability.

The strategies employed in ensuring credibility of the research findings included the use of triangulation whereby interviews were conducted with teachers and students. Purposive sampling was used for the choice of schools thereby enabling the advantage of targeting those informants whose information might apply to a majority of similar settings in other locations, in this case, other schools and classes. Field notes were gathered by conducting an observation of teachers and students in a natural classroom setting in the role of a non-participant observer. One-on-one open ended semi-structured interviews were conducted with the participating teachers and students which were combined with the examination of students' artifacts, such as their draft compositions, mind maps, composition writing exercise books, pictures of different types of homes brought by students, teachers' lesson plans, and prescribed textbooks used by both the teachers and the students in their composition writing lessons. Also, the standard marking rubric used by the teachers to score students' writing was examined. Verbatim quotations from the interviews were included in the text to give more substance to the findings. The researcher's experience as an English language teacher for over two decades also informed the choice of elements to be observed, documents to be checked, observation of students' behaviour during lessons, as well as the interview discussions with both the teachers and the students.

Further, the feeling of collegiality that existed between the researcher and the school teachers, helped to promote the atmosphere of ease in the students and teachers. This enabled the parties to open up during the interviews, and act naturally during the lesson observation sessions. In addition, literature pertaining to EFL composition writing was continuously reviewed. In the stages of data collection such as observation and interview. The data grid shown below summarizes the research objectives, the data needed, the location of data, how to obtain the data, and how to analyse the data as shown below:

Figure 02. Data Collection procedure

Research Objective	**Data sources**	**Data Collection**	**Form of Data**
Approaches Teachers Use	Teachers Syllabus	Observation Interview Document Analysis	Qualitative

			Qualitative
Challenges Posed	Teachers Students	Observation Interview Document Analysis	Qualitative Qualitative
Inhibition/Non-inhibition	Teachers Students	Observation Interview Document Analysis	Qualitative Qualitative
Models/Solutions	Teachers Students	Observation Interview Document Analysis	Qualitative Qualitative

C. Research result and discussion

Based on Analysis of research questions one to three led to the findings that will be discussed in this part of the report. It was found that the approach used by the teachers showed lack of value/importance placed on writing and creativity as a skill. The teachers did not seem to see the future benefits of the development of their students' writing skills. Composition teaching was probably done just to go through the motions. The teachers' lessons were uninspired, as they showed no passion for the activity. These were reflected in the way the teachers handled the teaching of composition writing in their classrooms. The writing instruction process was bland, repetitive and boring. Arising from the overall analysis, these were the findings from the study:

· Non compliance with official directives and objectives of language teaching;
· Lack of Students' Competence in Composition Writing;
· Students were assigned to write on topics beyond the level of their experience;
· Students were allowed to complete composition writing assignment as homework without the teachers' supervision and assistance;
· To convey information, and logically order and present facts and ideas based on other subjects of the curriculum.

· To recognize and use different registers, implicit meaning and non-verbal communication appropriate to the situation

It is noted that writing is a generally difficult skill to learn. Some of the causes of the difficulty in writing include what Collins (1998) refers to as writing not being a spontaneous activity, but some conscious mental effort that has to be learned in a formal setting. It is also believed that writing is an involuntary activity, and that people do not just pick it up as they do spoken language, but that it needs to be taught and learned. In consideration of the nature of writing above, the main objective at this point is to find ways or strategies to minimize the difficulties which students have with writing in general, and to help them overcome their aversion for composition writing in particular. To this end, the researcher will suggest a combination of methods represented by the process/modeling approach. This simply means adapting or combining modeling (a feature of the product orientation), with the process approach. The product approach demands that students should focus on model, form and duplication. Simpson (2006) also maintains that students in classes adopting the product approach find themselves studying model texts, and attempting exercises aimed at drawing attention to relevant features of a text. As earlier explained in chapter four, it is a stop gap measure to provide context for EFL learners to develop writing skills by using the reading and writing connection to support the process approach to writing at the senior high school in East Lombok Regency.

Moreover, some researchers affirm that there is no reason why a writing programme should not contain elements of both approaches. Jordan (1997) says that it will be wrong to assume that the product no longer exists, or that it has no practical value. Besides, modeling in this context can provide the experience or background that EFL learners need in order to write effectively. For example, the evidence from the selections of students' artifacts in this report shows that they would benefit from modeling, as well as relating ideas to their experience. Most of them lack organization skills, content and context, all of which can be provided by modeling, coupled with the process approach to writing.

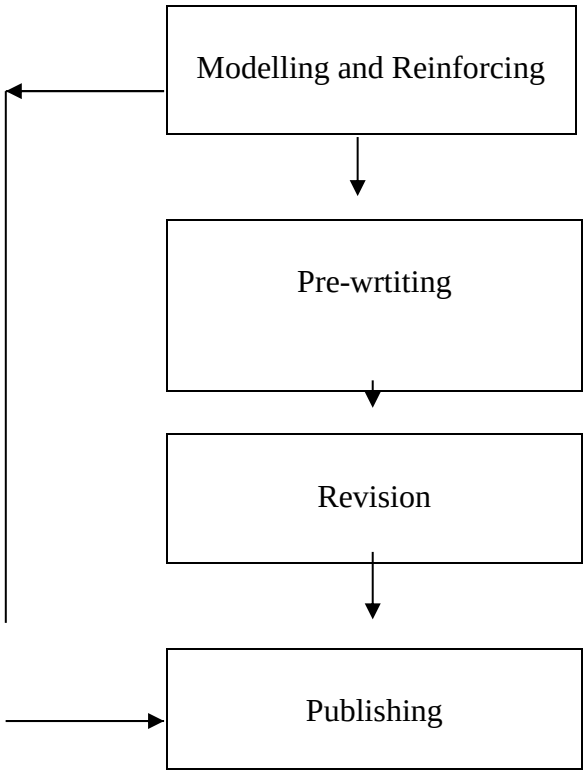
Considering the outlined benefits of modeling above, the argument in this study is that, because of the peculiar difficulties being experienced by students in this study, as a result of background factors and teacher methods, they would need content, contexts, and motivation to initiate their own writing. It was also found that the reading and writing habits that should support effective writing were not engrained in students. Further, as beginning writers, especially in the EFL context of this study, modeling

would help to provide the platform or scaffold for the students to develop effective writing skills.

The teaching and learning of English as a foreign language poses many challenges, especially in composition writing, at the senior high level in Indonesia, in general and in East Lombok more specific. The need to explore various options and strategies to overcome the challenges is imperative. A combination of process and modeling approaches (process/modeling) is an option that is worth considering, not only in East Lombok Regency, but also in other settings with similar backgrounds or problems. This is because it has been argued that reading has an important role to play in effective writing. As already stated, it can be used as a support or scaffolding technique to help EFL learners in this context to develop their writing skills. It is believed that the vocabulary that students see in their readings usually manages to crop up in their writing and that combining reading with writing provides the researcher with the rich potential of the language needed when the situation arises.

The process/modeling approach explores the link between reading and writing to enhance or improve students' writing skills. This means that reading can be used to prepare learners for more realistic forms of writing. It is believed that writing activities at this stage can provide a basis for integrated learning through reading and writing. The model can be diagrammatically represented and explained as shown below:

Figure 03. Suggested Model for English Composition Writing



(Adapted from Badger and White, 2000)

Modeling and *reinforcing:* The teacher introduces a model in the form of a reading passage from content areas, portions of newspaper clippings, articles from magazines, novels, videos, dramatisation and so on, as long as it is something that excites the students' interest. The teacher at this stage lets students discuss important details that would help them to plan their own writing such as the outline, paragraphing, main ideas, and other features that make the writing good or bad. *Prewriting:* Students can now plan their own writing by linking the context to their own experience. They discuss or relate similar experiences and make comparisons, where necessary with what they have read, heard or done. They then brainstorm ideas, making a list, drawing a mind map and (refer to text where necessary to do this). Where necessary, students can be encouraged to do more research on their themes/topics. *Drafting:* Drafting here

means that students can put their ideas on paper, focus on meaning and understand that writing can change. They can also engage in group and pair work or collaborative writing. *Revision:* At the revision stage, students can do self and peer editing. The teacher also facilitates and reinforces students' writing by guiding them to do effective revision by giving them editing rubrics and offering individual or group feedback to help students improve their writing. The teacher encourages students to write and rewrite as much as possible, until they are satisfied with what they have written. *Publishing:* Students write final product and incorporate the teacher's correction in such areas as grammar and meaning and so on before submitting their work for assessment.

In conclusion, it is the researcher's submission that the teaching and learning of English as a foreign language poses many challenges, especially in composition writing at the senior high school level in East Lombok Regency. The need to explore various options and strategies to overcome the challenges is imperative. A combination of the process and modeling approach is an option that is worthy of consideration, not only in East Lombok Regency, but also in other settings with similar backgrounds or problems in writing instruction.

D. **References**

Adeyemi, D. A. (2004). Relative effectiveness of the individualised and the cooperative Learning Approaches in Teaching Composition Writing at the Junior Secondary Level: A Case Study. An Unpublished M.Ed Research Project Submitted to the Faculty of Education, University of Botswana.

Allen, J. and Corder, S. (Eds.). (1974). *Techniques in applied linguistics: The Edinburgh course in applied linguistics.* Oxford: Oxford University Press.

Altano, B. (2003). *Writing processes and structures*, East Lansing: University of Michigan Press

Arthur, J. (1993). English in Botswana classrooms: Functions and constraints. In Rubbagumya, C. M (Ed.). *Researching Language in African Classrooms.* Clevedon: Multilingual Matters, 66-78.

Atkinson, R. (1998). *The life interview.* London: Sage.

Badger, R. and White, G. (2000). A process genre approach to teaching writing. *ELT Journal*, 54 (2), 153-160.

Badger, R. and White, G. (2000). A process genre approach to teaching writing. *ELT Journal*, 54 (2), 153-160.

Baskoff, F. (1990). *New worlds: A course in guided composition*. New York: Heinle and Heinle.

Bereiter, C. (1980). Development in writing. In Gregg, L. W. (Eds.). *Cognitive Processes in Writing*. Hillsdale, NJ: Lawrence Erlbaum Associates, 73-93.

Berninger, V. (1996). *Reading and writing Acquisition: A developmental Neuropsychological Perspective.* Boulder, CO: Westview Press.

Besson-Molosiwa, A. A. (1990). The use of process approach in the teaching of Setswana compositions in selected secondary schools in Botswana. Unpublished Masters Dissertation. University of Wisconsin, Madison.

Bogdan, R. C. and Biklen, S. K. (1992). *Qualitative Research for Education: An Introduction to Theory and Methods,* Boston: MA: Allyn and Bacon.

Cohen, A. (1987). Student processing of feedback on their composition. In Wenden, A. and Rubin, J. (Eds.). *Learner Strategies in Language Learning.* London: Prentice-

Cohen, L., Manion, L. and Morrison, K. (2005) *Research methods in education* (5th Edition). New York: RoutledgeFalmer.

Collins, J. L. (1998). *Strategies for struggling writers.* New York: The Guilford Press.

Grabe, W. and Kaplan, R. B. (1996). *Theory and Practice of Writing.* London: Longman

Graham, S. (2005). *Writing Better: Effective Strategies for Teaching Students with Learning Difficulties*, Baltimore, MD: P. H. Brooks Publishing Company.

Graves, D. (1994). *A Fresh Look at Writing,* Portsmouth, NH: Heinemann.

Graves, D. (1996). *Writing: Teacher and Children at Work.* Portsmouth, NH: Heinemann Publishers.

Gronlund, N. E. (1981). *Measurement and Evaluation in Teaching*. New York: Collier-Macmillan.

Hadfield, C. and Hadfield, J. (1990). *Writing Games.* London: Nelson Publishers.

Hairston, M. (1982).'The winds of change: Thomas Kuhn and the revolution in the teaching of writing'. *College Composition and Commnunication* 33 (1), 76-88.

Harris, K. R. and Graham, S. (1996). *Making the Writing Process Work: Strategies for Composition and Self-regulation.* Cambridge, MA: Brookline Books.

Hayes, J. and Flower, L. (1980). Identifying the organization of writing processes. In Gregg, L. W. and Steinberg, R. W. (Eds.). *Cognitive Processes in Writing*. Hillsdale NJ: Erlbaum, 3-30.

Hayes, J. R. (1996). A framework for understanding cognition and affect in writing. In Kevy, C. M. & Randsdell, S. (Eds.). *The Science of Writing*. Mahwah, NJ: Erlbaum, 3 -30.

Hedge, T. (1988). *Writing*. Oxford: Oxford University Press.

Heller, M. F. (1995). *Reading-Writing Connections. From Theory to Practice*. Boston, USA: Longman Publishers.

Johnston, B. (1987). *Assessing English: Helping Students to Reflect on their Work.* Milton Keynes: Open University Press.

Jordan, R. R. (1997). *English for academic purposes.* Oxford: Oxford University Press.

Jordan, R. R. (1997). *English for Academic Purposes.* Oxford: Oxford University Press.

Kellogg, R. T. (2001). Commentary on part 2: processing modalities and development of expertise in writing. In Alarmagot, D. and Chanquoy (Eds.). *Through the Models of Writing.* Dordrecht: Kluwer Academic Publishers. 219-228.

Kementrian Pendidikan Nasional (2013) Kurikulum bahasa Inggris Sekolah Menengah Atas.

King, K. B. (2006). *The Writing Template Book*, East Lansing: University of Michigan Press.

Kress, G. (1994). *Learning to Write (2nd Edition*). London: Routledge

Rowell, P. M. (1991). Communicating in the classroom: An interpretative study of two junior secondary schools. Unpublished Report submitted to IEES Research Foundation. New York: University of Albany.

Simpson, A. (2006). *A Process approach to writing*, http://www.Developingteacher.com/articles/tchtraining/pwl.adam.htmpl

Enhancement of Learning Outcome And Student'S Response on Biology Class ThroughImplementation of Stad Model in Smp Negeri I Sukorejo-Pasuruan

Yus Setriarini

setriariniyus@yahoo.com

Abstract

In learning process determine the model of learning becomes very important in a process of management of teaching and learning activities in the classroom. There are several problems that teachers often encounter, among others: 1) difficulty in choosing the appropriate method with the material, 2) difficulty in choosing, determining and compiling problems according to the criteria 3) difficulty dividing the group due to lack of class heterogeneity. The difficulties encountered resulted in the learning outcomes obtained by learners to be less than optimal and not in accordance with the expected.The purpose of this paper is to describe the learning outcomes and responses of students in grade VIII-G biochemistry through the implementation of STAD model in SMP Negeri 1 Sukorejo. The research approach used in this research is qualitative approach. Researchers in the implementation is assisted by some friends in Lesson study activities that act as an observer. The data used is the recap of quiz value, Daily Deuteronomy, learning observation sheet.

From the observation result, it is known that the percentage of learning activity in cycle 1 is not all done. This can be seen from the acquisition score of learning implementation is at 89% percentage. There are still some criteria of the STAD syntax that have not been implemented by the teacher. In cycle II the percentage of learning activity has increased, it is seen an increase of 5.5% so that the percentage to 94.5%. Recap learning result obtained quiz value in the final cycle of 77% of the initial value of only 45.5%. In the first cycle of learners who complete in learning the initial concept is 57.5% and 42.5% of students remedial, in cycle II learners are thorough in learning the second concept is 80% and 20% remedial. The average value of cognitive test results in cycle I is 77, in the second cycle is 79. While the results of the response of learners of 4.26 included in the category strongly agree if the learning is implemented with STAD model.

The suggestions include: 1) STAD learning model proved to improve learning outcomes and learners' responses, it is expected that teachers use the learning model in the learning process in the classroom; 2) For teachers interested in using the STAD learning model should consider such things as: teacher readiness, the time available to construct STAD model learning tools; 3) For other researchers interested in using STAD learning model can be further developed on other materials in the field of biological studies.

Keywords: l*earning outcomes, responses, STAD*

A. Introduction

Biology is one of the branches of naTural science that discuss about organism and the environment. Therefore, biology is a science that directly related to the life of the learners. Biology subject intends to make the learners or here the students understand the concepts of biology and its interconnection and able to use the scientific method to solve the problems, so it could make the students more aware of His greatness and power.

Teachers should be able and have the ability to conduct an effective and efficient learning process, in order to make the students understand the concept. Teachers must have and be able to apply basic teaching skills, have the ability to determine and apply appropriate teaching methods. In addition, teachers are required to have the ability to involve studentsto participate during the learning activities. Teachers also should have the ability to create an atmosphere that supports the achievement of learning objectives. Thus, the teacher will be able to bring the students successfully in achieving learning objectives.

In accordance to the direction of government policy on the National Curriculum 2004 with a competence-based approach, the learning system must lead to competence-based learning. Competence-based learning could bedefined as a learning system that the learning outcomes are the basic competencies which have to be mastered by the students. The referred learning outcomes are competencies in terms of cognitive aspect, which includes the level of knowledge, understanding, application, analysis, synthesis and assessment; affective competence that includes giving response, assessment, appreciation and internalization; and psychomotoric competence includes early, semi-routine and routine movement skills (Bloom, in Mardapi, 2003). In order to improve the effectiveness of biology subject learning, there should be a learning approach that adapted to the ability of students and the learning process to build the aspects of cognitive, psychomotoric and affective of students, in which this can be done through learning with STAD model group approach.

Group learning is very effective learning strategy in biology subject. Some researchers like Johnson and Johnson (2989) and Slavin (1995) found that learning group was an effective strategy in learning process and widely used by natural science teachers in United States. Group learning emphasizes on the importance of verbal communication among students in small groups. In that learning model, students are given opportunities to speak about their observation, ideas, and theories in order to understand Biology. In addition, this learning model is able to generate a solid ambience for the students toward one another to achieve the learning objectives.

Group learning is a learning model that the students are working together to attain particular objective in the form of competence or to finish a task. Various of group learning model have been developed, field-tested, and evaluated. In several

models, students are finishing a task together, while in other model, group members work individually in particular aspect of the task and submit the result when they are done.

The main components in group learning model can be explained as follows: First, the learning encourage students to work together to understand a competence, to finish tasks, to solve problems, to review a quiz, carry out laboratory activities, and to fill worksheet. Second, the arrangement process of making heterogenous small groups for students could encourage students to help each other, distribute the tasks well, and support their friends in learning. Third, there is a positive interdependence among the member group. Fourth, developing students' responsibility to learn and cooperate. Last but not least, the occurrence of group processing in learning.

The curriculum in education system supposed to be dynamic, so that it will be able to follow changes and cope the challenges. The alteration of curriculum is important since Indonesian students are still low in terms of the ability to solve questions related to logical reasoning. It is also found that there are several weaknesses of the previous curriculum (KTSP 2006), such as the content and message are still too much, it has not fully developed the competence (mostly dominated by knowledge aspect), and did not aware of both local and global changes (Mulyasa, 2013).

Competencies needed in the future include the ability to communicate, the ability to think clearly and critically, the ability to consider the moral aspect of a problem, the ability to be a responsible citizen, the ability to try to understand and tolerant of different views, have a broad interest in life, have a job readiness, have appropriate intelligence talents and interests and are responsible for the environment. The development of the National Curriculum is expected to be able to generate productive, creative, innovative, and effective Indonesian people through strengthening attitudes, skills and integrated knowledge (Chotimah, 2014).

Learning method is influential to students' learning activities which also will bring effects to students' learning outcome. Hence, a pleasant learning atmosphere is able to support the students in achieving learning objectives. One of the learning methods that can support students learning activities is cooperative learning method.

According to Slavin (2008), cooperative learning is a learning in which the students learn together, share their ideas, and responsible to their learning outcome, both individually or in group.

Based on the aforementioned definitions, it can be concluded that cooperative learning is a learning model that utilize small groups in which the students are cooperating to maximize their learning. They are urged to be responsible on each individual and group success. In this model, teachers act as the facilitator and are not the only source of information for the students.

Learning in small groups assist students in undertanding the knowledge, generate debates, and teaching each other (Wilson, *et al,* 1996). In other words, learning process that conducted in small groups could encourage students to work together in understanding materials being learned. In that model, happened an assisting process among group members in order for them to master the materials. In other words, they are more pleased to learn in groups rather than individually, since they got emotional and intellectual encouragement that enable them to pass knowledge and skill level (Silberman, 1996).

Student Teams Achievement Division (STAD) is one of the methods or approaches in simple and good cooperative learning for teachers who just start using cooperative approach in the classroom. STAD is also an effective cooperative learning method. STAD type cooperative learning consists of five main components, namely class presentation, group learning, quiz, development score and group awards. In addition, STAD also consists of a regular cycle of teaching activities.

Thinking is a process, including manipulating knowledge in the cognitive system (Solso, 2005). Ennis (1985) stated that critical thinking is a logical and reflective thinking that focused on decisions about what to accomplish or what someone should do. The differences lie in the emphases adjusted to the field of study being researched.

The ability to think does not developed by itself that in line with someone's age. This thinking ability will develop well if it is deliberately developed. Well-planned and conducted learning activities to develop thinking skills are very important factors. The use of appropriate approaches, strategies, methods, and instructional techniques that are intended to foster thinking ability of learners are actions that can exercise students' thinking skills. The results of Corebima research (2002), for example, applied the "Thinking Empowerment Through Question (*Pemberdayaan Berpikir Melalui Pertanyaan*)" or Trautman, et al. (2000) who chose to use inquiry approach, both of which show that it could improve the thinking ability of students.

B. Research Method

This research is a class-action research (*Penelitian Tindakan Kelas*). Based on the classification of this research, it is designed to use a cycle model, that conducted in two cycles. Each cycle consists of 4 phases, namely Planning, Acting, Observing, and Reflecting.

The subject of this research was VIII-G students in SMPN 1 Sukorejo in 2016/2017 academic year which numbered 40 students in total.

Qualitative approach was utilized in this research. The researcher was assisted by several fellow teachers in Lesson Study activity who acted as the observers to obtain accurate data in the learning process.

The collected data was quiz result, daily exam result, questionnaire result, field-note and observation result that have been simplified and abstracted. These were done to gain distinct information and data that enable the researcher to generate a conclussion.

C. Findings And Discussion

From reflection activity, researcher got lots of suggestion, such as: students were not accustomed to have a discussion with friends. This can be seen from how active the students in working individually in group rather than maximizing the role of the group to solve the problems given by teacher in a worksheet; the model teacher did not give enough opportunity to students to develop their thinking skill, since questions in the worksheet were still categorized in C2-C3 and did not develop the thinking skill yet; and teacher has not taught the students how to think, that is to use the known facts and concepts to generate new ideas.

Based on the recapitulation of quiz score in the early and in the end of learning, it was shown that the students have learned about the concept delivered by teacher.

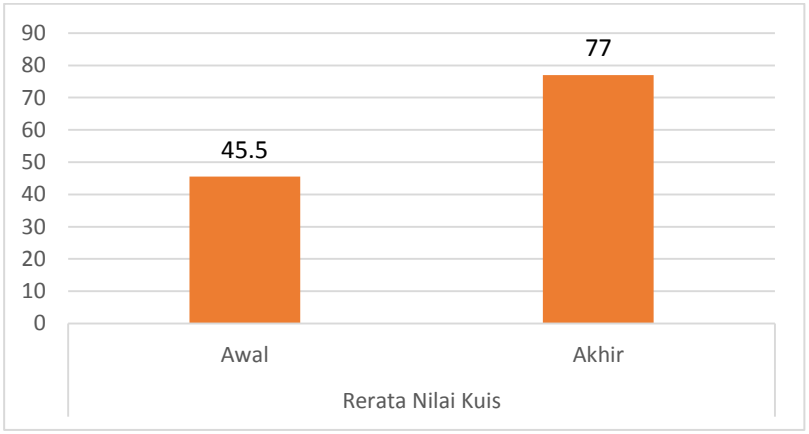
Picture 1. Teacher observed group discussion

This can be seen from the previous quiz score recapitulation and after the learning took place, there was a good increasing of result. In the first phase, quiz score before the learning was conducted, the average score was 45.5% and after following the learning model, there was an increasing of 31.5% which makes the final average score as 77%.

Picture 2. Students discussed in a group

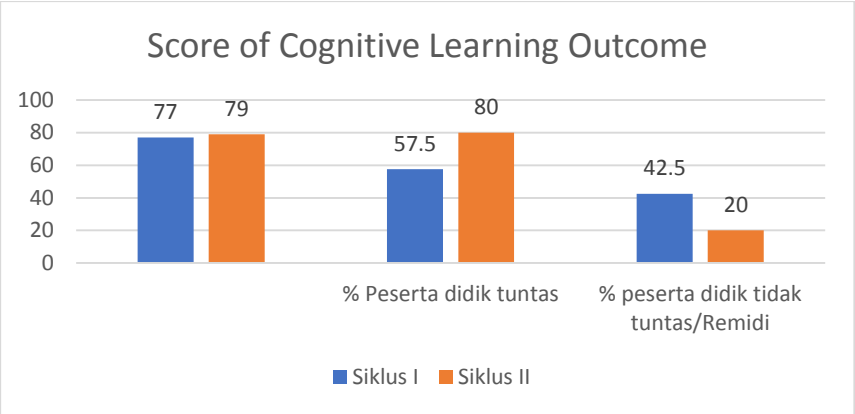
Picture 3 and 4. Observer conducted observation on students

Detail of quiz score can be seen in the graph below:



Graph 1

As for the score of learning outcome, it was obtained through the learning process that include the daily exam score. In the first cycle, students who passed mastering the initial knowledge was 57,5% and 42,5% of students should have repeated the learning process. While, in the second cycle, the percentage of students who passed and those who did not pass was 80% : 20%. Average score of cognitive test in first cycle was 77, whereas in the second cycle was 79. The detail of score can be seen in table below:

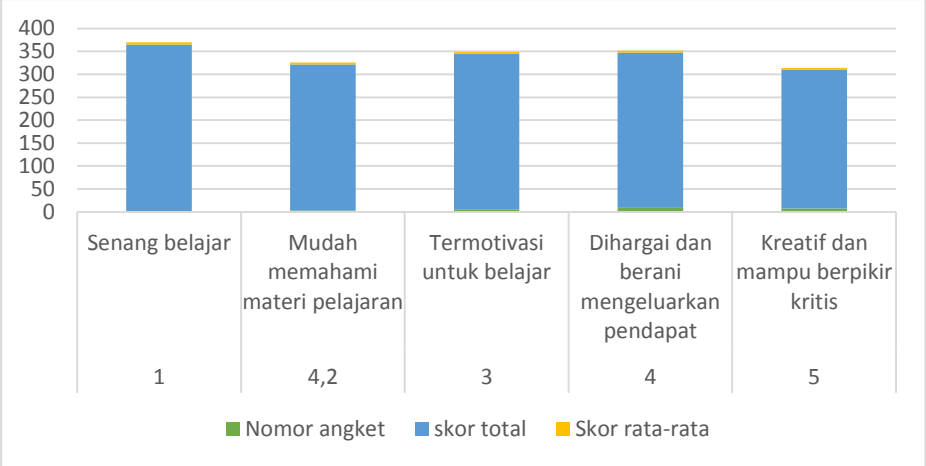


Graph 2

From the questionnaire result given to the students after the learning process, it was classically obtained the average score of 4,26 which categorized "very agree". This has the meaning that the students have positive response towards the use of STAD model in the learning process. The questionnaire result in detail can be seen in table 1 and graph 3.

Table 1 Questioner Result

No	Measured variable	Questionnaire number	Total score	Average score
1	Love to learn	1.2	365	4,68
2	Easy in understanding the material	3,5	318	4,07
3	Motivated to learn	4,5	340	4,35
4	Appreciated and able to state opinion	9,10	338	4,33
5	Creative and able to think critically	7,8	302	3,87
Total score				**4,26**



Graph 3

D. Conclussion And Suggestions

Following a change does not always impact to a more negative effect than its positive effect. Change is a transformation of the present condition into the expected condition of affairs in the future, certainly a better condition. Character-based and competence-based curriculum changes are expected to solve the problems that encounter today's education, especially in entering a globalization era that is full of challenges, so it needs to be implemented thoroughly. Do not wait for others to change, start from ourselves, do the implementation with various learning models from any activity, such as training, courses, lesson study activities, either school-based or MGMP-based lesson study, from these activities we can learn to become a more professional teacher.

E. References

Chotimah, Husnul. 2014. Autokritik Implementasi Kurikulum 13.Makalah dipresentasikan pada Seminar Nasional di FKIP Universitas Nusantara PGRI Kediri, 29 Maret 2014.

Corebima, A.D. 2002. *Pemberdayaan Berpikir Melalui Pertanyaan (PBMP) sebagai Alat Pembelajaran IPA-Biologi Konstruktivistik untuk Meningkatkan Penalaran Peserta didik SLTP di Jawa Timur*. Laporan Riset Unggulan Terpadu VIII Bidang Dinamika Sosial, Ekonomi dan Budaya. Malang: Lemlit Universitas Negeri Malang.

Mulyasa, E. 2013. *Kurikulum Berbasis Kompetensi*. Bandung: PT Remaja Rosdakarya Offset.

Slavin, E, Robert. 2008. *Cooperative Learning Teori, Riset dan Praktik.* Bandung : Nusa Media

Silberman, M.L. 1996. Active Learning.*101 Cara Belajar Peserta didik Aktif.* Bandung: Nusamedia.

Solso, R. L. M., M. Kimberly, Maclin, Otto H. 2005. *Cognitive Psychology.* Boston: Pearson Education, Inc.

Experimentation Math Education Realistik Indonesia And The Problem Based Learning (PBL) To Problems Solving In Terms Of AQ Student On Lecture Mathematics High School Grade III Academic Year 2016 / 2017

[1]Neny Endriana,[2]Abdul Aziz
[1]Hamzanwadi University

Abstract

This research aims to know which do produce the solution of a problem better math on (1) each approach pembalajaran (2) on each type AQ student (3) in each type AQ students to the approach of learning (4) on each learning approach against type AQ a student on a course called high school mathematics academic year 2016 / 2017 .The kind of research used in this research is research experimental specious (quasi-eksperimental) to a draft factorials 3 x 3. teknik the collection of data that is used is a test and poll .Research instruments is the test problem solving math and AQ poll .Data analysis technique that is used is quantitative data analysis based on the results of a test problem solving mathematics student . The population in this research was each student grade III in a course called mathematics senior high school levels consists of 4 class , the sample in this research consisting of 3 birth.

Analysis of data done with anlisis variansi two streets with cell not the same .The result showed that (1) learning by approach mathematics realistic indonesia better than the problem learning model based learning and learning klasikal , learning to a model the problem based learning is better than the klasikal learning; (2) problem solving students with type climbers better than with students with type campers and quitters , problem solving students with type campers better than with students type quitters; (3) students with type climbers and quitters used the mathematical realistic indonesia in solving problems is better than the problem learning model based learning and learning klasikal , learning model based learning the problem is better than the klasikal learning; (4) in learning by approach mathematics realistic Indonesia. Problem solving students with type climbers is better than the type and students campers quitters , and students type campers better than with students type quiiters , on learning model based learning the problem solving problems students with type climbers better than with students type campers and quitters , and students type campers better than with students type quiiters , on learning klasikal the same problem solving students .

Keywords:*math education realistik indonesia (PMRI), problem based learning (PBL), adversity quoetient (AQ) and problem solving*

A. Introduction

Undang-undang no 12 years 2012 of higher education , article 12 paragraph 1 , lecturers as a member of sivitas akademika has a duty transform science and / or technologies that control for students to make the learning and instruction so the university students active develop its potential .Look at this , so the level of success of education in college very affected by how of a care , responsibility , and competence lecturer in carrying out an learning.

The quality of learning it can be supported by some important element in learning , among other: (1) goals to be accomplished; (2) material to be dyeing and give the to the purpose; (3) methods and tools will bring material to on the objective; and (4) judgment as a tool to know whether or not achieve the objectives (Nana Sudjana , 2008: 23)

Based on observation to students , in learning math the problem solving high school students are low , this is shown with most students who are not able to solve the problem .Problems that meant were problem solving in the form of about given .It is most likely influential from his factor lecturer have not been able to plan , implement learning in full , usage method of varying learning is weak , that learning not so meaningful for college students. It is acknowledged that learning used tend to centered on lecturer (lecturer centered), resulting in the low the problem solving by students.

To solve the problem on, should be cured learning that is meaningful and offer the opportunity to reinvent and mengkonstruksi own mathematics, idea so the university students to understand what they learned and mengaplikasikannya in solving problems.In connection with it required approach relevant learning including math education realistic indonesia (PMRI) and the problem based learning (PBL).

The main reason apply PMRI and PBL on lecture mathematics high school among other methods PMRI approach chosen in learning because: (1) use contextual the problem as and turning point where mathematics desirable could arise ; (2) use the model or bridge with an instrument vertical, attention diverted on the model, the scheme and simbolisasi rather than simply transfer formula or mathematical formal directly; (3) use students. Contribution (4) interaktivitas, negotiations explicitly, intervention, cooperation and evaluation fellow student and lecturer is an important factor in learning a constructive; (5) integrated with other topics learning, holistic approach which indicates that unit-unit studied not to achieve separately but association and keintegrasian must be exploited in solving problems of answers non formal (de lange, 1987, 1996: treffers, 1991: gravemeijer, 1994 in 2003 zulkardi: 5).

But learning by approach PBL provides more students the chance to to develop the ability of them, mathematical digging, try, adapting, and change, resolution procedures including verify, solution according to a new situation obtained. (stanley p.Dewanto, 2008: 124).

As for the principle of key in education in math realistic indonesia is as follows:

1. *Guided Reinvention*
   This principle stressed" *Guided Reinvention"Through topics certain is presented; students be given the opportunity together to build and to rediscover ideas and mathematical concepts*
2. *Progressive mathematization*
   Part of this principle stressed "matematisasi" or "pematematikaan" that can be interpreted as "efforts to direct to math reasoning". Said prograsif because there are two steps matematisasi it, namely matematisasi (1) horizontal and (2) vertical synchronization more than a problem contextual given and will end in mathematics a formal
3. *Didactical Phenomenology*
   This principle stressed the phenomenon of learning to educate and stressed the importance of problems contextual to introduce topik-topik mathematics to students
4. *Self*-developed *Models*
   This principle point to function "bridge" of model .Because is rooted in problems are contextual and going to mathematical formal and the freedom , so it is possible that students will develop a model own (Soedjadi , 2007: 4-5) .

Meanwhile , Ehlert (2004) said that advantage PBL model is: (1) provide an opportunity to students to conduct research; (2) build skill think critically; (3) know content matter subjects and building purposes according to the concept of; (4) empower learners be someone expert in a particular field; (5) allow learners produce more than one form a solution; (6) said of diligence and the need to develop; assumptions and (7) motivate students learn.

But learning model , other factors affecting the success of an learning is the extent to which the ability of students themselves in resolving difficulties or problems faced .The size of students to know responnya against difficulties with AQ called .Stoltz (2000: 8)

While Phoolka And Kaur (2012: 110) define AQ as pemrediksi the success of some one in the face of trouble, how it acts in a difficult situation, how he controls situation, if she can find asal-usul proper of the problem, does he take his ownership in

this situation, is he trying to limit the effects of trouble and how they are optimistic how difficult it is finally be over)

AQ can be divided into three type .The division is usually by the response someone or individual in the face and address the issue and tantangan-tantangan in his life .Third type meant that climbers , campers , and quitters (Stoltz , 2000: 18-38) .With any different type AQ this , look how a student struggling in learning and can width of this amount of low in learning activities math

But ability to be achieved in pemebelajaran this is the problem solving students.Baroody (Nurizzati, 2009: 53) there are three interpretation: problem solving the problem solving the approach, the purpose, and the learning process.In this study, problem solving mathematics meant is the duty of problem solving mathematics which includes the process understand a problem, planned to solve, implement planning to achieve (solution) resolution, and final settlement how reviewing obtained

Based on the above so this research talk about experimentation math education realistik indonesia (PMRI) and the problem based learning (PBL) to solving problems in terms of AQ students

B. Research Method

The research is apparent research experimental , design 3x3 factorials .The study is done on the math high school hamzanwadi selong academic year 2016 / 2107 .On class randomly , including class 1 were subjected to experiment with math education realistik indonesia (PMRI) , class 2 experiment attract model the problem based learning (PBL) and class control attract klasikal learning model.

Variable free research is learning approach consisting of math education realistik indonesia (PMRI) , the problem based learning (PBL) and learning klasikal .Variable free others are adversity quotient (AQ) with three type AQ the type climbers , campers type , and type quitters .But variable terikatnya is problem solving students .The next , research apparent experiment used to see and analyze comparison breakthrough maslah mathematics students from the given treatment by used the PMRI used as a class experiment 1 , learning with PBL used as a class experiment 2 , and learning klasikal used as a class control .The third grade assumed equally in all terms and only different in the treatment of learning the approach

C. Research Results And Discussion

Data collection method consists of , the survey and methods tests .Research instruments consists of a test choice double and survey AQ students .The balance done by analysis variansi one way with cell not the same .As a prerequisite data analysis

necessary data analysis by meggunakan method lilliefors with statistics the used is L = Maks$|F(z_i) - S(z_i)|$The Lilliefors method is used for the normality test between experiment 1, experiment 2, and control class. The Bartlett test is used for homogeneity test between experimental class and control class with test statistic is$\chi^2 = \frac{2.303}{c}\left(f log\, RKG - \sum f_j logs_j{}^2\right)$

From each sample obtained$L_{obs} \notin$ DKand it was concluded that each sample came from normally distributed populations. Furthermore, obtained on each sample$\chi^2{}_{obs} \notin DK$so H0 is not rejected, and it is concluded that the population in the three learning models has the same variance and the population in all three AQ types has the same variance.

Based on the hypothesis test known that H0A is rejected, it shows that there are differences of problem solving ability of students who are given learning with PMRI, learning with PBL and classical learning. To find out which learning approach is better is a follow-up test between lines. Furthermore, from the calculation results obtained that H0B rejected, this indicates that there are differences in student problem solving skills between students with type AQ climbers, campers and qiuters. Furthermore, to find out which type of AQ is better done further test between columns. Furthermore, H0AB is rejected, it shows that there is an interaction between learning approach with student AQ type. To know which one is better in each learning approach and type of student AQ hence required further test between cells.

From the result of anava two different cell paths are obtained Fa = 8.3924 > 3,19 = $F_{0,05;2;58.}$ The value of the Fa lies in the critical area, hence H0A is rejected, so it is necessary to test further post anava with Scheffe 'method for the analysis of two-way variation. The result of double comparison test between columns between AQ is obtained result thatF_{tab}= 6,38 so $F_{1.-2.=}$ 40.0472 > F_{tab}, $F_{1.-3.}$= 163.37 > F_{tab}, dan $F_{2.-3.}$= 41.33001> F_{tab}. The results show that all three hypotheses are rejected, which means that there is a difference in students' mathematical problem-solving abilities that are subject to three different learning models. Judging from the marginal rate, students who are subjected to PMRI have higher mean than students who are subjected to PBL learning model and classical learning model. The results show that learning by using PMRI resulted in better problem solving compared to learning with problem based learning (PBL) and classical learning model, as well as learning using PBL resulted in better problem-solving skills compared to classical learning.

The success of learning by using PMRI approach because of the learning with this approach more directed students on the context of the problems associated with daily life. This is in line with Sofnidar (2013) quoted from Marpaung (2003) said that through

the PMRI approach students are trained to actively think and do, because learning is in the context of problems that are contextual or realistic for students. As for the success of learning with problem-based learning (PBL) Because learning begins by presenting a contextual faculty so as to stimulate students to learn more in terms of opinion (Demitra, 2003) said that Problem-based learning is an approach that students learn are confronted with practical problems, ill-structured, or open ended through stimuli in learning. Other research results showed that solving mathematical problems with conventional learning model is not better than students' learning achievement with problem based learning (Sri wahyuni, 2009).

From the analysis of two-way variance with unequal cells obtained $F_b = 6.2339 > 3,190 = F_{0,05;2;58.}$ Fb value is located in the critical area, therefore H0B is rejected means there is a difference in mathematics learning achievement in terms of AQ type climbers, campers and quitters, so it is necessary to do further post-anava test with Scheffe 'method for the analysis of two-way variation. From the result of double comparison test between columns between AQ obtained result thatF_{tab}= 6,38 $F._{1-.2=}$ 86.85747 > F_{tab}, F.1-.3= 198.959<$_{Ftab}$, dan $F._{2-.3}$= 26.65899> F_{tab}. Based on these results obtained that H0 of the three hypotheses rejected .. this shows that there are differences in solving mathematical problems between student types climbers, campers and quitters. In terms of the marginal rate, the climbers were higher than the campers and quitters, and the campers had higher rates than the quitters. These results are in agreement with Huijuan (2009) which concludes that there is a significant relationship between AQ and student achievement. In addition, the results are also in accordance with the results of research conducted by Fitri Era Suggesti (2013) concluded that AQ students climbing categories (high) have better mathematical problem solving than students with AQ category campers (medium) and AQ category quitters (low). Students with medium category AQ have better mathematical problem solving than low category AQ students.

From the results of two-way variance obtained {F|F > 2,52}, F_{ab} = 3.9693 Fab value lies in the area of criticism, therefore H0AB is rejected which means there is an interaction between learning approaches with AQ students so need to be tested further post anava using Scheffe 'method for anava two ways. From this result obtained that:

a. In students with PMRI learning, student problem solving type AQ climbers has problem solving as well as campers type students and better than quitters type students.
b. In students with problem-based learning (PBL) problem-solving student with type of climbers as well as campers type students and better than quitters type students, in addition to solving the problem of students with campers type better than the quitters.

c. In students with classical learning problem solving students with type AQ climbers as well as campers and quiters type students. while problem solving of student with campers type better than student of quitters type.
d. In students of climbers and quitters, the use of PMRI models results in student problem-solving skills that are as good as PBL cooperative learning models and better than classical learning models. And the cooperative learning model of PBL type produces problem-solving abilities that are as good as the classical learning model. In campers type students, the use of PMRI learning results in problem solving as well as PBL learning models and better than the classical learning model. And the use of learning model with PBL resulted in better problem solving than the classical learning model.

From these results it appears that the student type climbers have better problem solving of the student type quitters. This is caused by several factors, among others, students are able to follow every step in the learning activities, either with a realistic approach to mathematics or with probem based learning. these results are supported by research by Cornista And Macasaet (2013) which concluded that respondents with high AQ levels (climbers) have a high level of motivation for achievement and also have high interpersonal strength.

D. Conclusions And Recommendations

Based on data analysis, it is concluded that: (1) learning with realistic mathematics approach of Indonesia is better than learning model of problem based learning and classical learning, Learning with problem based learning model is better than classical learning; (2) Problem solving of student with type of climbers better than students with campers and quitters, student problem solving with tipee campers better than quitters; (3) students with climbers and quitters type using realistic approach of Indonesian math in problem solving better than learning model of problem based learning and classical learning, learning model of problem based learning is better than classical learning. Students with campers type using realistic approach of Indonesian mathematics in problem solving better than learning model of problem based learning and classical learning, learning model of problem based learning (PBL) is better than with classical learning; (4) In learning with Indonesian realistic mathematics approach, problem solving of student with climbers type is better than campmers and quitters, and camper type students are better than quiiters students, on learning problem based learning model of student problem solving with type of climbers better than campers and quitters, and camper-type students are better than quiiters, on the same classical learning of student problem solving skills.

The suggestions in this study include: (1) For the lecturer pengampu should pay attention to the selection of appropriate learning model and in accordance with the competencies taught in the learning activities of mathematics. One of the models of mathematics learning that can be applied is learning with PMRI approach and learning model problem based learning (PBL). In addition, it should consider the type of AQ owned by each student to be able to find solutions for improvement in learning; (3) As for suggestions for other researchers, this research should be used as a reference for other researchers who researched similar problems and expected for other researchers able to develop this research.

E. References

Barrows, H. S. (1996). *Problem-Based Learning in Medicine and Beyond. New Direction for Teaching and Learning*. Jossey: Bass Publishers.

Budiyono. (2013).*Statistics For Research*. Surakarta: UNS Press

Demitra (2003). Learning Problem Solving Basic School Mathematics with Problem Based Learning Approach. Paper presented at National Learning Technology Seminar at Hotel Inna Garuda Date 22 - 23 August 2003.

Ehlert, M. (2004). *An Evaluation of Problem-Based Learning: Application in an Undergraduated Supply Chain Management Course*. Northwestern University.

Fitri Era Sugesti. (2013). Experimentation of Cooperative Learning Model of Structured Numbered Heads (SNH) and Two Stay Two Stray (TSTS) with Realistic Mathematics Education (RME) Approach to Mathematics Learning Achievement Viewed from Adversity Quotient (AQ) Students. Thesis. Surakarta: Sebelas Maret University.

Huijuan, Z. (2009). *The adversity Quotient And Academic Performance Among College Students AT ST. Joseph'scollege, Quezon City*. Thesis. Quezon City: the Faculty of The Departments of Arts and Sciences St. Joseph's College.

Nana *Sudjana*. (2009) *The Basics of Teaching and Learning. Bandung: Sinar Baru Algensindo*

Nurizzati.(2009). *Creative Thinking and Mathematical Problem Solving: What, Why, and How to Develop It In Learners. Proceedings of the National Seminar on Mathematics and Mathematics Education, Bandung 19 December 2009, p. 49-60*

Phoolka, S., & Kaur N,. (2012). Adversity Quotient: A New Paradigm in Management to Explore.*TheInternational Journal's Research Journal of Social Science & Management*, vol. 2, no. 7, hlm. 110-118.

Sofnidar, dkk (2013). Implementation of PMRI Approach to Improve Ability of Geometry Concept of PGSD Students of Jambi University. Proceedings Seminar FMIPA University of Lampung

Stanley P. Dewanto. (2008). *The Role of Early Academic Ability, Self-Efficacy, and Other Noncognitive Variables on Achievement of Multiple Mathematical Representation Ability of Students Through Problem Based Learning. Educationist Vol. II No. 2 July 2008. ISSN: 1907 – 8838*

Stoltz, P. G. (2000). Adversity *Quotient Mengubah Hambatan Menjadi Peluang (Edisi Terjemahan T. Hermaya).* Jakarta: Grasindo.

R. Soedjadi, (2007). Core Fundamentals of Mathematics EducationRealistic Indonesia. Journal of Mathematics Education, Volume 1, No.2, July 2007

Zulkardi. (2003). *Realistic Mathematics Education (RME) or Indonesia Realistic Mathematics Education (PMRI). Paper presented in the National Mathematics Education Workshop on 21 August 2003. Sriwijaya University. Palembang.*

Bullying in English Language: Case study of Student of Pre-service Education Program, Lombok, Indonesia

M. Junaidi Marzuki (marzuki_mjunaidi@hamzanwadi.ac.id
Hamzani Wathoni (hz.wathoni@hamzanwadi.ac.id)
Kaka May Shela (jeaneshlea13@gmail.com)

Abstract

This study is designed to investigate the number of students who have experienced bullying in language learning, especially in English communication. To gain an in-depth understanding of the issue, qualitative approach with case study research was employed to gain the central phenomenon. The main purpose of this research was to investigate students' experience of bullying on English language communication. Fifty students of Hamzanwadi University Lombok, Indonesia was the main participant of this study. Based on the data analysis, the present researcher found that 98% students have experienced bullying and 92 % students stated that they feel embarrassed to learn, and practice their language within the university. This means that the bullying has negatively demotivated the students' willingness to communicate at the fourth semester of Hamzanwadi University.

***Keywords**: Bullying & English Language*

A. Introduction

Bullying is one of prevalent problems faced in today's education setting. As a consequence of this, there was abundant research conducted regarding factors contributing to this issue as well as its impact on people being victimized. It was found a percentage of 564 % of South African students reporting to be bullied (Greeff and Grobler, 2008). Another recent study was also carried out in Algeria involving a sample of 1452 school children aged 8, 10 and 12 years (Tiliouine, 2015) The findings showed a level of involvement of approximately 25-35%, including direct and indirect forms of bullying. There used to be a rather common belief that low self-esteem leads to aggression, including bullying.

Bullying occurs to some degree in every school. Bullying and victimization are highly prevalent among young people, and both bullies and victim exhibit negative outcomes (Stassen Berger, 2007). Bullying is disrespecting or teasing someone about their weakness or differences, laughing when someone is being bullied by another. Bullying behaviors come in variety of forms: physical, verbal, and social and relational (AllanL.Beane, 2008). Therefore, knowing and studying more towards how bullying might impact students in their daily life communication is viewed important to be conducted.

While there are substantial researches conducted in relation to this case, there is little research focusing on language education, especially in productive language skill, that is speaking. In this study, the present researcher decided to identify the number of student who experience bullying during their English learning. It also find out how bullying affect the students' motivation to communicate in English. To achieve these goals, there are two overarching question proposed (1) what form of bullying mostly student experience and (2) how it affect students' willingness to communicate in daily communication.

Definition and type of bullying

According to Spoede (2016) who is referring to (Bauman, Cross and Walker, 2014) bullying can be defined as an unwanted, aggressive behavior among school aged children which is involving a real or perceive power imbalance, and the behavior is repeated or has the potential to be repeated over time This definition put emphasis on bullying as a behavior of school children that consisting a repetitive action of hitting or underestimating others children in their daily process within the school.

Meanwhile, referring to Olweus (1978) bullying as a peer aggression with repetition over time, intentionality and an imbalance of power between the bully and the individual being bullied (Olweus, 2003; Greif and Furlong, 2006). Referring to this definition, bullying is often happened with the same person at the same place for example a student who becomes a victim could be bullied by the same students repeatedly, or the victim could be bullied by several students.

Looking at both definitions, it is clear that bullying can be appeared in a various ways, however, both definition are still putting the emphasis on the bullying as a repetitive action. Therefore, the researcher thinks that knowing how and what kinds of the common bullying.

Many literatures has analyzed and determined the forms and kinds of bullying, one of which is (Bauman, Cross and Walker, 2014) who has explained that there are some forms of bullying one of which is direct physical harm or (physical bullying); *to verbal taunts and threats,* (verbal bullying); *to exclusion, humiliation, and rumor spreading* (relational or social bullying); to electronic harassment using texts, emails, or online mediums (cyber bullying). Referring to the above explanation it is clear that bullying is not only appears as direct or face to face communication process but also in indirect contact such as internet, phone cell and also social media.

Verbal bullying is saying or writing mean things, includes; teasing, name-calling, threatening to cause harm, and control over target. Typically, verbal bullies will use relentless and they choose the targets based on the way they look, act or behave. Verbal bullying is often very difficult to identify because the bullies, the target and also people around did not realize that bullying is happened. While the effects of

physical bullying may be more obvious at first, verbal bullying is more insidious and over long periods of time works to destroy a child's self-image and self-esteem. This can lead to depression, anxiety and other problems. In extreme cases, several well noted instances often suicide have been linked to prolonged verbal bullying of a classmate or peer. Verbal bullying such teasing brings the bad effect to speaking skill.

There is a wide variation in prevalence rates of bullying across studies, partially due to differences in measurement or operationalization of the bullying construct. Students that are bullied victim will be shy to speak because they are worried about making mistake in their utterance. Also, McCroskey and Richmond (1990) stated that individuals with low self-esteem are less willing to communicate, and they further pointed out that the influence of self-esteem is often exerted trough other variables related to communication such as perceived communicative competence and communication apprehension. Adults often underestimate the prevalence of the problem.

Many risk factors for being bullied can be understood in the light of the bullies' characteristics and goals: children who are unassertive and insecure can elicit aggression-encouraging cognitions in potential bullies. It means that bullying is becoming a general concern within the all nation. The current researcher assumes that bullying is happening since many people do not really understand they are doing bully, therefore; the researcher put some definition towards this term.

B. Method

This research employed qualitative research approach to investigate the number of student experienced bullying and its impact on student willingness to communicate in daily life. Student with bullying experience was considered to be the central phenomena to investigate and understand thoroughly (Creswell, 2012). Strauss and Corbin (1998) noted that qualitative research is designed to gain accurate information to a phenomenon, such as feelings, process of thinking and emotion of people. The research design used in this research is case study, as Stake (2000) stated that it provide opportunity to investigate more than one cases to a phenomenon. Furthermore, it helps gain comprehensive as well as in-depth theory in understanding several cases (Miles & Huberman, 1994).

There were fifty student who participated in this study The target population of this study was all of the fourth semester students at Hamzanwadi University in the school year 2017/2018 which consisted of 2 classes. To collect the data, this study employed, survey, observation and semi-structured interview to identify the number of student experienced bullying and understand its impact on student's motivation to speak. Before collecting the real data, the instruments were tested to ensure that the participants fully understood the questions provided. This then led to reliability and validity of data gained. The data collected then was transcribed and analyzed with NVivo software, and put it in some categories based on central phenomena.

C. Findings and Discussion

The research result presented here are the description and the analysis of data related to bullying and its impact on students' daily life communication. The result of this research is in the following details:

Descriptive Statistic

In this chapter, the present researcher provides the description about the bullying data in the fourth semester of Hamzanwadi University in 2017. In collecting the data, present researcher spreading the questionnaires to know the number of students who experienced bullying, to find information about the form of bullying appeared in the University and after that the present researcher conducted interview and a focus group discussion to obtained information about what the students' perspective about bullying and how bullying impact their willingness in their daily communication.

Based on the data obtained, from 50 participants there are 48 (96%) students experienced bullying and 2 students (4%) students said never experienced bullying, while around 44 (92%) students indicated has experienced verbal bullying and 6 students (8%) experienced non-verbal bullying. Meanwhile, for the impact of bullying towards their daily communication willingness 76% students said that they feel embarrassed to speak their language, 13% feel reluctant to speak, and 2% feel demotivated. However, there are also different answers from the students where 2% stated that they feel motivated with the bullying. From the result of analysis, it is clear that bullying has given impacts towards students' daily communication willingness within the fourth semester of Hamzanwadi Universities and data related to this result are presented in the following charts :

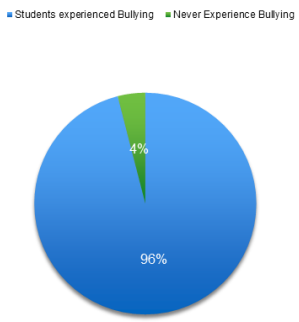


Chart 1. The percentage of students experienced Bullying at the fourt semester of Hamzanwadi University in academic year 2016-2017

Chart 2. Types of Bullying at Hamzanwadi University

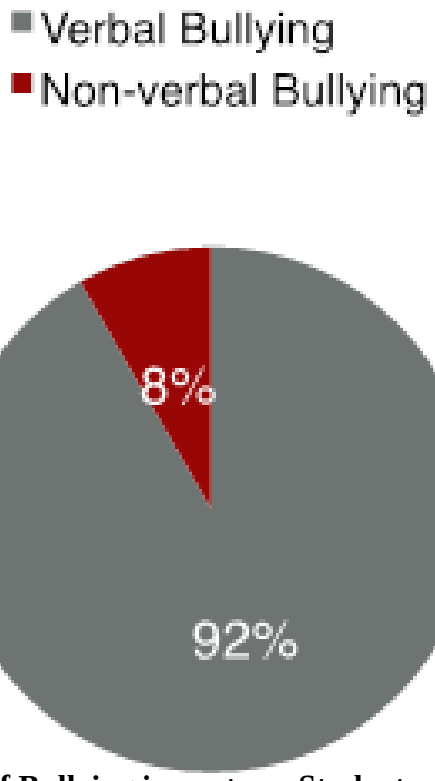
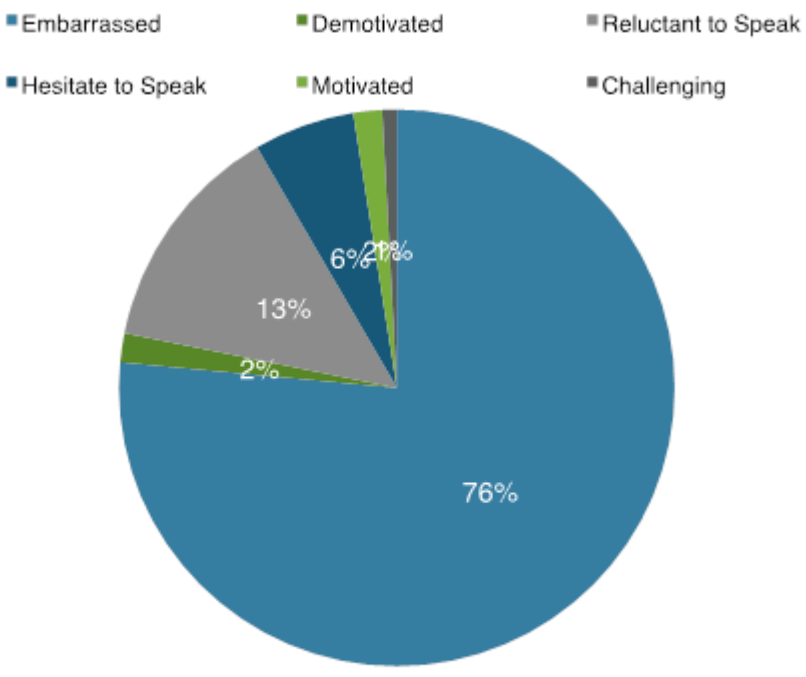


Chart 3. The Percentage of Bullying impacts on Students



Referring to the data gained in the research at the fourth semester of Hamzanwadi University students in the school year 2017, it is clear that bullying has negatively impact the students' daily communication willingness.

Based on the data gained, there is tendency that the most frequently bullying appears within the university is verbal bullying where the highest percentage is 98 %. While the biggest impact of bullying found is the students feel embarrassed to speak both with their lecturer and also friends when they are doing a mistake for example in pronouncing words or sentences. The feeling like *embarrassed, demotivated, hesitate and reluctant* lead the students to not practicing their English often in their daily communication. The current researcher linked the data gained with the performance of students during the observation period where not all students were willing to speak even for a simple topic. For example, when we came to the classroom, we tried to lead the students to speak by asking them *"what's your name?, where are you from?, how is your family?, do you know bullying?* And some others simple question. At this time, not all students want to speak in English even though they understand the question.

The current researcher believed that this phenomenon appeared due to their bad experience in their practice. When the researcher asked the information about the common bullying, one student *answered "basically, when I try to speak in English, some of my friends will say wow cynically and make me embarrassed to continue my speaking"*. This brought negative impact on their daily communication practice. The reason for this is that when the students are afraid to use their English, they will not be able to communicate well in their daily life. Therefore, the lecturers should be able to give understanding to their students that are in learning language some possible errors in practicing the language might happen and the students do not need to scared of doing this errors.

The students also need to understand that they do not to make their friends down in their daily communication since the possibility of errors for foreign language learner can be denied. According to Reverend Dr. Spooner which is quite commonly known; a particular type of error involving the exchange of initial consonants between words, the spoonerism. Some of Reverend Spooner's alleged spoonerisms are shown in examples (1) to (3). (See Potter, 1980, for a discussion of whether Reverend Spooner's errors were in fact so frequent as to suggest an underlying pathology.

D. Conclusion and Suggestion

Referring to the result of the research, the researcher got some conclusion as follow: (1) Bullying has negatively impacting students' performance in their daily communication practice (2) Looking the result of the data percentage, it is clear that Bullying is happened the some students do not really understand that they do bullying to their friends.

Based on the result of the study, the present researcher would like to offer some suggestion as follow: (1) it is important for the lecturer to raise the student's awareness of the negative impact of bullying (2) Lecturer should help students by motivating them to speak, especially those who has encountered bullying in their study journey (3) they also have to put emphasis on fighting towards bullying since it might stop the students from studying and practicing their English (3) it is expected that students should read many references related to bullying so they can avoid bullying, as a bullies or becoming the victims of bullying.

REFERENCES

Ary, Donald, Lucky Chasar Jacob, and AsgharRazavieh. (2010). Introduction to research education. London: Wardswoth. Thomoson Learning.

Bauman, S. (2014). Cyberbullying: What counselors need to know. John Wiley & Sons.

Beane, Allan L.(2008) "Protect your child from bullying." San Fransisko: Jossey-bass.

Berger, K. S. (2007). Update on bullying at school: Science forgotten?.Developmental review, 27(1), 90-126.

Brown, H. Douglas. (2004). Principles of language learning and teaching. San Francisco state university: Prentice Hall, Inc.

Creswell, J. W. (2012). Educatioal Research : Planning, Conducting, and Evaluating Quantitative and Qualitative Research (Fourth Edition ed.). Boston: Pearson.

Croft, W., & Cruse, D. A. (2004).Cognitive linguistics. Cambridge University Press.

Fulcher, G., & Reiter, R. M. (2003). Task difficulty in speaking tests.Language testing, 20(3), 321-344.

Miles, M. B., &Huberman, A. M. (1984). Qualitative data analysis.A sourcebook of new methods.

Modecki, K. L., Minchin, J., Harbaugh, A. G., Guerra, N. G., &Runions, K. C. (2014). Bullying prevalence across contexts: A meta-analysis measuring cyber and traditional bullying. Journal of Adolescent Health, 55(5), 602-611.

Iland, E., &Iland, T. W. (2015). Understanding the Nature of Bullying. EP Magazine, 44-47.

Thomas. (2000). The oxford essential guide to writing. Oxford University.

Lunenburg, F. C. (2010).Communication: The process, barriers, and improving effectiveness.Schooling, 1(1), 1-11.

McCroskey, James C., and Virginia P. Richmond. "Willingness to communicate: Differing cultural perspectives." Southern Journal of Communication 56.1 (1990): 72-77.

Macintyre, P. D., & Doucette, J. (2010). Willingness to communicate and action control.System, 38(2), 161-171.

Macintyre, P. D., Burns, C., & Jessome, A. (2010). Ambivalence About Communicating in a Second Language: A Qualitative Study of French Immersion Students' Willingness to Communicate.

Miles, M., & Huberman, A. (1994). *Qualitative data analyisi*. Thousand oaks, CA: Sage

Olweus, D. (2004). The Olweus Bullying Prevention Programme: Design and implementation issues and a new national initiative in Norway. Bullying in schools: How successful can interventions be, 13-36.

Olweus, D. (1994). Bullying at school. In Aggressive behavior (pp. 97-130). Springer US.

Strauss, A., & Corbin, J. (1998). *Basic of qualitative research: techniques and procedures for* developing *grounded theory*. Thousand Aoaks, CA: Sage.

Stake, R. (2000). Case studies. In N.K. Denzin & Y.S. Lincon (eds.0, *Handbook of qualitative* research (pp.435-454). Thousand oaks, CA. Sage

Developing Collaborative Habits of Prospective Teachers

Nyoto Suseno[1] & Riswanto[2]
University of Muhammadiyah Metro
nyotoseno@gmail.com&rumbiariswan@gmail.com

Abstract

One of the weaknesses of teachers in Indonesia is a closed attitude and less accustomed to collaborating. One of the efforts that can be done in LPTK is through the habit of collaborating started atthe college, especially through lesson study in the micro-teaching course. Some types of prospective teachers seem to be active but some are passive in the discussion. However, the important thing to note is the interaction between students. The process of habituating collaboration in micro-teaching begins by doing joint planning (plan), implementing the learning and observing (do), and reflecting the implementation of learning together openly (see). The activity is done repeatedly during lectures with each student changing roles, sometimes as a teacher, a student, and an observer. Habituation through the lesson study is expected in turn will awaken a culture in the student individual or a group of prospective teachers as a habit. This lesson study activity has a positive impact on the ability of prospective teachers in managing to learn in the classroom. Because with lesson study, there is a learning community which involved learning, listening, mutual correction, help, and respect. The process occurs gradually starting from the time of the first, second and third model, both individual and the classical also increase the average ability to teach prospective teachers.

Keywords*: collaborative, habit & prospective teachers*

A. Introduction

Higher education has a role in developing a culture that supports the quality improvement of the learning process. The Cultural process to improve the quality of learning can be done by adopting lesson study program. Beginning with introducing the lesson study program, followed by habituation in carrying out the activityto form a community that has a habit of mutual learning. Lesson study target is to realize the learning community, in which the need to develop the ability and willingness to collaborate with students and lecturers based on the principle of collegiality and mutual learning. According to Sato (2014) through the learning community, the students will learn and develop each other, the teachers as experts learn each other and grow, and parents support and engage in school to learn and develop each other.

Lesson study for teachers is to forming a learning community by conducting a study of the learning conditions that are conducted at every time, which means facilitating members to build a culture of mutual learning, mutual correction, mutual respect, and mutual help, in an effort to achieve innovative and collaborative learning conditions. Quality education can not be achieved instantly but must be passed step by step and improved continuously. Hendayana, (2007) suggests that Lesson study is a model of professional development of teachers through research learning with

collaborative learning and continuous learning based on the principles of collegialist and mutual learning to build learning communities.

An important aspect of building a learning community is the collaboration in learning. Collaborative learning opens the opportunity for all parties to learn from each other and be open to give and take advice from fellow colleagues. In implementation of the collaborative learning no one should feel superior or inferior, all collaborating parties should have the intention of mutual learning. This allows cross-breeding of inter-student, inter-teacher, inter-lecturer or all parties involved in collaborative learning.

Study of learning conditions in Lesson Study is not theoretical and pragmatic, but the study is based upon real facts that occur in learning, and is improved continuously, as well as from various aspects and not fixated on a particular point of view. It is in the opinion of Slamet (2010) that Lesson Study is an ongoing continuous activity and an effort to apply the principles in Total Quality Management, which is to improve the process and student learning outcomes continuously, based upon the data.

Suseno's research (2015) found that the average lecturer performance after the Lesson Study program is better than before, the lecturers who have open class perform better than those who have never open class, and student learning outcomes also increased with the implementation of lesson study. The result of Lesson Study implementation in LPTK, especially in FKIP UM Metro has a positive impact, both for lecturers as learning actors, and for students as targets in learning. Therefore LPTK Students as teacher candidates need to be equipped and trained through lesson study in order to grow attitude and ability to collaborate with students and lecturers based on the principle of collegiality and mutual learning in a learning community. Based on the description, it is necessary to make efforts to build the habit of collaborating students in a learning community through the micro-teaching course based lesson study and see the impact it has caused.

B. Method

This research was conducted in the majoring of mathematic-science education FKIP UM Metro in the micro teaching course. The number of respondents for this study was 15 students. Data collection is done through observation, document, and performance in practice of implementing micro learning. Observations were made to the students' activities within the process of applying the lesson study, both at the time of the plan, do and see, and the facial gesture shown by the students. Documents are obtained from the device and the results of the students' notes in the implementation of lesson study-based teaching practices, while the performance is obtained from the assessment of the students while doing teaching practice.

Data analysis is done through qualitative approach with several stages. The first stage, examining and selecting data related to the problem under study.The second

stage, important data or information grouped according to aspects and problems. The third stage, tabulating data based on its classification, in order to appear the class, nature, type, and frequency, so easy in reading and categorizing.Fourth, read all the data and perform the initial analysis by encoding the data, then describing and connecting various types of data and information to create a description, then perform further analysis to formulate a theme that fits the research focus by linking some related descriptions and eliminating the data. Which is not related to the research focus.

The fifth stage, making interpretation of the results of data analysis related to the issues studied and make conclusions. Analysis of this data is directed to see the attitude of student openness and cooperation as a manifestation of the ability to collaborate, students, as well as performance data to see the improvement of teaching skills of prospective teachers.

C. Findings and Discussion

1. Attitude of openness of prospective teachers in collaboration

Collaboration can be interpreted as aattitude to mutual giving that can be described as the willingness to accept/hear others and the willingness to give/help others as opinion or argumentation orgive feedback. Based on the learning device document of participants of micro teaching course, it can be grouped into 3 categories, that are good, enough and less. After each has a lesson plan, then the next communicate with colleagues who in Lesson Study called planning activities. In the plan activity was observed and obtained data of student openness attitude as follows:

Table 1 The attitude of openness in acceptsuggestion based on the quality of lessonplan during the plan activity

No	Category Document Planning	Attitude to feedback		Amount	Percentage
		Accept/ Open	Reject / Closed		
1.	Good	3	1	4	27%
2.	Enough	5	0	5	33%
3.	Less	2	4	6	40%
amount		10	5	15	
Percentage		67%	33%		

Tabel 2. Willingness to give advice based on the openness to accept suggestions

No	Attitude	Active Giving suggestions	Passive in giving suggestions	Information
1	Accept / Open (67%)	40%	27 %	60% of open students are willing to share and 40% do not want to share
2.	Reject/Closed (33%)	13%	20%	40% of closed students are willing to share and 60% are not willing to share.
				53% want to share

Based on Table 1, it can be explained that of the 15 respondents, 67% have an open attitude, and 33% have a closed attitude. From Table 2, it turns out that open attitude (willing to accept the opinions of others) does not always have the attitude of willing to share (give advice to others). Nevertheless, there appears to be a tendency, that respondents who want to accept also tend to give, and otherwise closed respondents also tend not to want to share. Based on the data, students' collaborative attitude can be differentiated into four types, namely: (1) students who will receive and give suggestions of 40%, (2) students who want to accept suggestions but do not want to give suggestions as much as 27%, (3) do not want to accept suggestions, but want to give suggestions as much as 13% and (4) students who do not want to receive and give advice as much as 20%.

2. Performance of Prospective Teachers in Open class (Teaching Practices)

One of the lesson study activities is to carry out open learning (open class), where teachers or others can see and observe in the classroom in order to learn. Each student from 15 respondents became a model teacher and implemented the open class. The performance data of the students who do open class are reviewed based on the quality of the learning plan they made and can be shown in the following diagram:

Figure 1. The performance of the open class is reviewed based on the lesson plan

Based on the diagram above, it appears that the quality of learning conducted by students in the open class related to the planning undertaken. The better the lesson plan, the better the qualitythe learning process as well as the open class.

Then if reviewed based on the collaborative attitude of prospective teachers, it can be described as the following table:

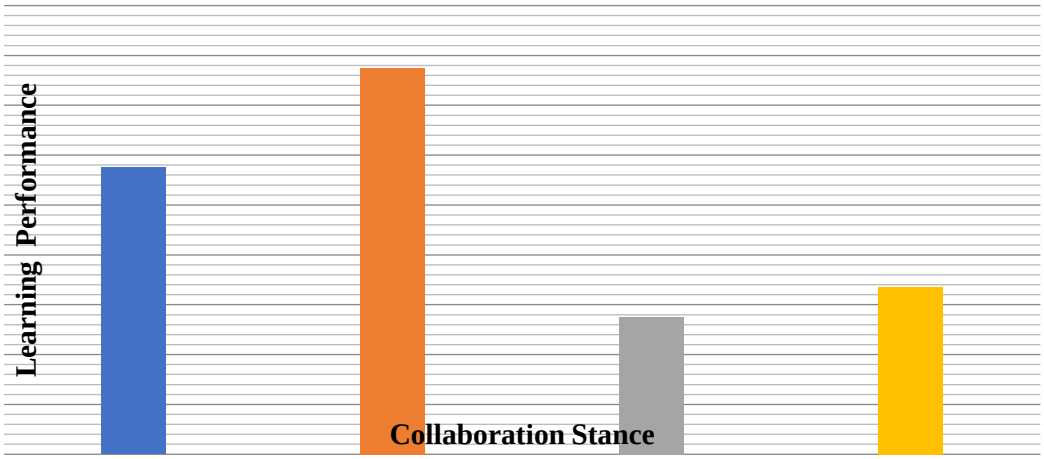


Figure 2. The performance of the open class based on type of collaboration

Based on diagram 2, it appears that the performance of learning is best shown by the students who have the type of willing to accept the suggestion but do not want to give advice, while the lowest learning performance is shown by the students who have typically not willing to accept suggestions, but willing to give advice. If it is only viewed from attitude of openness(willing to accept suggestions or means to listen to the advice of others) and closed attitude, then it can be described as the diagram below:

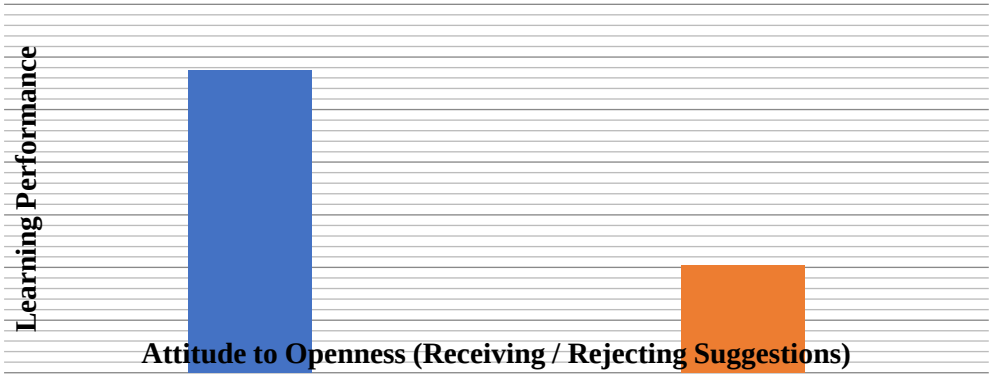


Diagram 3. The performance of the students during the open class is reviewed the attitude of accepting/reject the suggestion

If viewed based on the open attitude or closed students in collaboration, then the performance of prospective teacher when the open class that has an open attitude far better than the performance of students who have a closed attitude.

If it is seen the development of open class implementation of prospective teachers, it seems that every step in line with the experience as a teaching model has increased the average performance of prospective teachers in carrying out the practice of Learning. This can be seen in the following diagram:

.

Figure 4. Data Improvement of student performance in practice implementing learning each open class.

3. Collaboration Quality in Activities See on Microteaching course Based Lesson Study

Step Lesson study after done open class is see (reflection). In the reflection activities the data related to the quality of the collaboration, which includes the number of discussion substance (in this case indicated by the number of phrases) and the frequency or percentage involvement of students in discussion of reflection activity. The data can be presented in table 3 below:

Table 3. Discussion activity data, atmosphere, and gestures of participants discussion on reflection activities within 100 minutes intervals

Data retrieval	Number of expressions	Number of active persons	Information
Data 1st	17 statement expressions	6 Students	Atmosphere is good 73% gesture happy face
Data 2st	21 statement expressions	9 Students	Atmosphere is good 87% gesture happy face
Data 3st	15 statement expressions	6 Students	Atmosphere is good 93% gesture happy face
Data 4st	16 statement expressions	7 Students	Atmosphere is good 80% gesture happy face
Average	17,25 statement expressions	7 Students	The atmosphere is good, and the average number of happy gestures reaches 83.25%
Average per minute	1 statement expressions 5,8 minute	47%	

Based on table 3, we can describe the level of collaboration that occurred during the lesson study activity, in the discussion, 1 phrase every 5.8 minutes, the involvement of participants as much as 47% and the gesture of the faces showing the attitude of happiness to reach 83.25%.

D. Conclusions And Recommendations

1. Conclusion

This study finds some results that can be summarized as follows:

Student candidate teachers who have the open attitude as much as 67% and who have a closed attitude as much 33%. While the type of student collaboration attitude can be grouped into four, namely: type 1 attitude to accept and give advice (40%), type 2 attitude to accept advice but do not want to give advice (27%), type 3 attitude not willing to accept suggestions, but willing to give suggestions (13%), and type 4 attitude unwilling to accept and advice (20%).

1) The quality of the teaching practice of carrying out the learning will be good if the quality of the lesson plan is good.
2) Performance of teaching practice to carry out student learning that has an open attitude in collaboration is much better than students who have a closed attitude.
3) The performance of prospective teachers of implementing teaching practice progressively increases step by step along with the experience of doing the open class in micro-teaching course based on lesson study.

4) The quality of the collaboration was developed in the micro teaching course based on lesson study, which was shown by expression and argumentation average of 1 phrase every 5.8 minutes, 47% of the participants were actively involved and 83.25% showed a happy attitude.

2. Recommendations

1) Open attitude and willing to collaborate should be developed and cultivated to prospective teachers as well as teachers in Indonesia, through Lesson study to improve education in Indonesia.
2) Ability to be able and willing to hear opinions and suggestions of others are very important for prospective teachers and teachers in order to develop performance in implementing learning.

References

Hendayana, S. dkk. 2007. *Lesson Study Suatu Strategi Untuk Meningkatakan Keprofesionalan Pendidik (Pengalaman IMSTEP-JICA)*. Bandung: UPI Press.

Sato, Manabu. 2014. MereformasiSekolah. KonsepdanPraktikKomunitasBelajar. Tokyo: *Japan International Cooperation Agency*.

Slamet, Subad, T, Sutama, & Khotimah,R.P.2010. PeningkatanKompetensi Guru SekolahDasarMelalui*LessonStudy*. Jurnal Warta, Vol .13, No.1, 55 – 64.

Susilo, H, Chotimah, H, Joharmawan, R, Jumiati, Dwita sari, Y, danSunarjo. 2011. *Lesson Study BerbasisSekolah.* Malang: BayumediaPublising.

Suseno, N. 2015. Peran Lesson Study dalam Meningkatkan Kinerja Dosen dalam Perkuliahan di Jurusan Pendidikan MIPA FKIP UM Metro. Jurnal Pendidikan Fisika dan Teknologi. Volume 1. Nomor 14. Halaman: 239 -243.

The Effect of Discovery Learning Method Through Lesson Study in Terms of Problem Solving Skills, Motivation, and Social Skills

Fahrurrozi[1] dan Raudi Mardiana[2]
[1]Program Studi Pendidikan Matematika Universitas Hamzanwadi,
[2]Madrasah Ibtidaiyah Hamzanwadi No 1 Pancor
mas.odji.mpd@gmail.com

Abstract

This study aims to improve the quality of learning through lesson study by applying a discovery learning method in terms of problem solving skills, motivation, and social skill. This study used a quasi-experimental research using pretest-posttest nonequivalent group design. The population was a six grade students of MI Hamzanwadi No 1 Pancor TP 2017-2018. The sample is VIa and VIb class which is randomly selected. The instruments used to collect the data were a questionnaire of social skill, motivation and problem solving skill test. The data obtained in the form of data and the implementation of Lesson study questionnaire on the learning outcome data that has been done, the data in a qualitative descriptive analysis. The data problem-solving skills, solving, and social skills questionnaire of students were analyzed using multivariate and continued with univariate tests on the significance level of 5 %. The results of the questionnaire, the lesson is displayed as a percentage and can be summed up 100 % of the students gave the opinion that the implementation of learning interesting and motivated students will make but 30 % of students questioned the instruments are poorly understood. While the results of data analysis, showed that discovery learning method with the lesson study has positive effect in terms of problem-solving skills, motivation and social skills of students.

Keywords : *Discovery learning method, Lesson study, Problem solving skills, Motivation, Social skills of students .*

A. Introduction

Mathematics is one of the compulsory subjects for elementary school, this is because mathematics is very useful for studying other branches of science, it can even be said that mathematics is one of the determinants of the future of children as stated in Principles and Standards for School Mathematics (NCTM, 2000: 50) as follows:

In an ever-changing world, those who understand and can do math will have more opportunities and choices in determining their future. Ability in mathematics will open the door to a productive future. Weak in mathematics gives the door closed ... all students must have the opportunity and support needed to learn math in depth and with understanding. There is no contradiction between equality and excellencereach a goal or complete a task without doing any thinking

From the book NCTM above, it is very clearly said that mathematics considered as a determinant of the future, but the reality of the field is not uncommon, we find students who are less motivated to learn mathematics because

it is hard to memorize since by the learning process that has been experienced by students during this tends to the method of memorization, according to Hans Freudental (Gravemeijer & Terwel, 2000: 780-781) mathematics is a human activity and must be linked to reality. Thus, when students do mathematics learning activities in itself occurs the process of mathematization. There are two kinds of mathematization, namely: (1) mathematization on the emphasis of the problem of real life and (2) mathematization on the emphasis of mathematics material is a process that occurs within the mathematical system itself, for example: the discovery of problem solving strategy, linking the relationship between concepts mathematically or apply the formula / findings of the formula.

To support the teaching and learning process that implies the activity, the teacher must provide learning facilities for the students, starting from the selection of strategies, approaches, methods, and instructional techniques applied in the implementation of teaching and learning activities in the classroom, so that the objectives of mathematics learning contained in NCTM (2000 : 29), namely: 1) reasoning and proof reasoning, 2) mathematical representation, 3) mathematical communication, 4) mathematical connections, and 5) problem solving. NCTM (2000: 256) also states that "through problem solving, student can experience the power and utility of mathematics". Maximally, through problem solving students can know the power and usefulness of mathematics.

Nitko & Brookhart (2007: 215-216) states that problem solving is an attempt to achieve the desired goals and not automatically known the right way to achieve those goals. Nitko & Brookhart add that achieving a goal or completing a task without thinking is not said to be a problem-solving but a no-brainers. Krulik & Rudnick (Carson, 2007: 7) suggests "problem solving as the means by which an individual uses acquired knowledge, skills, and understanding to satisfy the demands of an unfamiliar situation". That opinion means that problem solving is a means by which an individual uses previously acquired knowledge, skills and understanding to meet unusual circumstances. Even in learning mathematics problem solving has different interpretations, such as solving the story, the problem is not routine, and apply the math in everyday life.

From the description above, it can be seen that the problem solving ability is very emphasized because by solving the problem, the students will be able to master other abilities, let alone supported by the social skill and high motivation. Fligstein (2001: 2) "The idea of social skiil originates in the symbol of interactionnism and is defined as the ability to induse cooperation in other". The prominence of social skills is basically a symbolic interaction and an ability to cooperate with others.

According to Muijs and Reynold (2011: 280), social skills include the main goal of education to improve school preparedness ability to respect others, to cooperate cooperatively express emotions and feelings in a good way, listen to others, follow the rules and procedures, sit down and be attentive, and work independently. From the above opinion that social skills are the ability to socialize with other people or groups using the right way. Social skills include attitudes that do something related to the interests of community life, such as working together, helping others, cooperating and so forth.

Aspects of social skills vary greatly according to their respective views. For that, from all aspects of social skills above can be summarized into several aspects namely 1) social responsibility; 2) cooperation; and 3) tolerance. From these aspects, the following social skills indicators are made:

1. Social responsibility is defined by doing the proper tasks as a student. Social responsibility is related to obligations to self, classroom environment, school.
2. Cooperation is doing work together in an effort to achieve the common goal by giving maximum contribution to the group in the form of thoughts, ideas, opinions, suggestions or criticism.
3. Tolerance means attempts to accept something different from the other side with himself, among other differences of ideas, beliefs, and differences of opinion in the discussion.

High social skills will certainly be very helpful in the learning process so that must be a focus in the learning activities, especially learning mathematics because with a sense of responsibility, work together and tolerance in students, mathematics which is considered difficult subjects, slowly will become a fun lesson. one of the learning patterns that can grow it is the Lesson Study, because according to Stigler and Hiebert (Herawati Susilo, 2009: 5) Lesson Study provides a "key element" missing from effective educational reform yatu effective way to improve the quality of learning through the development of keperofesionalan with the implementation collaboratively based on learning practices. Opinion is not much different to say Lesson Study is a model of educator profession development through collaborative learning and continuous learning based on the principles of kolegalitas and mutual learning to build community learning (Sumar Hendayana, 2006: 9).

With the key elements above and with coupled with the right learning model, the social skills and student motivation will develop well which will certainly result in improving student achievement, especially in the field of problem-solving skills. One of the learning models that can support the achievement of the goal is Discovery learning. Discovery learning is a teaching method that regulates teaching in such a way that the child acquires knowledge that he or she has not previously notified through notification, partially or entirely found alone (Ruseffendi 1991: 329). This is in line with the opinion of Amin (Suriadi, 2006) suggests that a retrieved activity is an activity or learning designed in such a way that students can find concepts and principles through their own mental processes.

Binkell-Holmes and Hoffman (Rohkmaniah, 2008: 33) describe three main features of the discovery method: (1) exploring and solving problems to create, integrate and generalize knowledge; (2) student-centered; (3) activities to incorporate new knowledge and existing knowledge. While Blake et al. (Rohkmaniah, 2008: 32) discusses the discovery philosophy published by Whewell. Whewell proposed a discovery method in three stages: (1) clarifying; (2) drawing conclusions inductively; (3) verification. Some of the advantages of the discovery method are also expressed by Suherman, et al (2001: 179) as follows:

1. students are active in learning activities, because they think and use the ability to find outcomes;

2. students understand the correct learning materials, because experiencing the process of finding it yourself. Something acquired in this way is longer remembered;
3. finding yourself gives rise to a sense of satisfaction. This inner satisfaction encourages the desire to make another discovery so that interest in learning increases;
4. students who acquire knowledge with discovery methods will be better able to transfer their knowledge to various contexts;
5. This method trains students to learn more by themselves.

From the description above, it can be concluded that with the application of discovery learning model combined with Lesson study can affect the social skills, motivation and the ability of students problem solving.

B. Methods of Study

This research used a quasi-experimental research with pretest-posttest non-equivalent group design. The steps of this study are 1) selecting the experimental class in the form of the existing learning group (class) taken randomly, 2) giving pretest to each group at a time together 3) doing the learning with the model to be experimented in the experimental class and conventional learning in the control class, 4) provide the final test (posttest) in both groups at the same time, and 5) perform data analysis of the pretest and posttest results to test the hypothesis and get the conclusions from the research.

This research was conducted in Mathematics Education Study Program of Hamzanwadi University. This study carried out a lesson study which consisted of 4 (four) cycles or 4 (four) times open lesson. Each cycle consists of 3 stages, namely the planning stage (Plan), implementation (Do) and reflection (See). The population of this research is all students of class VI Madrasah Ibtidaiyah (MI) Hamzanwadi No 1 Pancor, while the sample is taken randomly and obtained class VIa as experiment class and class VIb as control.

Intrumen problem solving abilities used are a description test consisting of five items. While social skills instruments and motivation in the form of a questionnaire that contains statements developed based on indicators on each dimension of social skills. The model of questionnaire scale used in this research is Likert scale and consists of four kinds of responses: very suitable (SS), appropriate (S), unsuitable (TS), and highly inappropriate (STS). Both of these instruments have been validated by experts and instruments of social skill and motivation through the construct validity test with exploratory factor analysis. Reliability of both instruments is obtained by Alpha Cronbach formula (Ebel and Frisbie, 1986: 79).
The stages of data analysis as follows.

1. Data in the form of score of problem solving ability with scale 0 -100 and score of questionnaire of social skill and motivation of students obtained in the form of categories consisting of four choices, that is very suitable (4), appropriate (3), not appropriate (2) , and very unsuitable (1) is converted into interval data.

2. Social skills scores and motivation are then converted into qualitative data on a scale of five, with reference to the formula adapted from Saifuddin Azwar (2010: 163).
3. Pretest data obtained from the students 'ability, students' motivation and social skills tests were analyzed simultaneously with the multivariate two-group test (Hotelling's T2) (Stevens, 2002: 176) to see the difference in mean of both treatments, if different then those used to test the hypothesis is the Gain value but if it is the same then the posttest data is used.
4. The same applies to posttest data, if there is any difference then it will be tested further by Benferroni t test (Kirk, 1995: 142).

C. Findings and Discussion

Lesson Study Implementation

Lesson Study on mathematics subjects was conducted by a team from Hamzanwadi University consist of 5 people and also a team of MI Hamzanwadi 10 people. The researcher himself focus on mathematics subjects with model teacher Raudi Mardiana, S.Pd mathematics teacher in class VI. Lesson Study implementation consists of 4 (four) cycles and each cycle consists of Plan, Do and See stages.

In the **first** cycle with the framework of learning materials fractions, in this cycle found several problems and how to solve them as follows:

a. Communication within the team is still rigid, especially how to propose problems experienced during teaching mathematics with the theme of fractional multiplication. In dealing with the rigidity, the team from the University gave small colored papers as a place to write problems that have been experienced and taped to large cardboard paper so that plasticity looks like a problem.
b. Natural creativity choosing learning media not visible yet. Creativity can be enhanced by looking at some of the tools owned by the PGSD study program and also from additional resource books and learning videos from the internet.
c. The model teacher is still dominant in the learning process (do), this is because of the teacher's habits. The process undertaken to reduce it is to improve planning and maximize learning media.
d. The result of the plan is not maximally implemented because students and teachers are still nervous. This is a common process because teachers model and new students perform the lesson study for the first time.
e. At the time of the refelksi team more tends to blame the model teacher so impressed only the model teacher who thinks looking for solutions to problems that arise. This problem arises because at the time of the plan has not been given directives, so because it is too eager to improve teaching and learning process.

In the **second** cycle with the fractional dividing material, from this cycle found several problems along with the way of completion as follows:

a. Communication in giving opinion has been going well, but still rigid at the time of reflection because
b. At the time of the plan there is a debate within the team in choosing learning media, between using paper or striped boxes in kerta that looks a bit abstract but economical and can be comprehensive, this indicates the creativity in choosing learning media has begun to grow. The solution taken is to seek expert consideration which at the time happened to be a monev of dicti.
c. Student activity sheets that have been compiled are still less effective in reducing the role of teachers in the learning process. It needs to be reviewed how to design more effective student activity sheets.
d. The division of the group has not been evenly distributed, it is seen from the three groups that all dominate over the other group. Ineffective group division is caused by an excessive number of members and a sitting position that is unable to support intense communication among members.

In the **third** cycle with the addition and subtraction materials of integers, from this cycle found several problems along with how to solve them as follows:

a. In the discussion process the model teacher should actively monitor the discussion in each group, especially in the less active group
b. Any opportunity for students to solve problems done by students should not only be written and explained by the teacher, but explained by the students directly although the solution is not right.
c. There are still some less active students like OPIK on behalf of him, he only accepts the work done by his group's friends. Teachers must improve their pedagogic competence so that the approach done to the less active students is better.

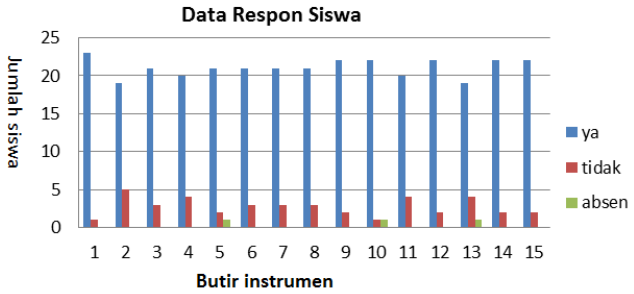
In the **fourth** cycle with multiplication and integer division material, from this cycle found several problems along with how to solve them as follows:

a. Problems that have not been resolved in the discussion should be resolved and given to the students so that they continue to be passionate in developing their social skills.
b. Some lesson plans that are not maximally implemented should be re-evaluated so that the other learning process can run optimally.

Based on the explanation from the first cycle to the fourth above, it is seen the progress achieved from step by step, this is all because the implementation of Lesson study that has been implemented created collaboration between the teams. Furthermore, from observations that have been conducted on learning, teachers and teams who become observers can learn from the observed learning process.

Student response to learning

Based on lessons learned through Lesson Study obtained data about student opinions on the learning process and tools that have been developed. The data can be seen in Figure 1.



Gambar 1.
Data about student opinions on the learning process

Based on the data in Figure 1, the items of instrument no. 1-6 conclude that the learning is quite interesting, fun, easy to understand, make students motivated, create cooperation and encourage self-reliance learning. Similarly, the response to media and teaching materials used (items 7-11) is interesting, can help to understand the concept of the material taught and can provide challenges to learn. While the response to the assessment and evaluation used (points 12-15) according to some students is poorly understood. This is because students have not understood the term assessment itself, so they are less confident in memebrikan response to items 12 and 14.

Problem solving ability

Tabel 1
Data about problem solving ability

Desktipsi	***Discovery + LS***		**Konvensional**	
	Pretest	***Posttest***	***Pretest***	***Posttest***
mean	52,2	79,32	53,45	70,12
Standar deviasi	7.1	11,3	7.3	9,3
Maximum value	67	75	65	80
Minimum value	10	20	15	20
complateness	0%	72,15%	0%	64,12%

Based on the results of descriptive statistical analysis in Table 1 shows that in the experimental group there is an increase in problem solving skills score before treatment with after treatment that is equal to 27.12, whereas in the conventional learning group there are 16.67. This happens because the learning process occurs learning community so that questions and answers to each other has been awakened, but through the process of investigation of students with friends of his group to find ways to solve the problem.

Students' motivation

Tabel 2

Data about students' motivation

Desktipsi	*Discovery* + LS		Konvensional	
	pretest	*Posttest*	*Pretest*	*Posttest*
mean	53.21	85.16	51.31	76.53
Standar deviasi	9.21	10.33	7.4	8.91
Maximum value	84	95	81	92
Minimum value	44	55	48	57

Based on the results of descriptive statistical analysis in Table 2 shows that in the experimental group there is an improvement of problem solving ability score before treatment with after treatment that is equal to 31.95, while in the conventional learning group there are 25.22. Motivation will arise when the feelings of comfort and pleasure that has been felt by students, with the principle of giving that share with each other, students who can not feel helped because students are intelligent to explain to him, other than that smart students will be motivated because of trusted by his friends and feel happy because can give something to his friend.

Social skill

Tabel 3

Data about scial skill

Desktipsi	*Discovery + LS*		Konvensional	
	pretest	*posttest*	*pretest*	*posttest*
mean	52.21	67.14	51.31	59.53
Standar deviasi	6.33	8.35	4.3	5.94
Maximum value	60	76	62	72
Minimum value	30	31	33	30

Based on the results of statistical analysis descriptive in Table 3 shows that in the experimental group there is an increase in social skills score before treatment with after treatment that is equal to 14.93, while in the conventional learning group there are 8. With the concept of cooperation in each group that emphasized in lesson study will appear responsibility to each other, in addition to being aware of the ability of his group of friends who are less then members of the group who can be responsible to explain to friends who have not been able to.

Tabel 4

Output of *t Hotelling test*

Description	Value	F	Hyp.df	Error df	Sig.
Before treatment	0.869	1.721	4	34,00	0,264
After teratment	0.34	11.46	4	34,00	0,000

Based on Table 4 above, the value of F was obtained before the treatment of 1.721 with a significance value of 0.264. With a significance

level of 0.05 then the value of significance obtained is greater than 0.05 so that H0 is accepted. In contrast to after treatment, the value of F obtained is 11.46 with sig 0,000 so that H0 is rejected, in other words after treatment there is mean proportion between group learning with discovery learning and conventional learning in terms of problem solving ability, motivation, and social skills.

Tabel 5
Output of Benferroni tests

Comparison grouf	Variable	Sig.	α
Discovery learning through *lesson study* with Konvensional	Problem solving ability	0,000	0.05
	motivation	0,001	0.05
	Sosial skill	0,003	0.05

From Table 5, it can be seen that it is significantly smaller than 0.05 from the three aspects so that it can be concluded that there is the influence of the discovery learning model through a significant lesson study on problem solving skills, motivation and social skills.

D. Conclusions and Suggestions

From the results of data analysis showed that 100% of students gave the opinion that the implementation of learning interesting and make students motivated but 30% of students lack understanding of some instruments given. In addition, from data analysis using manova and further test, it is concluded that there is an influence of discovery learning model through significant lesson study on problem solving ability, motivation and social skill.

The lesson study process is expected to improve the curriculum that has been applied because the curriculum is more than just a collection of activities: the curriculum should be coherent, focused on important mathematics, and related to both classroom levels (NCTM 2000: 14), in addition to understanding how to teach mathematics can be well grounded following the advice of mathematicians in NCTM books such as:

1. Effective mathematics teaching requires an understanding of what students know and need to learn and then challenges and supports them to learn it well (NCTM 2000: 20)
2. Students must learn math with understanding, actively build new knowledge from previous experience and knowledge. (NCTM: 2000: 20)
3. Assessment should support essential mathematical learning and provide useful information for teachers and students (NCTM: 2000: 22)

References

Carson, J. (2007). A problem with problem solving: teaching thinking without teaching knowledge. *Journal of The Mathematics Educator 2007, Vol. 17, No. 2, 7-15.*

De Walle, J.A.V. (2008). *Matematika sekolah dasar dan menengah* (Terjemahan Suyono). Boston, MA: Pearson Education, Inc. (Buku asli diterbitkan tahun 2007)

Depdiknas. (2003). *Undang-undang RI Nomor 20, Tahun 2003, tentang Sistem Pendidikan Nasional.*

Depdiknas. (2006). *Peraturan Menteri Pendidikan Nasional RI Nomor 22, Tahun 2006, tentang Standar Isi*.

Ebel, R.L. & Frisbie, D.A. (1986). *Essentials of educational measurement (4thed.)*. New Jersey: Prentice-Hall, Inc.

Fligstein, N. (2001). *Sosial skill and the theory of fields*. Paper was prepared tof a confrence sponsored by the German sosiological association on fower and organization at Humbrug University

Gravemeijer, K. & Terwel, J. (2000). Hans Freudenthal: a mathematician on didactics and curriculum theory. *Journal of Curriculum Studies*, 32, 777-796.

Hannula, M.S., Maijala, H., & Pehkonen, E. (2004). Development of understanding and self confidence in mathematics; grades 5-8. *Proceedings of the 28th Conference of the International Group for the Psychology of Mathematics Education, Vol 3 pp 17–24*. Diambil pada tanggal 15 Juni 2016, dari http://www.emis.de/proceedings/PME28/RR/RR162Hannula.pdf

Haylock, D. & Thangata, F. (2007). *Key concept in teaching primary mathematics*. Singapore: SAGE Publication.

Herawati Susilo. (2009). *Lesson Study Berbasis Sekolah*. Malang: Bayumedia Publishing

Kirk, R. E. (1995). *Experimental deign: prosedures for the berhavioral sciences*. Pacifik grope: Brooks/Cole Publishing Company

Muijs, D, & Reynold, D (2008). *Effektif teaching, theory dan practice.* London: Sade Publication Ltd.

National Council of Teachers of Mathematics (NCTM). (1989). *Curriculum and evaluation standards for school mathematics.* Reston, VA: The National Council of Teachers of Mathematics.

National Council of Teachers of Mathematics (NCTM). (2000). *Principles and standards for school mathematics.* Reston, VA: NCTM.

Nitko, A.J., & Brookhart S.M. (2011). *Educational assesment of students (6th ed.).* Boston, MA: Pearson Education, Inc.

Rohchaminah, S. (2008). *Pengaruh Pembelajaran Penemuan terhadap Kemampuan Berpikir Kritis dan Matematika Mahasiswa Calon guru*. Disertasi UPI Bandung: Tidak diterbitkan.

Ruseffendi, S. (1984). *Dasar-dasar Matematika Modern dan Komputer untuk Guru*. Bandung: Tarsito.

Saifuddin Azwar. (2011). *Tes prestasi. Fungsi dan pengembangan pengukuran prestasi belajar*. Yogyakarata. Pustaka Pelajar.

Stevens, J.P. (2009). *Applied multivariate statistics for the social sciences (5th ed.)*. New York: Taylor and Francis Group.

Suherman, dkk. (2001). *Common TexBook Strategi Pembelajaran Matematika Kontemporer*. Bandung: Jurusan Pendidikan Matematika UPI Bandung.

Sumar Hendayana. (2006). *Lesson Study "Suatu strategi untuk meningkatkan kepropesionalan pendidik*". Bandung: UPI Press

Suriadi. (2006). *Pembelajaran dengan Pendekatan Discovery yang Menekankan Aspek Analogi Untuk Menigkatkan Pemahaman Matematik dan Kemampuan Berfikir Kritis Siswa SMA*. Tesis UPI Bandung: Tidak diterbitkan.

Suryosubroto, B. (2002). *Proses Belajar Mengajar di Sekolah*. Jakarta: Rineka Cipta.

DEVELOPMENT OF TEACHING MATERIALS WITH AUTHENTIC ASSESSMENT BASED ON PAIKEM IN LEARNING AND LEARNING PROCESS SUBJECT

Baiq Yuliana Rizkiwati[1)]Muhammad Zainul Majdi[2)]

[1) 2)] Economic Education Program of Hamzanwadi University

baiq_rizky@yahoo.co.id

m.zainulmajdi@gmail.com

Abstract

This research and development are aimed to: 1) to produce teaching materials Learning and Learning Process with authentic assessment based on PAIKEM, 2) to know the feasibility of learning and learning process materials with authentic assessment base on PAIKEM developed according to the assessment of design experts, material experts and assessment experts 3) To know the responses of expert validators and student to learning and learning process materials with authentic assessment based on PAIKEM that has been developed, and 4) to know the effectiveness of learning and learning process materials with authentic assessment based on PAIKEM. The data were collected by questionnaire and essay test.

The results showed that learning and learning process materials with authentic assessment based on PAIKEM is very feasible to be used, proven with the score of material expert 81.81% (feasible), design experts 81.33%, and assessment experts 81.33% (feasible) and field trials of 79.57% (feasible). The developed product is tested on 30 second semester students who are studying and studying in Economic Education Program of Hamzanwadi University in academic year 2016/2017. To know its effectiveness through your experimental design (quasi experiment) with research instrument used is essay test. Based on the result of t-test, the significance of p-level is 0,002 where the p-level data is smaller than the significance that is 0,05 (p <0,05). So there is significant difference between the value of the experimental class and the control class. Thus teaching and learning materials with PAIKEM-based authentic parenting proved to be effective.

Keywords: Learning and learning process, Teaching Materials, Authentic Assessment Based on PAIKEM.

PRELIMINARY

Learning in college is no longer centered on the teacher, but centered on students and learning emphasizes on relevant materials and concepts found by the learners themselves as well as the relationship between the material learned and the problems that exist in the real life of the student. It trains students' thinking processes about what they will do to solve the problems around them. Learning and learning process is one of the common courses taught in all educational courses at Hamzanwadi University. Some of the concepts/materials in this subject are applicative, such as the theory of learning behaviorism and its application in learning, to convey the concept/material still using conventional method, so that the students can not apply the material obtained in daily life. The importance of equipping creativity and practicing the skills of analyzing concepts, students and instilling self-reliance in learning requires lecturers to plan and develop teaching materials based on PAIKEM with authentic Assessment during the learning process. Teaching and learning materials based on PAIKEM with authentic assessments are syllabus, lecture unit, teaching materials, applied learning model, student worksheets used for various assignments, authentic assessment of learning outcomes and assessment / evaluation of learning. All of them are arranged based on PAIKEM.

Evaluation of learning outcomes often used by lecturers is a written test and oral test. According to Arikunto (2011) for the essay test has weaknesses, including: 1) the level of validity and reliability is low because it is difficult to know which aspects of the knowledge of students who really have mastered; 2) how to check it is influenced by many subjective elements; 3) the examination is more difficult because it requires individual consideration; 4) the time for correction is longer and can not be represented to others. Considering the weaknesses of objective tests and essay tests, one of the learning evaluation instruments that can be used as an instrument to determine student learning outcomes is authentic assessment. According to Yunus (2012) authentic assessment is the process of collecting various data that can provide a picture of student learning progress. Here the picture of student learning development needs to be known by lecturers in order to ensure that students experience the learning process correctly. Since a description of the learning progress is required throughout the learning process, this assessment is not done at the end of the period only (the end of the semester). Assessment activities are conducted in conjunction with learning activities.

Based on informal interviews with some students who have taken courses on learning and learning process, it is learned that the material used by most of the material to date is still scattered in various sources such as textbooks and various sources on the internet. Although all these resources are complementary, a student may not own or acquire all of the material. Conditions like this cause students to be very dependent on lecturers, so the learning process in the class will become passive.

Lecturers become the only source of learning, students tend to just listen, consequently too much time consumed by lecturers to explain the material, so the opportunity to guide students in the learning process is almost unworkable. Therefore, the materials need to be collected by lecturers of course subjects to become teaching materials. Thus, students will have a handbook of instructional materials that can be used for self-study, and other resources can be used for enrichment.

Meanwhile, according to the questionnaire needs analysis of teaching materials in the learning process that is filled by 90 students who are taking the learning and learning course, where the students come from 15 courses of education in Hamzanwadi University which is divided into 4 majors. Each study program is taken by 6 students with different academic ability, 2 students with the highest GPA, 2 students with moderate GPA and 2 students with low GPA. The results of the questionnaire showed that 70 students stated that they needed teaching materials in most teaching tasks, as many as 7 students stated that they needed teaching materials in a small part of the learning task, and 13 students stated that they needed teaching materials in the whole learning tasks.

The data above shows that most of the students assume that the teaching materials are needed to be able to learn and do the task independently. This is also reinforced by the opinion of the lecturers of learning subjects

RESEARCH METHODS

This research is a type of research and development. According Sugiyono (2013) research and development (R & D) is a research method used to produce a specific product and test the effectiveness of the product. Borg and Gall (2003), there are 6 stages to conduct research and development, namely: 1) preliminary study; 2) planning; 3) product development; 4) product validation; 5) product trial; and 6) the final product.

The research was designed and developed at Hamzanwadi University. And has been implemented on students who are taking the course Learning and Learning semester academic year 2016/2017 on Economic education course University Hamzanwadi. This research was conducted from 1st April until 30th August, 2017. While the subject in this study was students amounted to 30 students.

Data collection techniques used in this development research is: Questionnaire or questionnaire, Data in this development research is the result of assessment by the team of validators in the questionnaire that has been provided. Questionnaire compiled includes 3 types of questionnaire material experts, design experts and assessment experts. Test, is used to assess the effectiveness of teaching and learning

materials based on PAIKEM with the developed authentic assessment. Data in this research were obtained by using quasi experimental design with pre test design and post test control group design.

Data obtained from the test subject (validator) is analyzed by descriptive analysis technique percentage. The formula used is as follows:

Formulas for assessment per item;

$$Pi = \frac{xi}{yi} \text{ x100\%}$$

The formula for the overall assessment of items:

$$P = \frac{\sum_{i}^{n} = 1xi}{\sum_{i}^{n} - 1yi} \text{ x100\%}$$

Information:

Pi = Presentation of item/criterion i

P = Percentage of overall assessment

Xi = Score for item/criterion i

Yi = Maximum score for item/criterion i

$\sum_{i}^{n} = 1xi$ = Number of scores for item/criterion i

$\sum_{i}^{n} - 1yi$ = Maximum score for i item/criterion

N = Many items/criteria are judged in the validation

I = 1,2,3,4,5,n

To determine the conclusions that have been reached, then applied criteria as in table 1.1 below:

Table 1.1 Eligibility Criteria

Eligibility Criteria Percentage (%)	Validation Criteria	Information
85,01-100,00	Valid	Eligible/No need to be revised
70,01-85,00	Valid enough	Decent enough / No need to be revised
50,01-70,00	Less Valid	Less Eligible / Partial Revision

01,00-50,00	Not valid enough	Not Eligible / Total Revision

Source: Akbar (2013:41)

RESULTS AND DISCUSSION

The data generated at the validation stage are analyzed using descriptive analysis technique percentage which is a technique or a way to convert quantitative data into percentage form then interpreted with qualitative sentence. Validation data analysis consists of expert material data analysis, design expert data, assessment expert and product trial data. The data analysis is done on each question item and the total number of question items. The analysis of the data is described as follows:

The results of the whole analysis of teaching materials developed as follows:

Table 1.2 Overall Analysis Validation of Learning and Learning Materials Based on PAIKEM is accompanied by authentic assessment.

No	The assessed component	Percentage (%)	Criteria of validity
1	Average validation of material experts	81,81	Valid
2	Average design expert validation	81,33	Valid
3	Average validation of assessment experts	81,33	Valid
4	Student response	79,57	Valid

Based on table 1.3 Overall Analysis Validation is obtained from material experts with an average percentage value of 81.81% (Valid) and eligible for use, design experts obtained an average percentage value of 81.33% (valid) eligible for use, and The assessor obtained the average value of the percentage of 81.33% (valid) feasible to be used and the result of the student response obtained the average value of the percentage of 79.57% (Valid) eligible for use,

From the average percentage to the three validators and the results of the student response can be concluded that learning materials and learning based on PAIKEM feasible and can be used in supporting the learning process of learning and learning lectures at the level of S1 of education, especially in the economic education program of Hamzanwadi University.

Data Analysis on the Effectiveness of Learning and Learning Materials Based on PAIKEM along with Authentic Assessment

Preliminary capability data and end-ability Student class of experiment and control class is obtained from pre test score and post test score of each class.

The summary data of students' pre-test post-test results in the experimental and control classes can be seen as follows:

Table 1.3 Results of Student Learning in Experiment and Control class

Experiment		**Control**	
Average %		**Average %**	
Pre test	***Post test***	***Pre test***	***Post test***
57,06	84,86	58,37	78,57

Based on Table 1.3 data on the effectiveness of teaching and learning materials based on PAIKEM with Authentic Assessment in this study was obtained by comparing the mean score of pre test and post test in experiment and control class in limited field trial. The post test score of the experimental class is 84.86 while the control class is 78.57. This shows the contribution of the use of teaching and learning materials based on PAIKEM with authentic assessment in increasing the student's average score.

Furthermore, data analysis of the effectiveness of Learning and Learning Resources Based on PAIKEM with Authentic Assessment using independent test sample t test. Obtained p-level data is 0.002 where p-level data is smaller than 0.05 ($p < 0.05$). So there is a significant difference between the value of the experimental class and the control class. That states "there is the influence of learning materials and learning based on PAIKEM accompanied by authentic assessment of student learning outcomes".

PAIKEM Based of Learning and Learning Materials with Authentic Assessment Developed

In this research, it has been developed learning materials and learning courses based on PAIKEM with authentic assessment and some supporting instruments. The product development research snippet in the form of learning materials and Learning Based PAIKEM accompanied by authentic assessment as follows:

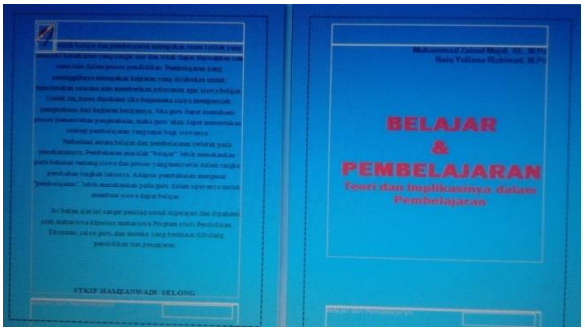


Figure 1.1 Cover Learning and Learning Materials developed.

Information:

1. Syllabus, a lecture course (SAP) based on PAIKEM; Description of course of study and learning and outline of lecture guidance for one semester.
2. The teaching materials developed have the following components: 1) cover / cover page; 2) introduction; 3) table of contents; 4) table list; 5) the title; 6) introduction; 7) Purpose; 8) subtitles, material 9) summary; 10) student worksheets; and 11) glossary; 12) bibliography. 13) Authentic assessment.
3. PAIKEM-based student worksheet; Student worksheets are packed following the syntax of PAIKEM, which is used as a guide for creating and executing tasks.
4. Authentic assessment guidelines describe attitudes, skills, and knowledge that students have or have not. Development of Authentic assessments for learning and learning courses that includes assessment on:
   a. Project Assessment. The project here is a group assignment to create a predefined learning model simulation. The simulation is reported in the form of a video to be presented in front of the class. The project is conducted outside the lecture hours within ± 1 month.
   b. Performance Appraisal : Assessment of performance in simulating the learning model.
   c. Product Assessment: 1) create concept maps for a concept of each subject. 2) Reports. The report contains the search results of the student literature on selected and pre-selected learning theories. Browse libraries can refer to instructional books or on internet search results. The preparation of reports is done in groups.
   d. Written Assessment: Test of conceptualization; the test device used to measure the level of mastery of the concept of learning and learning materials.
   e. Self assessment, and Assessment of partners: gaining information about: (a) the character of the student, and (b) the independence of the student.
   f. The product resulting from the development process is teaching and learning materials based on PAIKEM with authentic assessment. The developed teaching materials are made practical in order to facilitate lecturers and students in learning and learning process.

REFERENCE

Ahmadi, Iif Khoiru, dkk. 2011. *PAIKEM GEMBROT (Mengembangkan Pembelajaran Aktif, Inovatif, Kreatif, Efektif, menyenangkan, Gembira, dan Berbobot)*. PT. Prestasi Pustakaraya. Jakarta.

Arikunto, S. 2011. *Dasar-Dasar Evaluasi Pendidikan (Edisi Revisi)*. Jakarta: PT. Bumi Aksara.

Borg, W.R., *et.al.* (2003). *Educational Research an Introduction*; Seventh Edition. New York: Longman Inc.

Dasril., Yulkifli., & Haris. V. (2014). Pengembangan Modul Praktikum Berbasis Paikem Pada Materi Fisika SMA Kelas X Semester II. Jurnal *Edusainstika*, Vol.1. (1) : 15-17.

Hamalik, Oemar.(2010). *Proses Belajar Mengajar*. Jakarta: Bumi Aksara

Ismail, Bustamam. (2010). *Pengembangan Model PAIKEM dengan Pendekatan SETS*. http://hbis.wordpress.com/2010/07/04/pengembangan-modelpembelajaran-paikem-dengan-pendekatan-sets/. Diakses 28/03/2016.

Slameto. (2011). *Model PAIKEM*. Semarang: UNNES.

Sugiyono.(2013). Metode Penelitian Kuantitatif, Kualitatif dan R&D.Bandung. CV Alfabeta.

Suranto. (2013). Membangun Pengetahuan Wirausaha Mahasiswa Melalui PAIKEM Gembrot. Artikel *Seminar Nasional Ienaco – 2013 ISSN: 2337-4349*

Yunus, A. 2012. Model Penilaian Otentik dalam Pembelajaran Membaca Pemahaman Berorientasi Pendidikan Karakter. *Jurnal Pendidikan Karakter*. 2 (2)

Developing EFL Critical Reading Syllabus andMaterials for Students of the English Department-IKIPMataram

Fathurrahman Imran, HeriHidayatullah dan Edi Firman

fathurrahmanimran@ikipmataram.ac.id, herihidayatullah@ikipmataram.ac.id, firmaneddy@gmail.com
Program Studi Pendidikan Bahasa Inggris FPBS-IKIP Mataram

Abstract

*The demand of a new model of syllabus and materials were required by the launching of KKNI-based Curriculum in Indonesia particularly at the English department of FPBS-IKIP Mataram. Due to, the students' needs and learning characteristic became the purpose of this current research.A qualitative research had been conducted to find out the data needed by which two kinds of questionnaires were administered.The data obtained from the instruments were analyzed qualitatively (Likert scale). From 132 respondents, the results dealt with the learning characteristics showed that the audio was 19.69%, the visual was 50.75%, and khinesthetics was 29.54%. In relation to the students' needs, there were four aspects to be considered 1) necessities in which most of the students' topic interest was aboute*ducation *(72%), culture (63%), and social life (45%).In adition, the whole critical reading sub-skills had to be covered; 2) weaknesses in which the students reading ability were categorized into good but their current critical reading skills was not good because of some obstacles; 3) the teaching critical readingobjectives were divided into two namely external and internal sub-skills in which the students expected to have it unless grammar mastery; and 4) classroomactivities in which the respondents tended to see teachers as all roles but Class controllers. Meanwhile, the students' role as all roles but as knowledge receivers. The critical reading tasks were not loved to be done only in large group (11%). Thus, it could be concluded that the students needed critical reading syllabus and materials that covered the whole objectives and three topics interest with the settled teachers and students' role.*

Key Words:*KKNI-Based Curriculum, EFL critical reading, syllabus, material*

Introduction

The term "critical" does not mean negative in any context but it is closest in meaning to the term "evaluative". Thus, critical reading refers to the ability of evaluating before making decision in the activity of reading which is undoubtfull can increase the students' social process and effect on words choice in spoken and or written skills (Universitesi, 2014:133). In addition, considering the variety of information presented today either printed or non-printed media, anyone specifically college students are required to be able to differentiate between the truth and opinion.Basri (2013) stated that there are two reasons why the students must be critical, firstly because of the various types of information received nowadays either its sources or essences, and secondly because of the students as peoplepower who must be provided with a sufficient ability to think in order that they can improve themselves on their own disciplines.

Reading in a critical way needs the readers' strategies for the sake of obtaining the message of the author before coming onto the readers' conclusion. One of the effects of critical reading strategies is on the students' vocabulary retention (Khabiri&Pakzad, 2011:73).

In relation to this current research, all effective teaching techniques and strategies that displayed the readiness of the students in acquiring the critical reading skills or their critical reading profile wasinsufficient since they have to be provided with critically challenging texts (Ghajar&Kafshgarsouteh, 2011:26). In addition, much theories mention that one of the fundamental aspects to be provided for the sake of teaching learning process is the teaching materials. Due to,Errington and Bubna (2015) stated that the textbook could reinforce underdeveloped students' epistemology through limitations of content and position as passive recipients of an authoritative version of oversimplified knowledge. In further, Richard (2001: 251) comments that 'instructional materials generally serve as the basis of much of the language input that learners receive and the language practice that occurs in the classroom'. However, it is important to be taken into account that there are some types of textbook, two of them are teachers-made textbook and ready-made textbook. In relation to the ready-made textbook, Swan (1992) in Hutchinson & Torres (1994) warned that it seems difficult to find out the textbook that can absolve teachers of responsibility in the day-to-day decisions like what and how to teach it. To the researchers' opinion, it would be best textbook to be used in classroom setting when the educators developed their own textbook. They also assumed that the teaching materials used sometimes were not appropriate with the students' needs and characteristics. Due to the fact that the critical reading lecturers adapted materials from various resources to be used in the teaching learning process,this current research produced a textbook for students based on their needs and characteristics.

Another important thing to be considered, beside teaching materials,was the available of syllabus, in which its content is more specific and more concrete than curriculum (Krahnke, 1987:2).The importance of syllabus specifically in Indonesia could be seen from accreditation files, in which it becomes one of the eight standards to be required. In addition, its importance also can be seen from its purpose, which serves three major roles, as a contract, as a permanent record, and as a learning tool (Parkes& Harris, 2002:55). However, the absence of syllabus in the teaching learning process might lead the students not to achieve the learning goals that had been developed by the institution.The lecturers also might choose irrelevant teaching materials to be taught. The fact showed that the development of KKNI-based curriculum had been done in 2015. Due to, the researchers assumed that there might be no universities especially the English department of FPBS IKIP Mataramdeveloped syllabi particularly for critical reading course.

In accordance with the above explanation, this current research proposed a syllabus for critical reading course, which was developed based on KKNI-base curriculum along with a critical reading textbook for students by considering their needs and characteristics.

At last, producing those two products was urgent to be done through this current research in order that the graduations could compete in Asian Economy Society or MEA, which not only required their English skills but also their skills in making decision, giving logical reasons, and other critical reading skills.

One of the important aspects in the educational activity is curriculum. it is supposed to be importance since it focuses on determining what knowledge, skills, and values students learn in school, what experiences should be provided to bring intended learning outcomes, and how teaching and learning in educational systems can be planned, measured, and evaluated (Richards, 2001). Due to from the three focuses of curriculum, there would be three components that must be consider namely the learning goals, contents, and methods.

CR Syllabus

Syllabus is not identical with a curriculum. Krahnke in 1987 wrote that there was unclear distinction between the two terminologies since the curriculum includes syllabus but not vice versa. The syllabus will be the parameters of curriculum therefore it will be more specific and more concrete for instance a curriculum may specify only the goals (what the learners will be able to do at the end of the instruction). It will be the job of syllabus to specify the content of the lessons used to move the learners toward the goals.

In ELT, there are six different types of syllabus namely a structural or formal syllabus, a notional/functional syllabus, a situational syllabus, a skill-based syllabus, a task-based syllabus, and a content-based syllabus (Krahnke, 1987:10-12). The three types of syllabus, structural or formal, notional/functional, and situational, emphasize on form. However, the three remain syllabus emphasize on meaning. Furthermore, the six types emerged because of the theory of language.

The teaching practice between secondary and tertiary school levels in the Indonesian context is different. The distinction might be seen from the instructional methodology being implemented. In accordance to this distinction, there will be two terminologies (pedagogy and andragogy) used to describe how they differ from each other under four assumptions (Monts, 2005:2). The pedagogyviews the learners as dependent and the teacher as the only one who determine the teaching materials. However, the andragogy sees that there is a natural maturation due to the students have to move from dependency onto increasing self-directness. Next, in pedagogy, the validity of the learners' previous experiences is less taken into consideration due to they rely on the teachers' experience, textbook, or other instructional aids. On the other hand, andragogy views the learners' experience are primary, therefore the teaching and learning process is mostly done by utilizing experiential techniques. Further, pedagogy assumes that the students are ready to learn what society says that they have to learn. Meanwhile, andragogy asserts that they are ready to learn when they experience a need to learn, therefore they should focus on life-application categories and should be ordered based on their needs. At last, pedagogy views that learning has future orientation due to what is being learnt will be useful in the future times. However, andragogy sees

education as a process of developing competencies. Thus, the goal is to learn something that can be applied to get a better life tomorrow.

KKNI

The process of curriculum development in the Indonesian context, particularly at the English Department of FPBS IKIP Mataram,has been changed since 2015 following the government's instruction.Due to, as one of the teaching staffs, the researchers intend to develop a syllabus for one particular subject that is critical reading. In developing the syllabus, the basic considerations are the curriculum itself and the students' needs.

KKNI as the basis for developing syllabus in this current research is chosen under twofundamental reasons. The first, a syllabus should be derived from curriculumand the graduates are able to compete in national level at this post-millennium era.

Critical Reading

Theoretically, the general purpose of critical reading is to be able to make appropriate judgements (Khabiri&Pakzad, 2012:78), to understand how writing persuades, and to determine whether one should celebrate or undo the text (McNeil, 1992:51), and to analyze, synthesize, and evaluate texts (Andreani, 2010:iii; Carnine,1990:313). In order get the critical reading skills, some activities can be done, for examples, skimming, scanning, paraphrasing, summarizing. These activities are commonly trained through reading strategies. Beside those activities, the top-down and bottom-up approaches can also be introduced to the students.

In conclusion, it is to achieve the goal of critical reading, the readers should start from the simplest to the highest cognitive system (BukuKurikulumPendidikanTinggi, 2014). In further, there are three well-known taxonomies used to explain such cognitive system namely Bloom (1956), Anderson and Krathwol (2002), and Marzano (2009). Each of these have their own strengths and characteristics.

Needs Analysis

Needs analysis is paramount in ELT curriculum and materials development. Wong & Wu in 1998 said that the rationale for the course has been heavily influenced by the findings of a needs analysis. In line with Wong & Wu, Richards (2001:51) uttered that the needs analysis in language teaching is really necessary when the curriculum planners intend an English teaching program for special purposes (ESP). Due to, theresearchers of this current research in developing the syllabus and materials should consider the research findings that will be conducted at the first year research.

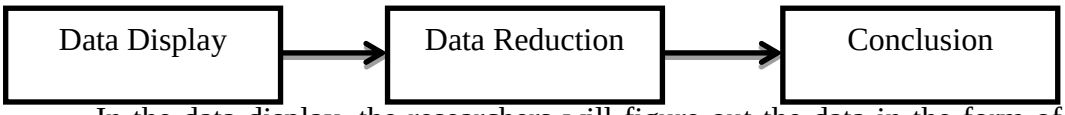
In analyzing the learners' needs, it is very important for the researchers to see and consider the classification of needs, which is divided into two namely subjective and objective (Brindley, (1984:149, via Nunan, 1999). The subjective needs are the learners' needs, which cannot be observed easily by the teachers, even stated by them. Meanwhile, the objective needs are the needs, which can be observed by the teachers in the form their individual data including their language proficiency and their pattern of language use.

A. Method

This current research aimed at producing certain products, syllabus and textbook. The due two productswere developed based on needs analysis conducted in the early research. Due to, the appropriate research design wasEducational Research and Development (R&D) proposed by Borg and Gall (1983:775).The R&D required the researchers to conducts some steps. They are1) studying research findings pertinent to the product to be developed; 2) developing the products based on these findings; 3) field testing it in the setting where it will be used eventually;4) revising it to correct deficiencies found in the field-testing stage; and 5) the product meets its behaviorally defined objects.Due to theproducts of this current research would be used at the fourth semester students of the English Departmentof Faculty of Language and Art Education IKIPMataram. Therefore, the subjects would be taken from that institution.

The model of this current research was intended to use the ten major steps of R & D cycle proposed by Borg and Gall(1983:775). However, the researchers adapted them in order to be appropriate with their development needs. Due to, the developmentsteps of this current research are 1) early research (needs analysis), 2) development of products, 3) preliminaryfield-testing, 4) products revision, 5) main field-testing, 6) products revision, and 7) final products. The model of the development can be seen in diagram 3.2.

The first step of this development is conducting research to obtain information mainly about the students' perception on the critical reading, the learning context, the teachers' role in facilitating instruction, and reviewing the literatures. The data in this step will be in the form of quantitative and qualitative since the instruments that will be administered are questionnaire, observation sheet, and interview. The data from questionnaire will be analyzed using Likert Scale while the other data from other instruments will be analyzed qualitatively as suggested by Cresswell (2012). The diagramis displayed below.



In the data display, the researchers will figure out the data in the form of words. The displaying data will be started when they begin color-coding and transcribing into drawing conclusion.In the data reduction, the researchers will use color-coding to parts of the text in the observation sheet, but in the interview, they will do transcribing first then followed by using color-coding. After doing color-coding and transcribing, they begin to explore it to obtain the general sense (memoing ideas, thinking about the organization of data, and considering whether they need more data). In addition, the researchers will reduce the data resulting from color coding and transcribing onto smaller number of themes.In drawing a conclusion, the researchers will firstly see the research questions and they will examine and develop the data in detail or themes to describe what they will have

learnt. The conclusion will be written narratively, by which they summarize the findings from their data analysis. In order that the researchers feel sure on the accuracy of the findings, they plan to do triangulation and member checking.

The second step is the productsdevelopment bywhich it refers to develop the syllabus and materials. The syllabus will be developed by considering the findings obtained at the first year research and for the materials development, the researchers will consider both findings obtained at the first and the second year researches.

The third step is the preliminary field-testing. It will be done by asking some experts to validate the developed products. The aspects of the products that will be validated by three different experts with different jobs are the contents, organization, and design.

The next step is the products revision. This phase will be done by considering all information obtained from the experts including their comments, suggestion, and evaluation for the draft of products.

The fifth step is the main field-testing by which the revised draft of products will be implemented in a classroom setting. It also involves observation and reflection on how the products are applicable and appropriate to be used in classroom. In addition, the weaknesses on the use of the materials are jot down and become the main consideration in the revision. The implementation of the products will be trial out through making lesson plans which in turn to be implemented in classroom setting.

The last step is the final products. Before publishing and distributing the products, there will be some revision conducted by which the researchers consider the results of the main field-testing for both small and large groups of students.

B. Findings and Discussion

The findings of this current research were obtained on the basis of the analysis of the collected data firstly derived from two questionnaires.

Findings

Data on Needs Analysis

There were four aspects to be focused on in this part namely the students' necessities on critical reading, weaknesses on critical reading, the objective(s) of teaching critical reading, and the required classroom activities. The following were the detail raw data obtained from the instruments of this current research and it had been analyzed using *Likert* scale.

Table 1. the students' topic interest and expectation on having critical reading sub-skills

No	Items	Percentage			
		VN	N	NN	NVN
1	Topic interest on				

	a.	Culture	63	29	8	0
	b.	Social life	45	49	4	2
	c.	Education	72	28	0	0
	d.	Politics	0	4	39	57
	e.	Law	0	0	48	52
2	Expectation on having CR sub-skills					
	a.	Giving logical reasons	44	51	5	0
	b.	Paraphrasing and drawing conclusion	67	37	0	0
	c.	differentiating among facts, non-facts, and opinion	53	47	0	0
	d.	Evaluating the author's conclusion	46	64	0	0
	e.	Determining the evidence, trustworthiness, and faulty of arguments	29	56	11	4

The above table described two items regarding the students' necessities on critical reading. The first item dealing with the topic interest to be discussed by the students during the teaching learning process and or to be displayed on the students' textbook. The students' response showed that they were highly needed to talk about culture, social life, and education in the critical reading class. However, they did not need to talk about politics and law. From the three topics, the students' highest response fell into education (72%), culture (63%), and social life (45%).

The second item was dealt with the students' needs on the required critical reading sub-skills. These sub-skills became the researchers' focus when developing the critical reading syllabus and textbook. The data showed that the students needed all sub-skills to be taught and or presented in the textbook.

Responses regarding the students' present reading ability, critical reading ability, and obstacles on critical reading were showed on the table below.

Table 2. the students' present ability on reading and critical reading and obstacles on having critical reading sub-skills

No	Items		Percentage			
			VG	G	NG	NVG
1	Critical reading prerequisites					
	a.	Reading Comprehension I	39	54	7	0
	b.	Reading Comprehension II	31	56	10	3
	c.	Reading Comprehension III	23	48	21	8
	d.	Extensive Reading	19	71	5	5
2	Current critical reading ability					
	a.	Drawing a conclusion	12	33	49	6
	b.	Evaluating issues	7	13	58	22
	c.	Distinguishing facts, non-facts, and opinion	17	19	47	17
3	Obstacles on having CR sub-skills		VA	A	NA	NVA

	a.	Finding multi point of views	61	31	8	0
	b.	Difficult to paraphrase and draw a conclusion	58	37	5	0
	c.	Insufficient knowledge on the issue	49	41	6	4
	d.	Difficult to scan the texts	19	27	52	2
	e.	Limited vocabularies to explore ideas	26	28	45	1

The above table shown that the students' present reading ability was mostly in good level (Reading Comprehension I (54%), Reading Comprehension II (56%), Reading Comprehension III (48%), and Extensive Reading (71%). However, the highest percentage fell onto Extensive Reading followed by Reading Comprehension II then I, and then III. The students who got very good score were Reading Comprehension I, II, III, and Extensive Reading. Moreover, only a few of them who were in not good and not very good score.

Regarding the students' current critical reading ability, the students' response was dominated in not good category. It could be seen from table 5.2 that the students' ability in drawing conclusion was 49%. However, only a few of them who could be categorized into good (33%), very good (12%), and the remain percentage fell onto not very good (6%). It was not far from the students'ability in drawing conclusion, their ability in evaluating issues was mostly categorized in not good (58%) and (22%) of them in not very good level. The remain percentages fell onto good and not very good levels. Dealing with their own ability in distinguishing facts, non-facts, and opinion were also in not good category (47%) followed by good (19%).

The respondents of this research had obstacles on critically read English text mostly on finding the multi points of view (61%), paraphrasing and drawing conclusion with no bias (58%), insufficient knowledge on the issue (49%), limited of vocabularies (26%), and scanning the text (19%). From the table, there were only two items, limited of vocabularies and scanning the text, that supposed not to be dominant obstacles.

Regarding the critical reading objectives, the researcher devided into two along with the students' response which could be seen from the following table.

Table 3. Other interference made in critical reading class

No	Items		Percentage			
			VA	A	NA	NVA
1	Non sub-skills goals					
	a.	Vocabulary mastery	25	48	13	14
	b.	Writing skills	39	32	19	10
	c.	Grammar mastery	16	22	44	18
2	Sub-skills goals					
	a.	Knowing the English texts organization	21	38	40	1

	b.	Producing new ideas in the form of spoken and written	48	31	13	8
	c.	Synthesizing others ideas	71	21	8	0
	d.	Drawing good logical conclusion	79	19	2	0

It could be seen that the students had variety response to these two items. In term of the students' vocabulary mastery, they mostly (73%) agree and very agree however 27% of them were not (very) agree. It was the case dealing with their writing skills but their grammar mastery by which they did not agree (62%).

Different from non sub-skills, the sub-skills ones were dominated by those who were agree and very agree to the whole sub-skills. Dealing with knowing texts organization (59%), Producing new ideas (79%), Synthesizing (92%), and Drawing good logical conclusion (98%).

There were three aspects of teaching became the researchers' focus namely the teachers' role, the students' role, and learning model. The following table was the detail response taken from the respondents.

Table 4. The role of teachers and students in classroom and the learning model

No	Items		Percentage			
			VA	A	NA	NVA
1	Teachers' role					
	a.	Class controllers	11	27	34	28
	b.	Class organizers	41	21	30	2
	c.	Class collaborators	52	48	0	0
	d.	Information providers	60	40	0	0
	e.	Feedback givers	48	52	0	0
	f.	Class facilitators	35	49	16	0
2	Students' role					
	a.	Knowledge receivers	9	21	67	3
	b.	Knowledge informants	41	59	0	0
	c.	Knowledge providers	49	51	0	0
3	Learning model					
	a.	Self-working	18	22	33	27
	b.	Work in pair	36	64	0	0
	c.	Work in small group	48	52	0	0
	d.	Work in large group	7	4	67	22

Regarding the teachers' role, the respondents (62%) did not (very) agree when the teachers as the controllers. However, most of their response showed that they (very) agree when their teachers became Class organizers (62%), Class

collaborators, (100%), Information providers (100%), Feedback givers (100%), and Class facilitators (84%).

Talking about the students' role, they really wanted to be the knowledge informants (100%) and providers (100%) rather than the knowledge receivers (30%).

In term of the teaching learning model applied in classroom, the respondents wanted to do the critical reading tasks by theirselver (40%), in-pair (100%), in small group discussion (100%), and in large group (11%).

Data on Learning Characteristics

The data found from this second type of instrument dealing with the students' learning characteristics.

Table 5. Data about the students' learning style in critical reading class

No	Respondents	Types of Learning			Remarks
		Audio	Visual	Khinesthetics	
1	132	26	67	39	-
Percentage		19.69	50.75	29.54	-

The table above showed that from 132 respondents, there were 26 or 19.69% who preferred learning something using picture or other visual media. However, the highest learning style fell on visual by which 67 out of 132 or 50.75% preferred to learn something through hearing and speaking. Moreover, there were 39 respondents or 29.54% who loved to be given something to accomplish.

Discussion

It had been elaborated that one of the aspects of needs analysis was dealt with the students' necessities. This kind of aspect focused on finding the students' topic interest to be discussed during the teaching learning process. The researchers found three main topics namely education, culture, and social life. In term of education, there was 72% of the students were interestedon it. That percentage indicated thatthe dominant materials to be taught and developed was about education followed by culture, and social life. In addition, by having the percentage of the three main topics interest, the students were really aware on their future carreer as the teachers alongwith their own coomunication, relationship, and adaptation with their society.

On the basis of the data found, the students' strenght was on the prerequisites of critical reading and it indicated that they were ready enough to learn the critical reading skills. However, when they were asked about their current critical reading ability, they had in low category on some sub-skills. Due to the objective(s) of teaching critical reading should cover the whole sub-skills with the required classroom activities.

C. Conclusion

Regarding the data analysis, the researchers could conclude that the students were ready enough to learn critical reading and the critical reading syllabus and materials should cover the whole objectives and three topics interest with the settled teachers and students' role.

References

Andreani, S. 2010. *Critical Reading.Unpublished Handout*.English Department, Faculty of Letters, State University of Malang.

Basri, Februari 2013.*UrgensiMelatihSiswaBerpikirKritis. Radar Mandalika*, p.8.

Borg, Walter R. and Gall, Meredith D. 1983. *Educational Research: An Introduction*. New York: Longman

Carnine, D. et.al. 1990. *Direct Instruction Reading*. (2nd Ed.). Columbus: MerillPublishng Company.

Cresswell, J., W. 2012. *Educational Research*: *Planning, Conducting and Evaluating Quantitative and Quantitative Research*. Boston. Pearson education

Errington, Alison. &Bubna, David. 2015. Management by Textbook: The Role of Textbooks in Developing Critical Thinking. *Journal of Management Education*. 39 (6): 774-800.

Ghajar, S. G. &Kafshgarsouteh, M. 2011. Recovering the Power Inside: A Qualitative Study of Critical Reading in an Iranian University.*Turkish Online Journal of Qualitative Inquiry*.2 (3). 26-39

Hidayatullah, Heri. 2015. *Utilizing Questioning Technique to Improve the Students' Comprehension Skills on Expository Texts.Journal of English Language Teaching (Jo-ELT)*.3 (1).17-22.

Hutchinson, T. & Torres, E. 1994.The Textbook as Agent of Change.*ELT Journal*.48 (4). 315-328

Khabiri, M. &Pakzad, M. 2012.*The Effect of Teaching Critical Reading Strategies on EFL Learners Vocabulary Retention.The Journal of Teaching Language Skills (JTLS)*. 4 (1) Spring, 73-106

Krahnke, K. 1987. *Approaches to Syllabus Design for Foreign Language Teaching*. New Jersey. Prentice-Hall, Inc.

McNeil, J.D. 1992.*Reading Comprehension: New Directions for Classroom Practice*. (3rded.). New York: HarperCollins Publishers.

Monts, Bob. 2005. *Andragogy or Pedagogy: A Discussion of Instructional Methodology for Adult learners*. http://www.coe.ilstu.edu/scienceed/jinks/ci538/papers/monts.htm. Accessed on 16th April 2016.

Nunan, D. (1999). *Second Language Teaching & Learning*. Boston. Heinle & Heinle Publisher.

Parkes, Jay & Harris, Mary.B. 2002. The Purposes of a Syllabus. (online). http://www.google.co.id/url?sa=t&source=web&rct=j&url=http://jan.ucc.nau.edu/~coesyl-p/syllabus_cline_article_2.pdf&ved=0ahUKEwjhkq_wpoTMAhUkGKY. Accessed in 10 April 2016.

Richards, J.C. 2001. Curriculum Development in Language Teaching. Cambridge. Cambridge University Press.

Tim KurikulumPembelajaranDirektoratPembelajarandanKemahasiswaan, Dirjen DIKTI, KementerianPendidikan&Kebudayaan. 2014. BukuKurikulumPendidikanTinggi. DirektoratPembelajarandanKemahasiswaan, Dirjen DIKTI, KementerianPendidikan&Kebudayaan

Universitesi, Akdeniz. 2014. Critical Reading in EFL in Turkish High School Context. *International Journal of Language Academy*.vol.2/3 Autumn. 133-156.

FORMULIR PENDAFTARAN

Nama Lengkap	: FATHURRAHMAN IMRAN
Gelar/titel	: M.Pd.B.I
Penulis Ke	: I
Institusi	: IKIP MATARAM
Alamat	: JL. PEMUDA NO. 59A MATARAM
e-mail	: fathurrahmanimran@ikipmataram.ac.id
No HP	: 081803629832

Saya akan menghadiri konferensi sebagai:

- ☐ Peserta Pemakalah (Guru/Mahasiswa S1)
- ☑ Peserta Pemakalah (Dosen/Mahasiswa S2/ Mahasiswa S3)
- ☐ Peserta Non Pemakalah (Guru/Mahasiswa S1)
- ☐ Peserta Non Pemakalah (Dosen/Mahasiswa S2/ Mahasiswa S3)

Judul Artikel :
Developing EFL Critical Reading Syllabus and Materials for Students of the English Department-IKIP Mataram

.....2017

FATHURRAHMAN IMRAN

(Tanda tangan & Nama Terang)

Catatan :

1. Nama yang tertera di dalam formulir ini akan digunakan untuk pencetakan sertifikat.
2. Apabila Penulis ke dua dan seterusnya hadir wajib mengisi formulir dan membayar kontribusi sama dengan presenternya.
3. Formulir ini wajib dikirim kembali bersamaan dengan pengiriman Abstrak dan Full Paper.

FORMULIR PENDAFTARAN

Nama Lengkap	: HERI HIDAYATULLAH
Gelar/titel	: M.Pd.
Penulis Ke	: II
Institusi	: IKIP MATARAM
Alamat	: JL. PEMUDA NO. 59A MATARAM
e-mail	: fathurrahmanimran@ikipmataram.ac.id
No HP	: -

Saya akan menghadiri konferensi sebagai:

- ☐ Peserta Pemakalah (Guru/Mahasiswa S1)
- ☑ Peserta Pemakalah (Dosen/Mahasiswa S2/ Mahasiswa S3)
- ☐ Peserta Non Pemakalah (Guru/Mahasiswa S1)
- ☐ Peserta Non Pemakalah (Dosen/Mahasiswa S2/ Mahasiswa S3)

Judul Artikel :
Developing EFL Critical Reading Syllabus and Materials for Students of the English Department-IKIP Mataram

.....2017

HERI HIDAYATULLAH

(Tanda tangan & Nama Terang)

Catatan :

1. Nama yang tertera di dalam formulir ini akan digunakan untuk pencetakan sertifikat.
2. Apabila Penulis ke dua dan seterusnya hadir wajib mengisi formulir dan membayar kontribusi sama dengan presenternya.
3. Formulir ini wajib dikirim kembali bersamaan dengan pengiriman Abstrak dan Full Paper.

Validity of the Inquiry-Creative-Process Learning Model to Promote Critical Thinking Skills

Wahyudi[1)], Ni Nyoman Sri Putu Verawati[2)], Syahrial Ayub[3)]
[1,2,3)]Program Studi Pendidikan Fisika, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Mataram, Indonesia
Email: wahyudi@gmail.com

Abstract

Critical thinking has become a major trend and center of interest in learning recently, and in Indonesia has become a major competence of higher education level learning. It is therefore important to develop a specific learning models to promote critical thinking skills of learners. This research is the first step of development research that aimed to produce Inquiry-Creative-Process (ICP) learning model with valid criteria on content validity and construct validity aspects for the purpose to promoting critical thinking skills of prospective teachers. The validation of the ICP learning model is done through a mechanism of focus group discussion (FGD) involving 5 (five) experts. Data were analyzed descriptively with average score of each validator. Validation results shown that the validator assessment of the ICP learning model developed is valid with the average score of Va 4.12 (declared valid if, 3.40 <Va <4.21). The results of this study into consensus with the validator that the contents and constructs of ICP learning model can promote critical thinking skills of prospective teachers and can be a reference in the implementation in the field.

Keywords: *Inquiry-Creative-Process learning model, critical thinking skills*

A. Introduction

Mastery of science matters demands the ability to think logically and critically, therefore the model that should be applied to facilitate the learners activity of thinking (Prayogi & Muhali, 2016). The point that causes weakness of the quality of learning, which is rooted in the weakness of the learning process does not encourage students to think critically (Ariyati, 2010). Critical thinking has become a trend and the primary focus in teaching, curriculum authority even in some developed countries have included critical thinking skills in their curriculum as learning objectives (Bailin, 2002). In Indonesia alone, recently in curriculum 2013 include learning objectives, one of which directs learners to think critically (Kemendikbud, 2013), critical thinking has also become a very important part as the main competence to be achieved at higher education level in Indonesia, as stated in Regulation of Minister of Research, Technology and Higher Education of Republic of Indonesia Number 44 Year of 2015 on National Standard of Higher Education. This regulation explicitly defines the general skills that graduates of the undergraduate program must be capable of applying critical, logical, systematic, and innovative thinking in the context of the development or implementation of science and technology that concerns and implements the value of humanities appropriate to their area of expertise. According Mitrevski and Zajkov (2011)

critical thinking is a kind of thinking that involves learners actively in solving the problem, formulating conclusions, predict, and make decisions.

Partnership 21st Century Skills (2011) explicitly explains that one of the essential skills that the learners must have in the 21st century is to think critically. In similar with that, Wasis (2016) stated that high-level thinking skill of one of them, that is critical thinking should be the focus of learning development, because it is believed potential to make someone have life skills, creations and innovation so that able to solve various life problems which increasingly Complex in the 21st century.

Mitrevski and Zajkov (2011) show that the trend of educators in branch countries identified using eighteen models and methods ranging from discussions, demonstrations, project work, to outdoor leasson methods, but there are not explicitly purposed to improve and train critical thinking skills. This finding is certainly alarming, whereas critical thinking as a component of high-level thinking skills can and should be taught (Woolfolk, 2009). Educators also believe that developing high-level thinking skills including critical thinking is critical (Albrecht & Sack, 2000), but few of them have any idea of how to teach it (Prayogi, 2013, Paul et al in Duron et al., 2006), whereas teaching critical thinking is very important and becoming the goal of the college curriculum in Indonesia. Critical thinking is reflective and reasonable thinking that is focused on deciding what to believe or do (Ennis, 1985; 1989; 2011), its purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or conceptual considerations upon which that judgment is based (Facione, 1990; 2011). Thompson (2011) states that in learning critical thinking requires a holistic approach and should involve a set of appropriate learning models. Therefore, it is necessary to develop a set of specific learning models to train the critical thinking skills of learners, in this context the students as prospective teachers.

One model devoted to the purpose of how the learners think is the inquiry model (Arends, 2012). However, a review conducted by Verawati (2013) suggests that it is difficult to trace critical thinking using the inquiry model, since the inquiry model does not take into consideration the initial knowledge aspects of the learners about the topic being isolated. In addition, the inquiry model also does not explain the worksheet scheme used in the investigation which can be a bridge that can train the learners' critical thinking. Prayogi and Muhali (2015) also point out that some steps of the inquiry model are less explicit and explicitly pursued for the purpose of training the critical thinking of learners.

These deficiencies further elicit the idea that the inquiry model should be developed for the specific purpose of training in critical thinking skills. In this study, the inquiry learning model is integrated with scientific creativity processes, in this study the model developed namely Inquiry Creative Process. Creative processes or so-called scientific creativity potentially train the critical thinking ability of learners (Adams, 2006). Aspects of scientific creativity include problem finding, problem solving, creating hyphotheses, design experiment, and product

design (Turkmen, 2015; Ayas & Sak, 2014; Hu et al., 2010; Aktamis & Ergin, 2008; Hu & Adey, 2010). These aspects will later be integrated into the inquiry model into a set of Inquiry Creativity Process learning models to train the critical thinking skills of prospective teachers.

B. Method

This study is the preliminary step of development research to produce the Inquiry-Creative-Process learning model with valid criteria. One of the criteria of rich products quality according to Nieveen (1999) that must meet the criteria of validity. The validity is the content validity and construct validity aspects. The process of validating the ICP learning model is done through a focus group discussion (FGD) mechanism involving 5 experts.

Assessment of validity consists of 5 scales, that were; 5 = very valid; 4 = valid; 3 = quite valid; 2 = less valid; and 1 = invalid. The validity of model is determined by calculating the averages of validation aspect score for each expert. Scores obtained from expert judgments, then converted into qualitative data with scale five (adapted from Bahtiar & Prayogi, 2013).

Table 1. The validity level of the ICP learning model

Interval	Category
Va > 4,21	Very valid
3,40 < Va ≤ 4,21	Valid
2,60 < Va ≤ 3,40	Quite valid
1,79 < Va ≤ 2,60	Less valid
Va ≤ 1,79	Invalid

Annotation:
Va = value of determining the validity level of the learning model.

Learning model is said to have a good degree of validity, if at least the validity level achieved is valid. If the validity level is under valid, then a revision is required. The reliability of the learning model was calculated using the percentage of agreement equation by Emmer and Millett in Borich (1994). Learning model is said to be reliable if it has percentage of agreement (PA) of ≥ 75% for each assessment from the validators.

C. Findings and Discussion

The ICP is a model developed by integrating the attribution of creative processes or so-called scientific creativity to each inquiry syntax. Creativity is required to produce original ideas (Kleibeuker et al., 2013). Scientific creativity is a creativity in science learning attributed by an emphasis on problem finding, *creating hyphotheses*, *creatively experiment designing*, *science creatively problem solving*, and *creatively product design* (Turkmen & Sertkahya, 2015; Ayas & Sak, 2014; Hu et al., 2010; Hu & Adey, 2010; Aktamis & Ergin, 2008). The assignment of creativity can extend the reach of creative activity, so learners can apply,

produce, discover, compare, connect, imagine, and design creative ideas (Rotheram, 2014).

Attributions in scientific creativity are then integrated into scientific inquiry activities. Inquiry base lesson as a learning model according to Arends (2012) follow the steps of activity; Identify problems, formulate hypotheses, plan experiments to test hypotheses, formulate explanations, and reflection. Inquiry processes need to be integrated and attributed to scientific creativity for the purpose of training learner critical thinking, as described by Adams (2006) that the creative process (scientific creativity) has the potential to promote critical thinking skills. This integration is also to sharpen the potential to promote thinking through inquiry activities (Arends, 2012). The learning steps of the ICP model are described in Table 2.

Table 2. Learning steps of the ICP model.

Learning phase	Learning proccess
1. Establishing set and problem finding	• Prepare lessons and communicate the learning objectives, learner find as many issues as they relate to learning materials, and choose one core problem to be tested and formulated it.
2. Creating hyphotheses	• Learners formulate hypotheses according to the selected problem, re-examine the relevance of the hypothesis with the formulation of problems and knowledge that may already exist in their cognition system.
3. Creatively experiment designing	• Learners identify the variables in the hypothesis to be tested, define operationally variables that have been identified, develop steps of hypothesis testing in the form of creative experimental procedures based on operational definitions of variables that have been prepared.
4. Science creatively problem solving	• Learner implementation the experimental steps that have been prepared, check the accuracy of the implementation of experimental steps that have been done, evaluate experimental results based on previously formulated hypotheses, conclude the experimental results.

Learning phase	Learning proccess
5. Creatively product design	• Learner create an experimental results resume that includes detailed explanations with concept support from relevant sources.

The validation process of ICP learning model is done through focus group discussion (FGD) mechanism involving five experts as validator. The validator assessment of the ICP learning model developed declared valid (Va = 4.12). The results of the validator assessment of the ICP learning model are shown in Table 3 and Figure 1.

Table 3. Expert validation results on the ICP learning model

Nu.	Aspects of validation		Average score	Category
1	Content validity	The need for development of model.	4.20	Valid
		The model designed base on state-of-the-art of knowledgement.	3.95	Valid
2	Construct validity	Consistency and logically of all arrangement components of model.	4.20	Valid
		Va *PA*	*4.12* *93.87%*	*Valid* *Reliabel,* PA ≥ 75%

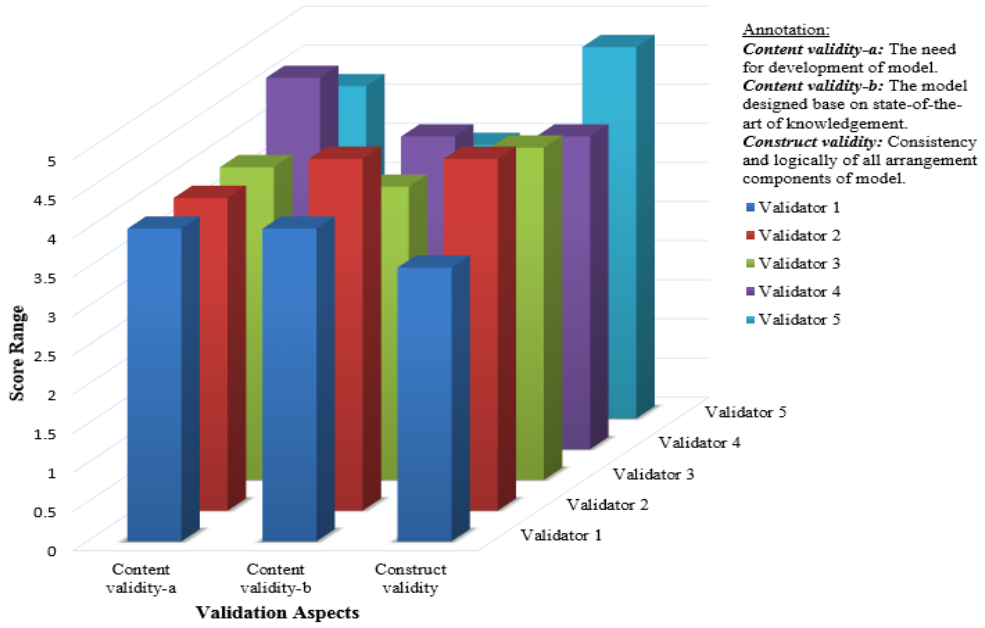


Figure 1. Expert validation results on the ICP learning model

The validity of the ICP model in this study refers to Nieveen's theory (1999), that the framework of a product is one of valid criteria (content and construct validity). Content validity is all components that make up the model must be based on need and state-of-the-art of knowledgement, and construct validity is meant that all components must be consistently linked between one others and also logical. The content validity on aspects of the need for development of the model has a score of Va of 4.20 with valid criteria. This result can not be separated from the purpose of ICP model development to promote the critical thinking skills of prospective teachers as the need for the main competence of graduates of 21st century skills. The ICP model has also fulfilled the expectation of the higher education requirement in Indonesia, one of which is to practice critical thinking skills as the demands of student learning needs as contained in the Indonesian National Qualification Framework and Regulation of the Minister of Research, Technology and Higher Education of the Republic of Indonesia. The development of the ICP model also bridges the gap between the expectation of critical 21st graduate competency needs with the fact that preservice teachers critical thinking skills are still relatively low, as previous findings by Prayogi and Muhali (2016).

Content validity on the state-of-the-art aspect has a Va score of 4.20. The development of the ICP model is supported by empirical studies of scientific creativity from recent research references that true scientific creativity can serve as a bridge for critical thinking purposes (Adams, 2006; Turkmen & Sertkahya, 2015; Ayas & Sak, 2014; Hu et al., 2010; Aktamis & Ergin, 2008; Hu & Adey, 2010). Critical thinking as part of human resources, its can be learned and developed through learning basic science concepts that must be for learner (Muhlisin et al., 2016). The learning process depends weight on our method of learning education because the learning method affects learning goal (Schmaltz et al., 2017; Muhlisin, 2012).

In construct validity component with main aspect is consistency and logically of all arrangement of component of model, the experts as validator give average score

of Va equal to 4.20 with valid criterion. Experts have agreed that the ICP learning model has been consistent and logical in terms of the learning phase, sequence and interrelationships between components in the learning activities. According the Nieveen (1999), when all components are consistently linked to each other (construct validity), then the product is considered to be valid.

The learning phases of the ICP model have been consistent in training critical thinking skills. The problem finding and science creatively problem solving which are the dimensions of scientific creativity, both have a correlation in the context of critical thinking train. The cognitive dimensions of creative thinking certainly correlations with some of the dimensions of critical thinking, this is especially obvious when the students are thinking in the context of problem solving. When the students are thinking in a given context (critical thinking), they make use of various thinking processes (creative thinking). The properties of critical thinking are linked to the creative abilities during problem finding and problem solving (Kousoulas & Mega, 2008). Creative problem finding ability is defined as a kind of intellectual trait or ability that is demonstrated in the process of producing and expressing new-found questions in a unique, novel and useful and purposeful way, using existing contexts and experience. It is embodied not only in the quantity, but also in the diversification (types) and in the originality of the problems found (Han et al., 2013).

Creating hyphotheses is a very important part as an aspect of scientific creativity (Jiang & Thagard, 2014). When learners are faced with problems, they hypothesize and find ways to solve the problem (Arends, 2012), as well as learn to think critically (Alberta Education, 2010). Creatively product design is part of the scientific creativity in which learners are able to design science products from creatively studied (Hu & Adey, 2010).

Theoretically the ICP model has been declared valid, therefore empirical review by applying it to the subject in the learning should be done so that the ICP model is practicallity and effectiveness in promoting the critical thinking skills of prospective teachers.

D. Conclusions And Suggestions

The validation results from the experts show that the ICP learning model declared valid on the content validity and construct validity aspects to promote critical thinking skills of prospective teachers and can be a reference in the implementation in the field.

References

Adams, K. (2006). *The Sources of Innovation and Creativity*. National Center on Education and Economy. USA.

Aktamis, H., & Ergin, O. (2008). The Effect of Scientific Proccess Skill Education on Student's Scientific Creativity, Science Attitudes, And Academic

Achivements. *Asia-Facific Forum on Science Learning and Teaching*, 9(1), 1-21.

Alberta Education. (2010). *Inspiring Education: A Dialogue with Albertans.* Edmonton, AB: Alberta Education.

Albrecht, W. S., & Sack, R. J. (2000). Accounting education: Charting The Course Through A Perilous Future. *Accounting Education Series, 16*.

Arends, R. (2012). *Learning to Teach*. Ninth Edition. New York: McGraw-Hill.

Ariyati, E. (2010). Pembelajaran Berbasis Praktikum untuk Meningkatkan Kemampuan Berpikir Kritis Mahasiswa. *Jurnal Matematika dan IPA*. 1 (2).

Ayas, B,. & Sak, U. (2014). Objective Measure of Scientific Creativity: Psychometric Validity of the Creative Scientific Ability Test. *Thinking Skills and Creativity*, 13(2014), 195-205.

Bahtiar, & Prayogi, S. (2012). *Evaluasi Hasil Pembelajaran Sains (IPA).* Mataram: CV. Dimensi Raya.

Bailin, S. (2002). Critical Thinking and Science Education. *Science and Education*, 11, 361–375.

Borich, G. D. (1994). *Observation Skills for Effective Teaching*. Columbus, OH: Merrill.

Duron, H., Limbach B., & Wough W. (2006). Critical Thinking Framework to Any Dicipline. *International Journal of Teaching and Learning in Higher Education.* 17 (2): 160-166.

Ennis, R. H. (1985). A logical basis for measuring critical thinking skills. *Educational Leadership*, 43(2), 44-48.

Ennis, R. H. (1989). Critical thinking and subject specificity: Clarification and needed research. *Educational Researcher*, 18(3), 4-10.

Ennis. R. H. (2011). *The Nature of Critical Thinking: An Outline of Critical Thinking Dispositions and Abilities*. Presentation at the Sixth International Conference on Thinking at MIT, Cambridge, MA.

Facione, P. A. (1990). *Critical thinking: A statement of expert consensus for purposes ofeducational assessment and instruction*. Millbrae, CA: The California Academic Press.

Facione, P. A. (2011). *Critical Thinking. What It Is and Why Its Counts*. Measured Reason and The California Academic Press.

Han, Q., Hu, W., Liu, J., Jia, X., & Adey, P. (2013). The Influence of Peer Interaction on Students' Creative Problem-Finding Ability. *Creativity Research Journal*, 25(3), 248-258.

Hu, W., Shi, QZ., Han, Q., Wang, X. & Adey, P. (2010). Creative Scientific Problem Finding and Its Developmental Trend. *Creativity Research Journal*, 22(1), 1–7.

Hu, W., & Adey, P. (2010). *A* Scientific Creativity Test for Secondary School Students. *International Journal for Science Education*, 24(4), 389-403.

Jiang, M., & Thagard, P. (2014). Creative Cognition in Social Innovation. *Creativity Research Journal*, 26(4), 375-388.

Kemendikbud. (2013). *Pendekatan Scientific (Ilmiah) dalam Pembelajaran*. Jakarta. Pusbangprodik

Kleibeuker, S. W., De Dreu, C. K. W., & Crone, E. A. (2013). The development of creative cognition across adolescence: Distinct trajectories for insight and divergent thinking. *Developmental Science, 16*, 2-12.

Kousoulas, F., & Mega, G. (2008). *Creative and critical thinking in the context of problem finding and problem solving: A research among students in primary school*. Retrieved from http://www.ep.liu.se/ecp/021/vol1/011/ecp2107011.pdf

Mitrevski, B., & Zajkov, O. (2011). Mathematics and Science Teachers' Concept of Critical Thinking. *Bulgarian Journal of Physics*. 38 (2011), 318-324.

Muhlisin, A., Susilo, H., Amin, M., & Rohman, F. (2016). Improving critical thinking skills of college students through RMS model for learning basic concepts in science. *Asia-Pacific Forum on Science Learning and Teaching*, 17(1), 1-12.

Muhlisin, A. (2012). Pengembangan Perangkat Pembelajaran IPA Terpadu Berbasis Contextual Teaching And learning (CTL) dengan Model Pembelajaran Kooperatif Tipe Student Achievement Division (STAD) Tema Polusi Udara. *Journal of Educational Research and Evaluation*, 2, 139-145.

Nieveen, N. (1999). *Prototyping to Reach Product Quality*. Kluwer Academic Publisher.

Partnership for 21st Century Skills. (2011). *Frame Work for 21st Century Learning*. www.p21.org.

Peraturan Menteri Riset, Teknologi, dan Pendidikan Tinggi Republik Indonesia Nomor 44 Tahun 2015 tentang *Standar Nasional Pendidikan Tinggi*.

Prayogi, S., & Muhali. (2016). Developementof Active-Based-Inquiry Learning Model to Increase Critical Thinking Skills of Students Teachers Candidate of Physics. *International Conference on Elementary and Teacher Education (ICETE) 2016*. Lombok, 22-23 October 2016.

Prayogi, S., & Muhali. (2015). Validity of Active-Based-Inquiry (ABI) Learning Model. *International Conference on Mathematics, Sciences and Education (ICMSE) University of Mataram 2015.* Lombok Island, Indonesia, November 4-5, 2015.

Prayogi, S. (2013). *Identifikasi Pemahaman Konsep Berpikir Kritis Mahasiswa dan Dosen Pendidikan Fisika serta Penerapannya dalam Pembelajaran di Kelas*. LPPM IKIP Mataram. Laporan Hasil Penelitian.

Rotheram, K. (2014). Teaching, Learning and Creativity (TLC) Model for Science. *School Science Review*, 95(353), 79-84.

Schmaltz, R. M., Jansen, E., & Wenckowski, N. (2017). Redefining Critical Thinking: Teaching Students to Think like Scientists. *Frontiers in Psychology*, 8(459), 1-4.

Thompson, C. (2011). Critical Thinking Across The Curriculum: Process Over Output. *International Journal of Humanities and Social Science*, 1(9), 1-7.

Turkmen, H., & Sertkahya, M. (2015). Creative Thinking Skills Analyzes of Vocational High School Students. *Journal of Education and Instructional Studies in the World*, 5(1), 74-84.

Verawati, S. P. (2013). Implementasi Model Inquiry untuk Mengembangkan Keterampilan Berpikir Kritis Mahasiswa Pendidikan Fisika pada Pokok Bahasan Hukum Hooke. *Jurnal Pendidikan Biologi BIOTA*, 6 (1), 77-86.

Wasis. (2016). Higher Order Thinking Skills (HOTS): Konsep dan Implementasinya. *Seminar Nasional PKPSM IKIP Mataram*. Mataram, 22 Maret 2016.

Woolfolk, A. (2009). *Educational Psychology*. New York: Pearson.

Effects of Thinking Empowerment Strategy Through Questioning on Students' Thinking Activity and Ability in Economic Subject X Class in Islamic Senior High School (MA Al-Ijtihad Danger Masbagik Sub District)

Muh. Fahrurrozi[1], Khaerani[2]
[1, 2]Hamzanwadi University
[1]ozyalu@gmail.com,[2]khaerani881@ymail.com

Abstrack

This research aims to know the effects of strategy PBMP to activity and ability of thinking of student at economic subject of X class in MA Al-Ijtihad Danger in the school year of 2015 / 2016. This research uses experiment research as design group control nonequivalent pretest-posttest. The research sampels were taken with random sampling technique. The data collection technique used observation for the thinking activity and test for the ability. The data analysis techniques were data normality, and data homogeneity testhypothesis. Result of the research indicate that the mean score of learningactivity in the experiment class is 3,50 (active category) and in the control class is 2,46 (less active category) while storeylevel of implement strategy PBMP to result of ability of thinking of student at experiment class that is 76,06 and SDi 6,6 and class control that is 62,81 and SDi 5,84. From result of this research, it is obtained by value of t arithmetic/calculate equal to 5,39, while value of t the tables of equal to 1,69 at level of signifikan 5% and dk = n1+n2-2. Thereby can be concluded that the application of PBMP strategy provide positive and significant effects on the thinking activity and ability by the studentsin the economic subject of X class in MA Al-Ijtihad Danger.

Keyword:*activity, ability of thinking , PBMPstrategy*

A. Introduction

Education is an aware and planned effort to realize studying situation and learning process so that learners can actively develop their potentials to have spiritual, religious acquisitions, self-control, personality, intelligences, noble characters as well as any required skills for themselves, society, nation and arithmeticry (Act of National Education System, 2011: 03).

Results of the observation and interview conducted by the researchers in MA Al-Ijtihad Danger on the date of 27 February 2016 obtain the information that: there are less active students; this can be seen from less students asking for questions at the teaching and learning process as well as the questions are categorized as not high level questions; at the time the teacher using interview method at the teaching and learning process, the students seldom answer for the questions; they just give simple answers because they still hardly understand the economic concepts, particularly in the materials having calculations which are necessary for more thinking ability.

There are not only the problems, there is also a problem related to low ability of students in problem solving related to the issues; this can be seen from the mean of daily test

by the students in X class that is still low and cannot meet the applicable Minimum Completeness Criteria in MA Al-ijtihad Danger in the learning indicators requiring the students to have more thinking ability particularly in the calculation materials. Carefully seeing at these problems above, then the researchers want to apply a learning method so that it can condition the students to be more actively involved in the learning process, they can build more cooperative situation, as well as they can train their thinking ability, think critically, and have problem solving ability. Therefore, the learning is applied in the form of thinking empowerment strategy through questioning (PBMP).

The PBMP strategy is an informative learning, overall conducted through a series or set of designed questions in written forms so that it can obtain feedback or stimulation on the students' thinking process. One of the approaches is requiring teacher's role as the creative facilitator and mediator in the learning process at class.

Based on the above description, in order to improve learning outcomes, especially on the economic subject, it is necessary to conduct a research entitled "The Effect of Thinking Empowering Strategy Through Questioning on Students' Thinking Activities and Ability in Economy Subject of X Class MA Al-ijtihad Danger Masbagik Subdistrict Lesson Year of 2015/2016 ".

The purposes of this research are 1) To determine the effect of thinking empowerment strategy through questioning on students' learning activities on the economic subject of X class in MA Al-ijtihad Danger lesson year of 2015/2016. 2) To determine the effects of thinking empowerment strategy through questioning on students' thinking ability on economy subject of X class in MA Al-ijtihad Danger lesson year of 2015/2016. 3) To determine the effect of thinking empowerment strategy through questioning on students' thinking activity and ability on the economic subject of X class in MA Al-ijtihad Danger lesson year of 2015/2016.

According to Gulo (Jamil, 2013: 148) Learning strategy is teaching plan and procedure so that all basic principles can be accomplished and all teaching objectives can be achieved in an effective manner.

PBMP was introduced by Corebima as one of the efforts to empower students' thinking capability through questions. The question efforts on the PBMP sheets are as students' feedback or stimulation of thinking processes. According to Corebima (2007), the Thinking Empowerment by Questioning Strategy (PBMP) or TEQ (Thinking Empowerment by Questioning) is a learning pattern implemented without any informative learning process, entirely it is implemented through a series or set of questions that have been designed in a written manner in the PBMP Sheets, on the learning supported by practicum activities, it is also necessary for technical commands.

Learning activities are activities undertaken by a person as behavioral change process as a result of individual interaction with the environment (Ali, 2010: 22).

The thinking capability is to connect the ability with the word proficiency. Every individual has different skills in performing an action. This proficiency influences on any existing potentials within the individual. Learning process requires students to optimize all skills that they possessed. (Sriyanto, 2006: 3).

B. Research Method

The type of research in this study is experimental research. Experiment is a research trying to find out any effects of certain variables on other variables under controlled conditions. This research uses *Quasi Experimental Design* in the form of *Nonequivalent Control Group Design*. (Sugiyono, 2014: 116).

The population in this study is the entire students of MA Al-ijtihad Danger Lesson Year of 2015/2016 which are distributed in 3 classes, X-1 class by 31 students, X-2 class by 33 students and X-3 class by 22 students.

The first step in the sampling is the random sampling technique of sample member collection from the population by making lot of names of each population class, then it is randomized so that there are two classes that can be used as the temporary samples; the second step, then the two classes are given pretest to determine the students' early ability whether homogeneous or not. Such way is applied when the samples are considered homogeneous then it is used as the research samples; the third step, the two classes are selected using the lots of names, then the X-1 class is selected to be the experimental class (Sugiyono, 2013: 120). The sample in this research is the X-1 class chosen as the experiment class and the X-2 class is as the control class, MA Al-ijtihad Danger Lesson Year of 2015/2016 with there are 64 students.

Data collection technique in this study is using observation to determine students' activities and tests on the students' thinking skills. The instrument tests are using validity, reliability, difficulty and differentiation.

Technical data analysis uses data description, students' learning activity analysis and prerequisite test with data normality test, homogeneity test and hypothesis test.

C. Results and Discussion

Result

Description of Research Data

The obtained data are described using descriptive statistic. According to Nurkancana and Sunarta (1992:100) observation results of students' activity are analyzed using descriptive statistic. The statistic calculation is conducted with a purpose to obtain criteria from the mean score of students' learning activity.

a. Observation Result Data of Students' Learning Activity

The results obtained concerning the students' activity are as follow:

Table.1
Observation Results of Experiment Class Activities

Class	Number of students	Meeting	Number of items	Total score	Mean	Category
Experiment	31	1	8	647	2,60	Quite active
	31	2	8	655	2,64	Quite active
	31	3	8	859	3,50	Active

Table.2
Observation Results of Control Class Activities

Class	Number of students	Meeting	Number of items	Total score	Mean	Category
Control	33	1	8	613	2,32	Less active
	33	2	8	634	2,40	Less active
	33	3	8	651	2,46	Less active

b. Result Data of Students' Thinking Capability Test On Experiment Class

From the data analysis results using thinking empowerment strategy through questioning, it is obtained the pretest score in the experiment class with the highest score by 8 and the lowest score by 30. The mean is 55,90 with deviation standard by 8,33.Results of post tes score in experiment class obtain the highest score by 90 and the lowest score by 50. The mean for the experiment class is 76,06 with the deviation standard by 6,67.

Table.3
Summary of Simple Statistic Calculation for Experiment Class

Information	Experiment Class	
Number of Samples	30	
Assessment	Pre-test	Post-test
Maximum value	80	90
Minimum value	30	50
Mean	55,90	76,06
Deviation Standard	8,33	6,67

c. Result Data of Students' Thinking Ability test of Control Class

From the data analysis results using lecturing method, it is obtained the pretest score in the control class with the highest score by 85 and the lowest score by 30. For the mean is 58,43 with the deviation standard by 9,16. Results of post tes score in the control class obtain the highest score by 85 and the lowest score by 50. For the mean in the control class, it is 62,81 with the deviation standard by 5,84.

Table.4
Summary of Simple Statistic Calculation for Control Class

Information	Control Class	
Number of Samples	30	
Assessment	Pre-test	Post-test
Maximum value	85	85
Minimum value	30	50
Mean	58,43	62,81

Deviation Standard	9,16	5,84

DataAnalysis

a. Data Normality Test

Verification of data normality is conducted to test whether the scores in the studied variables are distributed normally or not. For the data analysis, it is used chi square (x^2) formula. Calculation results (x^2) are then compared to the (x^2) table value with the significance level by 5% and degrees of freedom (n-1), in which n is the number of students and criteria used are as follow:if $x^2_{arithmetic} < x^2_{table}$ then the studied data are distributed normally. Contrary, if $x^2_{arithmetic} > x^2_{table}$ then the studied data are not distributed normally. In the data normality testing, the researchers use Microsoft Office Excel program. The calculation results of normality test analysis for the experiment class and control class are as follow:

Table.5
Normality Test Results

Groups	Statistics		
	x^2 arithmetic	x^2 Table	Information
Experiment	-102,9	11,07	Normal
Control	3,74	11,07	Normal

b. Homogeneity Test

Data homogeneity testing in this research is conducted to determine whether variance of both groups is homogenous or not. For the data homogeneity testing, it is obtained the results as follow:

Table.6
Homogeneity Test Results

No	Class	N	V	F_{hitung}	F_{tabel}	Criteria
1	Experiment	31	84,51			
				1,03	2,38	Homogenous
2	Control	33	81,78			

With the decision criteria $F_{arithmetic} < F_{table,}$ it means that the data is homogenous. In the significance level of 5% with 31as the denominator and 28as the numerator, then it can be concluded that $F_{arithmetic}$ 1,03< F_{table} is2,38, then the data is homogenous.

c. Hypothesis Test

Based on the hypotheses in this research, there are two ways to test the hypotheses, namely partially and simultaneously.

1) Partial Test

Table.7
Partial test of Students' Learning Activity in Experiment Class

No	Class	**∑X**	**∑Y**	**∑X²**	**∑Y²**	**∑XY**	**r_{xy}**
1.	Experiment	2358	2,60	181980	6,67	6105,8	45,43
	T arithmetic						5,39
	T table						1,697

Based on the partial test results for the students' learning activity variable, it is obtained $t_{arithmetic}$ 5,39 > t_{table} 1,697, then the zero hypothesis (H_o) is rejected and the alternative hypothesis (H_a) is accepted. So, it can be concluded that the use of thinking empowerment strategy through questioning **influences positively**on the students' learning activity in Economic subject in X class in MA Al-ijtihad Danger.

Table.8
Partial Test of Students' Thinking Ability in Experiment Class

No.	Class	**∑X**	**∑Y**	**∑X²**	**∑Y²**	**∑XY**	**r_{xy}**
1.	Experiment	2358	1733	181980	101209	133710	0,561
	T arithmetic						3,651
	T table						1,697

Based on the partial test results for the students' thinking ability variable, it is obtained $t_{arithmetic}$ 3,651> t_{table} 1,697, then the zerohypothesis (H_o) is rejected and the alternative hypothesis (H_a) is accepted. So, it can be concluded that the use of thinking empowerment strategy through questioning **influences positively**on the students' thinking ability in Economic subject in X class in MA Al-ijtihad Danger.

2) Simultaneous test

Table .9
Simultaneous test of Students' Thinking Activity and Ability in Experiment Class

Information		**rx_1y**	**rx_2y**	**rx_1x_2**	**Rx_1x_2y**	**$F_{arithmetic}$**	**F_{table}**
Pretest	1733	5,50	5,45	0,98	5,45	14,49	2,53
Posttest	2358						
Activity	2,60						

Based on the simultaneous test results for the students' thinking activity and ability variable, it is obtained $F_{arithmetic}$ 14,49> F_{table}2,53then the zero hypothesis (H_o) is rejected and the alternative hypothesis (H_a) is accepted.So, it can be concluded that the use of thinking empowerment strategy through questioning influences positively on the students' thinking activity and ability in Economic subject in X class in MA Al-ijtihad Danger.

Discussion

Experiment Class

Strategi Pemberdayaan Berpikir Melalui Pertanyaan (PBMP) or TEQ (*Thinking Empowerment by Questioning*) is a learning pattern that is implemented without informative learning process, all of which are implemented through a series or set of questions that have been designed in a written manner in the PBMP sheets, on the learning supported by practical activities, it is also necessary for technical orders.

The purpose of the thinking empowerment strategy through questioning is as one of the very appropriate learning models used to train students to be used to critical thinking and analysis, to train courage and sense of students' responsibility in facing any life problems in the community, and to determine students'acquisition on certain subject materials as not only a matter of arithmeticing.

The advantages of using the thinking empowerment strategy through questioningare that to train students' thinking ability in solving problems found in their lives; students are better prepared to face any problems presented by teachers; students are prioritized to be more actively involved in the learning process; they are given freedom to explore their abilities through various media. (Corebima, A. D. 2007: 28). Because the students are accustomed to face any problems in the learning process in the class, then, there will be definitely students' confidence. So that later, the students can mingle into the community; students can face their lives with confidence and objectives;without any sense of burden in facing any problems in the community.

Application of thinking empowerment strategy in the learning process is started by giving information and motivation. The teacher explains the problems faced with the background problem and invites the active learners to contribute their thoughts. It means that before the learning, firstly the teacher provides information about the materials to be conveyed as well as explains the learning objectives and provides motivation for the students about the importances of learning. At this stage, learners are invited to contribute as much suggestions as possible, since the increasing number of ideas leads to greater possibilities for better ideas;it is not necessary to correct all those ideas;any correction on the ideasthat are delivered in advance will just inhibit students' spontaneity in expressing their ideas. Learners do not have to hesitate to express their ideas or opinions, and do not need to feel bound. Though, if there are similar ideas, at the assessment stage,they can express any ideas.

Subsequent stage is the group formation. At this stage, students are divided into 6 groups; in each group will be given each question as many as 5 questions in the form of esay. In the next stage, the teacher guides the group to work and learn. At this stage, the teacher provides direction to each group to work on the problem that has been given withinpredetermined limited time; at this stage, the teacher will also lead to interviews between groups, by choosing representatives of each group to answer any questions that has been asked by another group in front of the teacher; the teacher will also provide questions to be answered by the individual by directing to answer directly on the blackboard. Group leaders and other participants try to make conclusion on the approved

alternative problem-solving points. After all satisfied, then, there will be final agreement on how to solve the problem as considered the most appropriate one.

Before and after the treatment, the researchers provide tests (pre-test and post-test) to all students. Furthermore, if it is seen from the learning activities in the class, learners that are provided the learning by using thinking empowerment strategy through questioningare more actively involved in learning activities, because students are given opportunity to participate actively in expressing all ideas / opinions.

Based on the results of the research, it is known that the learning activities by students usingthinking empowerment strategy through questioning are more active, than the learning activity by students only using the lecturing method; for the class experiment at each meeting, it is more active with the mean score at the first meeting is 2.60 (The category is quite active), the second meeting is 2.64 (the category is quite active) and at the third meeting is 3.50 (the category is active). Similarly, the results of students' thinking ability is more improved; this can be seen from the results of students' pretest and posttest test, namely students'pretest obtains mean score of 55.90 with the standard deviation by 8.3, while the students' posttest score is 76.06 with the standard deviation by 6.6.

Class Control

Lecturing method can be said to be traditional method, since it has been used for ages as oral communication tool between teachers and students in the teaching and learning process. Djamarah (2010:97) said that the lecturing method is one of the learning presentation manners conducted by teachers by oral description or explanation directly to learners.According to Wina Sanjaya (2006), there are advantages of lecturing method, such as it can present broad subject materials; lecturing can provide prioritized material principles; through lecturing, teachers can control class condition since it is the teacher's responsibility to lecture as well as by using the lecturing method, class organization can be regulated in simple manner. This method requires more teachers' activeness than learners, so that learners provide fewer chances to express their opinions. It means that the learning activity at class tends to be passive and can cause boredom for students because of teacher centred learning process. The students have no more chances in expressing their opinions, so that students' activeness is obstructed.

The learning step using the lecturing method is started by preparation. At this stage, the teacher explains to the students about the purpose of the lesson and the issues to be discussed during the lesson. In addition, teachers also reproduce apperception materials to assist students so that they can understand the lessons to be presented.

The subsequent step is the implementation. At this stage, the teacher presents any material related to the subject matters to be studied. Also, the teacher explains on the subjects in details and clear, then after the teacher explains all the materials then, the students discuss the issues based on the materials that have been taught, if there are any unclear materials then, the students are asked to ask the teacher.

And in the following step is the closing. At this stage, the teacher provides conclusions about the subjects that have been studied with the purpose that the materials can be understood and mastered by the students and all of which won't be easily forgotten. But before the conclusion, the teacher makes questions and answers about the materials

that have been studied, with the purpose to find out whether students are already familiar with what they have been learned or not. Then, the teacher provides reinforcement before the learning ends.

Based on the results of data analysis in the control group using the lecturing method from the first to the final meeting, it is obtained the mean score of students' learning activity at the first meeting by 2.32 (the category is less active), the second meeting by 2.40 (the category is less active) and on the third meeting by 2.46 (less active the category is less active); based on the observation result on the activity using the lecturing method, it does not affect on the students' activity because the one serving many roles in this method is the teacher and the students serve only as the listeners. Similarly, the students' learning outcomes in the control group using the lecturing method obtain the mean score on the pretest by 58.42 with the standard deviation by 9.16 and the posttest by 62.81 with the standard deviation by 5.84.

Based on the results of partial tests for students' learning activity variable, it is obtained $t_{arithmetic\ by}$ 5,39 dan $t_{table}$by 1.697, because $t_{arithmetic}$ is greater than t_{table}namely (5.39> 1.697) then the zero hypothesis (Ho) proposed is rejected, or in other words the alternative hypothesis (Ha) is accepted. The alternative Hypothesis (Ha) is accepted meaning that the thinking empowerment strategy through questioning affects on the students' learning activities on the economic subject of X class MA Al-ijtihad Danger Lesson year of 2015/2016. The conclusion is that there is a significant relationship between X variable and variable Y because the value of t arithmetic> value t table namely (5.39> 1.697).

And the result of partial test for students' thinking ability variable is obtained $t_{arithmetic}$ by 3,651 and $t_{table}$by 1,697, because $t_{arithmetic}$is greater than t_{table} namely (3,651> 1,697) then the zero hypothesis (Ho) proposed is rejected or in other words the alternative hypothesis (Ha) is accepted. It means that the thinking empowerment strategy through questioning affects on the students' thinking ability on the economic subject of X class MA Al-ijtihad Danger Lesson year of 2015/2016. The conclusion is that there is a significant relationship between X variable and variable Y because the value of t arithmetic> value t table namely (3.651> 1.697).

The simultaneous test is used to determine the relation or effects simultaneously from the independent variables on the dependent variables, namely by comparing critical value F (F table) with F arithmetic value with significance level by 5%.

Based on the simultaneous test results, it is obtained that the $F_{arithmetic}$ value is 14.49 and F_{table} value is 2.53 because the value of $F_{arithmetic}$> F_{table} (14,49> 2,53) then the zero hypothesis (Ho) is rejected and the hypothesis (Ha) is accepted; meaning that the thinking empowerment through questioning has positive and significant effects on students' thinking activities and on the economic subject of X class MA Al-ijtihad Danger Lesson year of 2015/2016.

Empirically, theoretical study above is reinforced by a research conducted by Zuhriah (2010) entitled "Increasing learning activity and achievement on the economic subject by implementing the thinking empowerment strategy through questioning for students of class X Ma Muallimat NW Pancor. The Percentage of learning activity in the

first cycle was 2.5 (less active) and on cycle II was 3.1 (quite active) which means that there was an increase. While for the learning completeness in cycle I was 62,8% and there was an increase in cycle II to be 88,8%. This means that learning with PBMP strategy is effective to improve students' economic activity and achievement.

A research by Lisnatul Hamidah (2009) with the title "Application of thinking empowerment through questioning (PBMP) with combination of numbered heads together (NHT) method to improve social science (IPS) learning achievement by integrated students of State Junior High School 6 Malang. As for post test result of cycle I, after the application of Thinking Empowerment Pattern Through Questioning combined with Numbered Heads Together method, it was obtained the mean score by 78 with the lowest value by 60 and the highest one by 93, percentage of the learning mastery was 56%. In the post test result of cycle II, there was an increase in the mean score by 89, with the lowest score by 73 and the highest score by 100. Percentage of the mastery learning was 94%.

A research by Yulia Windawati (2010) who examined the "Application of Learning on PBMP (Thinking Empowerment Through Questioning With TPS (Think Pair Share) Model). To Improve Students' Learning Outcomes and Activity of X Class AK 2 SMK PGRI 3 Nganjuk on Acarithmeticing Cycle Subject". In the research, it was using class action research with the research subjects was the students of X class AK 2 SMK PGRI 3 Nganjuk while the research analysis used is data reduction, data presentation, conclusion. Percentage of learning outcome improvement and student activeness in I cycle was 2.5 (Less active) and on the second cycle was 3.1 (quite active) while for the learning completeness in the first cycle, it was 62.8% and there was an increase in the second cycle by 88.8% Based on the research results using PBMP strategy is effective on the students' learning outcome and activeness improvement.

According to Corebima (2007) the application of thinking empowerment strategy through questioning can improve student's thinking and students' ability because thinking ability can be developed through various activities, such as by making questions that require students to play more active roles in following learning. Thus, the thinking empowerment strategy through questioning can assist students to understand any materials being taught because students freely express their opinions, ideas and ideas; they can determine about any taught materials, so that they can create their schemata, and it will be easier in understanding any taught materials.

D. Conclusion

Based on the results of research and discussion it can be concluded as follows:

The of thinking empowerment strategy through questioning has positive and significant effects on students' learning activity on the economic subject of X class MA Al-ijtihad Danger Lesson Year of 2015/2016, with mean score of class experiment activity namely at first meeting is 2,6; it is including in the active category. Hypothesis test analysis using partial test, it is obtained $t_{arithmetic}$ by 5,39 and t_{table} 1,697, then $t_{arithmetic}$ is bigger than t_{table} so that result of decision is that Ha is accepted, it means that with the thinking empowerment strategy through questioning has positive and significant effects on students'

learning activity; that the learning with the empowerment strategy thinking through questioning has positive and significant effects on students' thinking ability on the economic subject of X class MA Al-ijtihad Danger Lesson year of 2015/2016. It can be seen from the mean score of experiment class by 76.06 and the standard deviation by 6.60, while the learning using the lecturing method obtains the mean score by 62.81 and the standard deviation by 5.84. the analysis hypothesis testing by using partial test obtained $t_{arithmetic}$ by 3,651 and t_{table} by 1.697 then $t_{arithmetic}$ is greater than t_{table} so that the decision is that Ho is rejected and Ha hypothesis is accepted; meaning that with the thinking empowerment strategy through questioning has positive and significant effects on students' thinking ability.

The thinking empowerment strategy through questioning has positive and significant effects on the students' thinking activity and ability on the economic subject of X class MA Al-ijtihad Danger Lesson year of 2015/2016. The analysis test by using simultaneous test, it is obtained $F_{arithmetic}$ by 14,49 and F_{table} by 2,53, value of $F_{arithmetic}$ is 14,49 and F_{table} is 2,53 and value of $F_{arithmetic}$ is 14,49 and F_{table} is 2,53. In this case, there is an application of provision that the $F_{arithmetic}$ is more than the F_{table} then, the multiple correlation coefficient tested is significant, namely it can be applied to the entire populations. From the calculation results showing that $t_{arithmetic} > t_{table}$ (14,49> 2,53), it can be stated that the multiple correlation is significant and can be applied where the samples are taken.

E. References.

Ali, M. (2010). *Guru Dalam Proses Belajar Mengajar*. Bandung : Sinar Baru Algesindo.

Arikunto, Suharsimi. (2012). *Dasar-dasar Evaluasi Pendidikan.* Jakarta : Bumi Aksara.

Corebima. (2007). *Pembelajaran Sain Kontekstual Melalui Hand on Activity*. http: /lubisgrafura-wordpress-com/2007/09/09/Pembelajaran-Sain-kontekstual-melalui-hands-on-activity. Diakses tangagl 10 Februari 2016.

Soemanto, (2008). *Meningkatkan aktivitas Belajar Anak.* Jakarta : PT. Gramadia Indo Sarana Indonesia.

Sugiyono. (2014). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D.* Bandung : Alfabeta.

Sriyanto. (2006). *Pengertian Kemampuan*, http://ian43.wordpress.com. Diakses pada tgl 20/02/2016

Undang-Undang Sistem Pendidikan Nasional. (2011). Yogyakarta : Pustaka Pelajar

Yamin, Martinis. (2009). *Taktik Mengembangkan Kemampuan Individual Siswa.*Yogyakarta: GP Press.

Developing Teaching Media of Interactive Video CD Tutorial Using Camtasia Studio Aplication and Macromedia Flash

Muhammad Djamaluddin[1)], Yupi Kuspandi Putra[2)]
Hamzanwadi University
email: muhammad.djamaluddin@gmail.com

Abstract

This study is a R & D (research and development) that is the development research that aims to produce instructional media interactive tutorials CD video using Camtasia studio and macromedia flash to a language visual programming subject of educational informatics department of STKIP Hamzanwadi Selong as well as to find out the quality of The CD interactive media based on the media experts assessment, material expert and instructional expert. This cd Learning talk about the introduction of the Delphi programming language, the basic program, an example of making a simple program and database connections with Delphi. The results of a feasibility assessment of video tutorials learning media for visual programming language subjects are: (1) the percentage score of material expert assessment was 81.25%; (2) the percentage score of media expert assessment was 84.5%; (3) the percentage score of student response was 84.83%. Based on the results of the assessment and responses obtained, we can conclude that this instructional media of video tutorials on programming language of visual Delphi is feasible to be used and developed.

Keywords*: learning media, video tutorials, Camtasia Studio, Macromedia Flash, programming language Delphi visual*

A. Introduction

Technology, especially multimedia has a significant role in the teaching process. Many believed that multimedia can lead to fun and creative learning experiences. In teaching process, there are two important learning substances, namely teaching method and teaching media. Research related interactive multimedia conducted by Novan Setiabudi (2005), Rini Alfiah (2008) and Eka Wijayanti Purbaya (2010) concluded that multimedia can lead learning affectivity. Camtasia Studio and Macromedia Flash are one of computer software that can be used for teaching media. Besides, there lots technology and information teacher are not fully aware of it, and not use this innovative software as a part of interactive teaching media. The function of Camtasia Studia is designed to create interative video tutorial, while Macromedia Flash is used to create symbols of navigation to play the video created.

Based on observation at Hamzanwadi institute of Selong, the use of tutorial learning is not common. Considering its significances of improving the teaching quality, it then needs to employ in teaching and learning process for the better learning result without merely depending on demonstration, instead using tutorial video of how to get something done repeatedly.

The use of teaching media of tutorial video helps and facilitates the learning process of student and lecturer. Student can learn in advance and understand thoroughly the learning contents. Therefore, the lecturers do not need to explain the lesson in two or three times as the students can learn base on the pace of learning. Based on this consideration, it needs research on developing the learning quality in visual program course in the form of teaching media of tutorial video.

Referring the explanation mentioned above, this research developed CD teaching media in the form of interactive tutorial multimedia. This media is used as teaching aid to facilitate the lecturer in delivering the lesson.

1. Teaching media

The word media is derived from Latin, Medium meaning that middle and agent. Looking at media teaching perspective means as graphic and photographic writing or an electronic device to rearrange visual and verbal information (Azhar Arsyad, 2011: 3). Criticos (in Daryanto, 2011: 4) "media refers to communicative component as a passenger of communicator. To know the component of criteria of multimedia quality from media and content aspect, the researcher employed criteria of multimedia quality based on Sunaryo Sunarto (2005) as follows:

a. Media display aspect
   1. Layout proportional
   2. The appropriateness of the background
   3. Color matches
   4. The appropriateness of font choice
   5. The appropriateness of size of font choice
   6. The text readability
   7. The clarity of voice and music
   8. The appropriateness of animation with the content
   9. The interesting form of button or navigator
   10. Consistency *of display button*

b. Programing aspect
   1. Ease of use of the program
   2. Ease of selecting program menu
   3. Clarity of instructions for use
   4. Freedom to choose material to learn
   5. Ease of interacting with the program

6. Ease out of the program
7. Ease of understanding the navigation structure
8. Key function speed (navigation performance)
9. The accuracy of the reaction button (navigator button)
10. Ease of running animation settings

c. Aspects of learning
1. Compliance of basic competence with competency standard
2. Compatibility of basic competencies with indicators
3. Compliance of basic competencies with program materials
4. Clarity of program title
5. User target clarity
6. Clarity of study instructions (instructions for use)
7. The accuracy of the application of learning strategies (self-study)
8. Variation of delivery of information / data types
9. Interest in material in motivating users
10. The difficulty level of practice / evaluation

d. Aspect of content
1. Material integration
2. Depth of matter
3. Clarity of material content
4. Organizational structure / material order
5. Clarity of samples included
6. Adequacy of the included samples
7. Clarity of language used
8. Conformity of language with the user's target
9. Clarity of information on the illustration of the image
10. Clarity of information on animated illustrations

Various opinions of education experts such as Briggs, Gagne & Reiser provide understanding of learning media that can be summarized as follows (Ilmawan, 2004);

a. Learning media is a physical tool that can present the message and stimulate learners to learn;
b. Learning media as a tool where the message - the message instructional communication.
c. Learning media is a tool in the form of hardware and software that is used as a communication medium and aims to improve the effectiveness of the learning process.

2. Interactive Multimedia

Interactive multimedia is a multimedia equipped with user-operated controller tools, so users can choose what they want for the next process. Examples of interactive multimedia is interactive learning, game applications ", (Daryanto, 2011: 49). National Education Associaton in Azhar Arsyad (2006: 5) provides the definition of media as forms of both printed and audio-visual communication and equipment; thus the media can be manipulated, viewed, heard or read. The role of media in the learning process disclosed by Nana Sudjana and Ahmad Rivai (2005: 6-7), among others are:

1. A tool to clarify teaching materials when teachers deliver lessons. In this case the media used the teacher as a variation of verbal explanation of teaching materials.
2. Tools to lift or cause problems to be studied further and solved by learners in the learning process. At least teachers can place the media as a source of questions or stimulation of learning.
3. Learning resources for learners, meaning that the media contains materials that must be learned learners both individuals and groups. Thus will help a lot of teachers in teaching activities.

3. Tutorial Video

Jarice Hanson (1987: 23) state the definition of video as follows:

"video is a unique form of visual communication that has been influenced by historical factors, technical development, and criticism given to other form of media. Defining video is difficult because we have been introduced to the medium through a number of related technologies – most of which grew from the development of other form of media. The term „video" relates to a process, and can denote either the actual visual image."

Meanwhile, in the Big Indonesian Dictionary (2001: 1230), the tutorial is (1) class tutoring by a tutor for a student or a small group of students, (2) additional teaching through tutors. Furthermore, Cheppy Riyana (2007: 2) explains that learning video media is media that presents audio and visual which contains good learning messages which contains concept, principle, procedure, application theory to help understanding of a learning material.

Furthermore, Smaldino, Lowther, and Russell (2011: 404-406) explain that the video is available for almost all types of topics and for the type of learners in all areas of cognitive, affective, motor, interpersonal, teaching. They can bring learners almost anywhere expand their students' interests beyond the walls of the

classroom. Large objects to carry into the classroom, dangerous events to observe like a solar eclipse. Time and expense of field visits can be avoided.

From some of the expert opinions above, the researcher concludes that the video tutorial is a series of live images displayed by a teacher containing instructional messages to aid understanding of a learning material as a guide or additional teaching material to a small group of learners.

4. Camtasia Studio

Dahtul (2013) explains that Camtasia Studio is a video studio that contains multiple conversion editing, recording and capture tools for professional video design, demos and presentations. With an enhanced interface it is expected that new users will learn more easily. In this study researchers used camtasia studio application version 8.

5. Macromedia Flash

Kasingkabotan (in Jayadi, 2008) macromedia flash is one software program that is able to present audiovisual messages clearly to students and materials that are real, so that can be illustrated more interesting to students with various animated images that can stimulate students' learning interest to achieve goals learning. Meanwhile, according to Madcom (2004: 12) Macromedia Flash 8.0 is a graphics program intended for motion or motion and comes with a script for programming (action script) with this program allows the creation of interactive media animations, games. While Wirawan Istiono in Andriyanto (2010) explains that Macriomedia Flash 8.0 is a professional vector-based application program authoring tool professional used to create animation and bitmap very interesting to create animation logo, movie, game, interactive menu, and making applications web.

Based on some understanding of Macromedia Flash 8.0 which has been described by experts, it can be concluded that Macromedia Flash 8.0 in the learning is Macromedia Flash 8.0 is a softwere animated learning media to help teachers in delivering learning to make it more interesting and easy to understand Students and its application using computer and projector imager. In this study researchers using Macromedia flash version 8 applications.

6. Delphi Visual Programming Language

The Delphi programming language is object-oriented programming which is the development of the Pascal programming language. Pascal is a DOS-based programming created in 1971 by Niklaus Wirth of Switzerland. (Kani, Firmansyah, & Sufandi, 2010). While Delphi Integrated Development Environment (IDE) is an integrated view where the menu and tools look separate but very related that is a

unified whole in one coordination. Serves as a control center from the main menu, pallet component, form, code editor, object inspector and review object used to design, write program code and manage application display in various models (Madcoms, 2003). In this study, researchers used the application of Borland delphi.

B. Research Method

This research was a research and development (learning and development) learning media, especially in the form of learning through interactive multimedia-based teaching materials for visual programming language courses on Delphi programming language material. The program can be seen, heard and applicable to support the teaching material. So it is not creating an entirely new learning aid media, where as if there has not been a learning aid medium in the form of Interactive CD or computer based learning. Therefore, the outline of the research framework is structured in the following order: collecting data on current conditions for diagnosis of needs, analyzing data, developing and selecting alternative measures, testing new models, checking reactions, collecting new data for diagnostics, repeating analysis and development, and revise the model.

Development of interactive video learning media cd tutorial refers to the Gepart model, as quoted by Miarso (2003) below:

1. Purpose of assessment is to spell, create and find new solutions related to tutorial subjects visual programming language on Delphi programming language materials for students STKIP Hamzanwadi Selong.
2. The results of the assessment are something that can be applied, not only in the form of conceptual and procedural models, but also in the form of physical models.
3. The value to be achieved is in accordance with the advancement of learning technology today, namely in the form of video-based learning cd interactive tutorial.
4. The impetus to conduct an assessment is an innovation effort.
5. Criteria for success using performance standards include: effectiveness, efficiency, and attractiveness.
6. The conceptual basis is the operational teaching materials of visual programming language programming language of Delphi programming language.
7. The paradigm that becomes the reference is the approach of effectiveness and relevance.
8. The process of implementing the assessment as follows:
   a. Identify the situation.
   b. An alternative description.

c. Formulation of solutions.
d. Design testing.

While Stages and Steps of Research is Research development (Research and Development) consists of three stages, in which research steps refer to the R & D cycle Borg and Gall (1983), with a description of the explanation that has been modified and aligned with the goal and actual research conditions, as illustrated briefly in Table 1. Stages and steps of the study

Tabel 1. . Stages and steps of the study

Stage	**Step**	**Activities**
Pre Media Development	1	Preliminary research and data collection, Preliminary research Preparation of research results ,Introduction Needs analysis and Model design
Media Development	2	Creation of interactive multimedia-based teaching materials. ✓ Creating Navigation Structure and page design ✓ Create a program script (frame) Record a narration and edit it with a macromedia flash program ✓ Recorded video using Camtasia studio ✓ Change AVI video format into flash video file format (FLV) using factory format program. ✓ Create a basic concept application of visual programming language based on a pre-made page design ✓ Publish completed application program to CD form
Media evaluation	3	**Initial test** Review with material experts and media improvement experts
Media implementation	4	**Field Trial** Testing on some respondents of second semester students of S1 Informatics Education STKIP Hamzanwadi Selong

Medial revision	5	**Operational Improvement** Continuous media enhancement Learning based on interactive video cd tutorial

The instrument used in this study was aimed at assessing the feasibility of video learning media in interactive visual programming languages. Data obtained from this questionnaire was quantitative data. The questionnaire form used was a multilevel scale that is a question followed by columns showing levels, such as from very agrees to very disagree (Suharsimi Arikunto, 2010: 195). Population taken in this research was student of STKIP Hamzanwadi Selong. While, the sample of this research was one class that is Semester 1 and 3 Educational Information program taken at random numbered 30 people. Data obtained in this research was quantitative descriptive data. Quantitative data was derived from an interactive video cd tutorial assessment by an expert showing validity of video tutorials, student responses that demonstrate the practicality of video tutorials. While the instruments used in this study in the form of a questionnaire consisting of a questionnaire assessment of material experts, questionnaires assessment of media experts, and questionnaire assessment of students.

Data analysis employed was quantitative descriptive analysis technique that is by analyzing quantitative data obtained from expert test questionnaire and field test. Suharsimi Arikunto (1993: 207) explains that quantitative data in the form of figures calculated or measured results processed in a way later then compared with the amount expected to obtain a feasibility percentage. The formula used is as follows:

$$\textit{Percentage eligibility (\%)} = \frac{\textit{Score observedi x 100 \%}}{\textit{Expected score}}$$

Percentage search is is intended to know the status of material presented and presented in the form of percentage. However, it can be explained in the form of qualitative. For example, fairy good (76% - 100%), good (56% - 75%), unfit (40% - 55%), not worth (0 - 39%). The four scales can be written in Table 1. Media Percentage Feasibility Scale below:

Table 1. Percentage table according to Suharsimi Arikunto (1993: 208)

Achievement	Interpretation
76 - 100 %	Sangat Layak
56 - 75 %	Layak
40 - 55 %	Cukup
0 - 39 %	Kurang Layak

The percentage scale table above is used to determine the eligibility value of the resulting product. The value of eligibility for the visual video learning media product visual programming language set at good level.

C. Results and Discussion

The development of instructional video learning media for visual programming language courses is based through initial and final analysis. Information gathering is done by analyzing the problem and the material that is through survey at the time of study in class, and then continued with the gathering of information to support the data. After the materials are collected then proceed to the manufacture of video media by designing the media display which then combined / insert (assembly) these materials so get the initial video tutorial product. The video is then validated by a material expert and a media expert to find out the feasibility of terms of the subject matter and aspects of the learning media.

The trials on Student were conducted to obtain a media assessment in terms of appearance, operation and media usefulness. The validation and trial stages were intended to obtain feedback or correction about the video tutorial product that has been produced. Once the stages were complete, then the video tutorial was ready to be used and distributed. The results of the assessment of the feasibility of learning media video tutorials in visual programming language courses were conducted by material experts, media experts, and students of technology and information education of the second semester.

1. Result of Expert examination

Test of media experts used to obtain validation of feasibility of media experts, in this study obtained data media experts consisting of teachers who are competent in their field. Data obtained from the validation of media experts in the form of assessment of media learning from the media aspect. Validation by media experts was done using a questionnaire. To obtain a decent learning media, the media expert provided suggestions and recommendations for improvement. Data from the assessment results of media experts can be seen in the table below.

Tabel 2. Kelayakan Hasil Penilaian Ahli Media

No	Assessment aspect	Xt	Yt	%	Creteria
1	Media display	168	200	84	Sangat layak
2	Programming	170	200	85	Sangat layak
∑		338	400	84,5	Sangat Layak

Description: Xt (Score observed), Yt (Expected score), % (Percentage of Eligibility)

The data of expert media assessment test in the above figure is described as follows:

a. The results of the assessment of media experts on the aspect of media display on the video learning media visual cd tutorial visual programming language gained percentage of 84%. Based on the percentage of achievement scale then the media display aspect included in the category is very feasible.
b. The results of the assessment of media experts on the aspect of programming on video learning media visual cd tutorial visual program obtained a percentage of 85%. Based on the percentage of achievement, the programming aspect is categorized as very feasible.

Overall the assessment of media experts obtained a percentage of 84.5%. Based on the percentage of achievement, the video learning media visual cd tutorial visual programming language included in the category is very feasible so feasible to be used as a medium of learning.

2. Expert Material Review Results

Test of material experts is used to obtain validation of the feasibility of the material experts, in this study obtained data from a material expert consisting of teachers who are competent in their field. Data obtained from the validation of material experts in the form of assessment of the video learning media visual cd tutorial visual programming language of the material aspects. Validation by media experts is done using a questionnaire. To obtain a decent learning media, the material expert provides suggestions and recommendations for improvement. Data from the assessment results of media experts can be seen in the table below.

Table 3. Appropriateness of Expert Results

No	Assessment aspect	Xt	Yt	%	criteria
1	Learning	157	200	78,5	Sangat layak
2	content	168	200	84	Sangat layak
∑		325	400	81,25	Sangat layak

Description: Xt (Score observed), Yt (Expected score),% (Percentage of Eligibility)

The data of expert material assessment test in the above figure is described as follows:

a. The result of the expert assessment of the material on the learning aspect of the video learning media visual cd tutorial visual programming obtained a percentage of 78.5%. Based on the percentage of achievement scale, the learning aspect is included in the very feasible category.
b. The result of the expert opinion of the material on the content aspect of the video learning media visual cd tutorial visual programming obtained a percentage of 84%. Based on the percentage of achievement scale, the content aspect of the material is included in the category very feasible. Overall the results of expert material judgment obtained a percentage of 81.25%. Based on the percentage of achievement, the learning media is included in the category very feasible so it is feasible to be used as a learning media.

3. Product Trial Results

Product trials are conducted after the product has been revised and eligible by media specialists and material experts. Assessment data on this product test using a questionnaire. Questionnaires were given to 30 students of STKIP Hamzanwadi Selong Informatics Education Study Program. Aspects assessed include the material and media aspects. Data of product trial result can be seen in table below.

Table 4. Results of Product Feasibility Verification

No	Assessment aspect	Xt	Yt	%	Criteria
1	Content	1024	1200	85.33	Sangat layak
2	Media	1012	1200	84.33	Sangat layak
∑		2036	2400	84,83	Sangat layak

Description: Xt (Score observed), Yt (Expected score),% (Percentage of Eligibility)

The data of product trial in the above figure is described as follows:

a. The result of the students' evaluation on the material aspect of the video learning media visual cd tutorial visual programming obtained a percentage of 85.33%. Based on the percentage of achievement, the material aspect is categorized as very feasible.
b. b. The result of the students' evaluation on the media aspect of the video learning media visual cd tutorial visual programming obtained a percentage of 84.33%. Based on the percentage of achievement, the media aspect is categorized as very

feasible. Overall, the result of the students' assessment obtained a percentage of 84.83%. Based on the percentage of achievement, the learning media is included in the category very feasible so it is feasible to be used as a learning media.

By looking at the results of expert media learning test, learning material experts, and experiment of learning media can be concluded that learning media is feasible to be used as an interactive video learning media visual cd tutorial. So hopefully the use of tutorial video learning media is effective because the video tutorial has several advantages when compared with the direct learning method that lecturers use the drawings are: (1) interesting video display equipped with music to make students more motivated to learn, (2) students can easily repeat the part that he deems unclear so students can learn independently, and (3) this video tutorial is also easy to use.

Media Creation Tool was processed by hardware and software as follows:

a. Hardware

The hardware used to make this media is 1 unit of personal computer, with specifications:

1.Mother Board
2. AMD Athlon or Intel processors
3.DDR2 ~ 2 GB
4.NVIDIA GeForce 9600 GT ~ 512 MB VGA Card
5. Monitor
6.DVD-ROM, Mouse and Keyboard standard
7.Active Speaker

b. Software

The software used to create interactive media is divided into several kinds, including:

1.Software for operating system: Microsoft Windows 7 Ultimate
2.The main animation software maker: Macromedia Flash 8
3.Video-making software: Camtasia Studio
4.Voice processing software: Jet Audio 5, Audacity 1.2.2, MP3Doctor 5.1, MP3Gain 1.3.4

c. computer Specifications

To be able to use this media, computer or laptop used must meet the minimum system requirements are:

1. Intel Pentium 4 or AMD processors are equivalent or above
2. 128 MB RAM
3. 64 MB graphics memory
4. DVD-ROM 4x
5. Mouse and keyboard

6. Supporting devices: Speaker.

D. Conclusions

Based on the above discussion, it can be concluded that:

a. This video-based interactive learning video tutorial can be a supplement for students although it is only an option but can also be used to add knowledge, insight especially about visual programming language of Delphi and facilitate teaching and learning process as well as improve the quality of learning and student achievement.
b. The results of filling questionnaires from 30 student respondents regarding the quality of material display, presentation of materials, user interaction, program interaction and design aspects obtained percentage of 84.83%. Based on the percentage of achievement, the learning media of interactive video cd tutorial is included in the very feasible category so it is suitable to be used as a learning media which is an option that can help the students to improve student's learning achievement.

References

Arikunto, Suharsimi. (2010). *Prosedur Penelitian Suatu Pendekatan Praktik.*

Arsyad, Prof. Dr. Azhar. 2011. *Media Pembelajaran.* Jakarta: PT RajaGrafindo Persada.

Azhar Arsyad (2006). *Media Pembelajaran*. Jakarta: PT. Raja Grafindo Persada.

Cheppy Riyana (2007). *Pedoman Pengembangan Media Video*. Jakarta: P3AI UPI.

Darpo (2009). *Pengembangan Multimedia Pembelajaran Seni Tari di SMP*. (Tesis).

Dahtul (2013). Camtasia Studio. Diakses pada tanggal 21 Agustus 2015 di https://dahtul.wordpress.com/2013/01/09/pengertian-dan-penjelasan-camtasia-studio-7/

Daryanto. (2011). *Media Pembelajaran.* Bandung: PT Sarana Tutorial Nurani Sejahtera

Hanson, J. (1987). *Understanding Video Applications, Impact, and theory*. California: SAGE Publications, Inc.*II, Cetakan Kesembilan).* Jakarta: Penerbit Rineka Cipta.

Ilmawan Mustaqim, (2004). Rancang Bangun Modul Input Output Programmable Logic Controller Berbasis Mikrokontroler sebagai Media Pembelajaran Praktik Kendali Terprogram. Skripsi, Tidak diterbitkan.

Kani, Firmansyah, dan Sufandi, U. U. (2010). Pemrograman Database menggunakan Delphi (Delphi Win32 dan MySQL 5.0 dengan Optimalisasi Komponen ZeosDBO). Graha Ilmu: Jakarta.

Kasingkabotan (2014). Macromedia Flash. Diakses pada tanggal 24 Juli 2015 di http://kasingkabotan.blogspot.co.id/2014/02/macromedia-flash.html

Lowther, D. L, Russell, J. D, Smaldino, S. E. (2011). *Instructional Technology & Media For Learning Teknologi Pembelajaran dan Media untuk Belajar (Terjemahan. Edisi Kesembilan).* Jakarta: Kencana Prenada Media Group.

Madcoms. (2003). Pemrograman Borland Delphi 7. Yogyakarta: Andi.*Mata Pelajaran Ekonomi di SMA.* (Tesis).

Nana Sudjana dan Ahmad Rivai (2005). *Media Pengajaran (Penggunaan dan Pembuatannya).* Bandung: Sinar Baru Algensindo.

Setyabudi, Novian Wahyu. 2005. *Pengembangan Media Pembelajaran Berbasis Multimedia Untuk Mata Pelajaran Fisika Bahasan Kinematika Gerak Lurus (Skripsi).* Semarang: Program Studi S1-Teknik Elektro

Soenarto, Sunaryo. (2005). "Pengembangan media pembelajaran interaktif mata kuliah rangkaian listrik." *Laporan Penelitian*. Yogyakarta: Pendidikan Teknik Elektro FT UNY.

Sugiyono. (2010). *Metode Penelitian Kuantitatif Kualitatif dan R&D.* Bandung: Alfabeta

Suharsimi Arikunto (1993). *Prosedur Penelitian Suatu Pendekatan Praktik (edisi revisi*

Tim Redaksi Pusat Bahasa Depdiknas (2001). *Kamus Besar Bahasa Indonesia (Edisi ketiga).* Jakarta: Balai Pustaka. Yogyakarta: BukuBiru.

Development of Economic Materials Based on Android Applications on Koperasi Lesson Section For Senior High School Year of Learning 2017-2018

Huzani Jailani[1], Isfi sholihah[2], Lutfi Muktar[3]

[1, 2, 3]*Hamzanwadi University*

[1]huzainjailani.farabi@gmail.com,[2]isfi.is84@gmail.com,[3]lutfimukhtar03@gmail.com

Abstract

This research has a purpose for developing the material of study economic based android application on main discussion is cooperation for the students of class one of social program of sunior hight school and to know the advisability of the material of study ecomocic based on the assessment of material specialist, media specialist, and the point of view of the students. The material of study that is developed is experimented to ten students of class one of social program of SMA NW Tebaban. The outcome of the research show that the step advisability of the material of study economic base android application as material of study based on assessment of (1) material specialist was resulted the total score was 94.00 that inclided in category "excellence" and if it is percentaged get the score 85,45 % so, included category "very advisability", and (2) media specialist was resulted the total score was 48.00 that included in category "excellence" and if it is percentaged get the score 87,27 %, so included in category "very advisability". The students respon to this material of study in time was done try out the average shows positive respon with get the percentage ≥70 % every its indicator. Such was the case the material of economic based android application is advisability used as a material of study economi base android application on main cooperation material.

Key words: economic material, android and ADDIE

A. Introduction

The advanced nation is the goal and the ideals of every country in the world. One of the factors that support the progress of a nation is education. Once the importance of education to serve as a benchmark progress of a nation. Education is a complex process and in line with human development. Through education various life asphits are developed with learning and learning process. To complement learning and learning components in schools, teachers should use media or tools that can stimulate effective and efficient learning.

SMA NW Tebaban is one of the middle schools that is pioneering to become a more advanced school. Based on observations and interviews before the research conducted, economic learning activities in SMA NW Tebaban, not using the media

already available in school. The learning process, especially the economy has not implemented android based application learning. The process is more a transfer of knowledge from teachers to students. Student involvement in economic learning is limited to listening, recording, practice questions and occasionally discussing. Concepts or materials are presented with lecture methods.

Other observations made in class x especially on economic subjects, when the learning process of students less enthusiastic and tend to be bored. The learning process is less giving students the spirit of learning. The average score of students is still below the Minimum Exhaustiveness Keriteria (KKM) that is equal to seventy. Viewed from interviews and observations this happens because; 1) lack of motivation of students to learn to follow the learning process in the classroom; 2) lack of attention or concentration of students on what is delivered by the teacher; 3) the delivery of the material by the teacher is less clear so that the students less capture the learning materials; 4) the role of teachers as facilitators and moderators for the learning of the learning situation that has been conducive to students has not been implemented optimally; 5) most of the teaching teachers still use lecture and write-in writing methods that do not engage students actively; and 6) blum of instructional materials based on android applications for economic subjects.

Based on the description tesebut, educational media that researchers develop in the form of teaching materials android-based applications as an improvement student self-reliance learning. The benefits of instructional materials android-based applications are expected to motivate students to learn independently, creatively, effectively, and efficiently, can reduce the stastic atmosphere and menciftakan interesting and fun learning process. Because during this process of learning done by the teacher is the method of face to face (lecture) that causes students to become bored and bored so that students' motivation decreased. Other uses of various learning aids will menciftakan variations belajr, for the authors to conduct research in the field of development of instructional materials based on android applications.From the above problems then the researcher intends to examine: "Development of Android-Based Economy Based on Application Student Subjects Cooperative In SMA NW Tebaban"
Research purposes

Based on the formulation of the above problems, this study aims to:

1) Developing instructional materials based on android application to help the learning process of high school economy class X which is made based on research development method (Reserch and Development).
2) Knowing the feasibility of economic resources using android applications created to help the process of learning economy class X high school.

3) Knowing the opinions of students with the existence of instruction-based economic resources android applications that are made to help the process of learning economy class X high school.

Library Review

Theoretical Review

Teaching materials are information, tools and texts needed by teachers / instructors for planning and reviewing the learning implementation. Teaching materials are all forms of materials used to assist teachers / instructors in carrying out teaching and learning activities in the classroom. The material in question can be either written materials or unwritten materials. (National Center for Vocational Education Research / National Center for Competency Based Training).

Research Celebration

Based on the problems and frameworks that have been described previously and supported by the relevant empirical literature and study, this research question is:

1) How to develop economic teaching materials on the subject of Android-based cooperative application for X-class students in SMA NW Tebaban?
2) How does the validator's assessment of Android-based economic learning materials for X-class students in SMA NW Tebaban?
3) What is the opinion or response of students about the economic teaching materials on the subject of Android-based cooperative application for the students of class X in SMA NW Tebaban?

B. Research Methodology

Development of economic resources based on this android application using research and development methods (research and development). This development procedure adapts the development model of ADDIE, a development model consisting of five stages consisting of Analysis, Design, Development, Implementation and Evaluating. But in this study only until the implementation stage only.

C. Results and Discussion

Development Results

Development of Android Based Application Economic Resources

Development of Android-based economic learning materials follow the development model of ADDIE with the stages of Analysis (Analysis), Design (Design), Development (Development), Implementation (Implementation) and Evaluating (Evaluation), but in this study only until the implementation stage only. The overall implementation of this research development procedure in detail can be seen in the following description.

a. Stage Analysis

This research started from the observation to the school that is SMA NW Tebaban. Based on observations that have been done, most students experience saturation in learning because there are still many teachers who use conventional teaching methods of lectures and less use of learning media. The researchers observed that the use of smartphones can take students' time, for example, to play music, play games, and access various social media.

b. Design Phase

The design stage is a media design stage that includes making whole media design (storyboards), compiling material, questions and answers, creating backgrounds, drawings, and buttons to be included in the application.

c. Development Stage

Teaching materials are made using hardware with 320GB hard disk specifications, 4 GB RAM, and Windows 7 operating system. All components that have been prepared at the design stage and then assembled into a single unit using AppsGeyser software. Components assembled into a single media entity in accordance with the storyboard that has been made before.

The initial media then goes through the validation stage. At this stage the material is validated by 1 material expert namely lecturer of Economics Education Faculty of Teacher Training and Education of Hamzanwadi University, Mrs. Rohaeniah Zain, SE, M.Pd and 1 media expert who is lecturer of Infomatics Education Faculty of Teacher Training and Education Universitas Hamzanwadi, Rasyid Hardi W, ST. M.Pd. Inputs and suggestions from materials experts and media experts will serve as the basis for the revision of teaching materials so that the materials developed to be better.

Based on suggestions or opinions from material experts and media experts, revisions are made to make teaching materials better.

(1) Revision of material experts

On the material page no images are presented relating to cooperative material and material submitted in the media is still not complete.

The terms used are still not appropriate and not in accordance with the field of economics so that the ease of understanding the flow of material does not support. The use of language in the media is incomplete so that the students' convenience to understand the material flow is very difficult.

(2) Revised media expert

The suitability of the display color selection is too bright when viewed by the students, therefore the color needs to be replaced by the preferred ones by the students so that the colors are presented well. The

size of the image used is too large, if it is opening the image app is invisible and the appeal of the displayed image is still lacking.

d. Implementation Phase

Implementation stage is done by disseminating instructional media to 10 students of class X IPS SMANW Tebaban which is located at Highway tebaban. Before the media is used, students are required to install such media on smartphone devices. The spread of media is done through Shareit by researchers by sending the .apk file to each student. After the end of the lesson students are asked for a response or opinion by filling out a questionnaire that has been given.

Feasibility of Android-Based Economy Based Economy Material

a) Master of Materials

The validation made by the material expert is to collect suggestions and opinions from the material expert to make a revision. Assessment of learning materials by the material experts can be seen in the following table.

Table 1

Results of Feasibility Check by Material Experts

No	Indicator	Value	Criteria
1	Material compliance with KI and KD	5.00	Very Good
2	Clarity of formulation of learning goals	5.00	Very Good
3	Material conformity with Indicator	5.00	Very Good
4	Material suitability with learning objectives	5.00	Very Good
5	The truth of the concept of matter in terms of the scientific aspect of	4.00	Good
6	Clarity of Submission of	5.00	Very Good
7	Systematic material delivery	5.00	Very Good
8	Attracted material delivery	4.00	Good
9	Material completeness	4.00	Good
10	Actuality of material	4.00	Good
11	Suitability of difficulty level and concept abstraction with student cognitive development	4.00	Good
12	Clarity of example given	4.00	Good
13	The appropriateness of the evaluation with	3.00	Less Good

	the lesson material and learning objectives		
14	The key truths to answers	4.00	Good
15	Clarity of work instructions	5.00	Very Good
16	Clarity of Formulation of Question	4.00	Good
17	The truth of the concept about	4.00	Good
18	Variations about	4.00	Good
19	Degree of difficulty about	4.00	Good
20	Clarity of answer	4.00	Good
21	Terms of use of the term	5.00	Very Good
22	Ease of understanding the material flow through the use of language	3.00	Less Good
Total Value		94.00	Very Good
Avg. Value		4.27	Very Eligible
Persentage		85,45%	

Source: Primary Data is processed

Based on the assessment by the material experts as a whole, teaching materials get a total value of 94.00 on 22 indicators so that the category is very good. When calculated by percentage, teaching materials get the value 85.45% so included in the category is very feasible for use as teaching materials.

b) Media Expert

Validation done by media experts is to collect suggestions and opinions from media experts to make revisions to improve teaching materials for the better. Assessment by media experts can be seen in the following table.

Table 2

Feasibility Feasibility Result by Media Experts

No	Indicator	Value	Criteria
1	Provision of use of the term	4.00	Good
2	Language conformity with students' thinking level	4.00	Good
3	Ease of use language	4.00	Good

4	Creativity and innovation in learning media	4.00	Good
5	The suitability of selecting the color selection is	4.00	Good
6	Suitability of type selection	4.00	Good
7	Compatibility of the displayed image	4.00	Good
8	Ease of touch and navigation functions	5.00	Very Good
9	Ease of operation of the media	5.00	Very Good
10	Reusability (reusable)	5.00	Very Good
11	Maintable (daoat maintained / managed easily	5.00	Very Good
Value		48.00	Very Good
Average		4.36	Very Eligible
Percentage		87.27%	

Source: Primary Data is processed

Based on the assessment by the media expert as a whole, teaching materials get a total score of 48.00 on 11 indicators so that the category is very good. When calculated by percentage, learning materials get the value 87.27%, so included in the category is very feasible to be used as an economic resource based on android applications.

c) Student

The assessment of teaching materials was also conducted by 10 students in SMA NW Tebabab by using questionnaires. Questionnaires for students use Ghuttman scale with two alternative answers. Questions in the questionnaire consist of 6 questions that are combination. The complete questionnaire answer can be seen in the appendix. Here is a recapitulation of answers from 10 students of class X IPS SMA NW Tebaban.

Table 3

Recapitulation of Student's Opinion on Teaching Materials

No	Indicator	Answer		Total	Percentage Answer Yes
		Yes	No		
1	Interesting material delivery	10	0	10	100%
2	Clarity of example given problem	10	0	10	100%
3	Clarity formulation about	9	1	10	90.00%
4	Ability to encourage student curiosity	10	10	10	100%
5	The ability of teaching materials to improve students' understanding	10	0	10	100%
6	The ability of teaching materials to increase student learning motivation	9	1	10	90%

From the table above it can be seen that all questions get "Positive Response" with percentage ≥ 70%.

D. Discussion

Android Application Model as Economic Instructional Material on Cooperative Cooperative Subject

The android application model as an appropriate economic resource should contain the elements of competence, material and evaluation model. As well as elements of media that include the rules of learning media and CAI media rules covering the elements of software and usability. The material presentation model was developed based on the syllabus held by SMA NW Tebaban. The materials for class X IPS are limited to basic competencies describing cooperative concepts, cooperative management, applying cooperative concepts, and managing school cooperatives. This limitation is made during the introduction of the problem in the software requirements analysis stage.

Preparation

This app is designed so that students easy to open it via android smartphone. Before starting the application learning is sent to students using shareid help or via instant messaging such as whatsapp and blackberry messenger. To overcome the

limitation of the number of smartphone students are gathered into several groups so they can discuss.

Presentation of Material

The main subjects presented in the instructional materials of this android-based economy are grouped into (1) cooperative concepts, (2) cooperative management, and (3) school cooperatives. And students can also discuss outside the classroom by utilizing their smartphone.

Android Application Fungicanitas As Economic Instructor Subjects Cooperative

Navigation

Navigate on this app using buttons and gesture swipe. The buttons are placed in the application layout section and the application action bar section. While the use of swipe placed on the layout. Testing is done by running the application and trying the navigation functions. This is in accordance with Pressman's testing method (2010: 457).

Operational

Application of economic aar on the subject of cooperatives can operate on various android devices. Operational apps use the android API level 8 operating system (Android 2.2 Froyo) to API level 19 (Android 4.4 KitKat). This app can only be operated using devices with screen sizes of 3.7 inches to 5 inches. When using a size outside of the size there is a possibility that the arrangement of the widget is not fit and difficult to access. Operational applications are like the results of research conducted by Pamuji (2013) and Purbasari (2013).

Feasibility of Android Based Application Economy Based on Cooperative Subject

Performance

Performance tests are performed using a variety of different smartphone devices. Performance is intended to determine the performance of applications on various android devices. In a study conducted by Purabasari (2013) only use a smartphone when android devices have fragmentation is very diverse ranging from screen size, operating system to additional sensor specifications.

a) Feasibility

The feasibility of application of economic teaching materials on the subject of cooperatives is judged by material experts and media experts. The appraisal of the appropriateness of the materials application by the material expert is assessed based on 3 aspects of material relevance, material organizing, and language.

The total score of ratings by the material expert is 94.00 (the "excellent" category). Then the score is calculated in the form of percentage of teaching materials to get value 85.45% so it can be said that the feasibility of application

of economic resources on the subject of the cooperative based on the assessment by the material experts included in the category of "very decent" is used as teaching materials.

The appraisal of the appropriateness of the application of economic teaching materials on the subject of cooperatives by media experts is assessed based on 3 aspects: language, appearance, application usage.

The total score of ratings by media experts is 48.00 ("very good" category). Then the score is calculated in the form of the percentage of teaching materials get the value 87.27% so it can be said that the feasibility of application of economic resources on the subject of cooperatives based on assessment by media experts included in the category of "very decent" is used as teaching materials.

The assessment of teaching materials was also conducted by 10 students in SMA NW Tebabab by using questionnaires. Questionnaires for students use Ghuttman scale with two alternative answers. Questions in the questionnaire consist of 6 questions that are combination. It is known that all questions get "Positive Response" with percentage ≥ 70%.

E. Conclusion

Based on data analysis and discussion in chapter IV, it can be concluded.

a. The development of Android-based economic instructional materials on the subject of cooperatives using the ADDIE development model are Analysis, Design, Development, Implementation, and Evaluation. This study is limited to Implementation only.
b. The feasibility of the Android-based economic apparatus based on the subject of the cooperative based on the expert material judgment of the whole aspect earns a total value of 94.00, so that it falls into the category of assessment very well and if the lesson of instructional materials get 85.45%, this indicates that the teaching materials of the overall aspect based on (%) are in the category very feasible to be used as an economic resource based on Android applications.
c. The feasibility of instructional materials based on the Android app on the subject of cooperatives based on the expert assessment of the media overall aspects get a total value of 48.00 so that the entry in the category of assessment is very good and if the materials dikententekan get 87.27%, this indicates that the teaching materials from the aspect Overall based on (%) are in the category very feasible to be used as an economic resource based on Android applications.
d. Trials were conducted at SMA NW Tebaban by 10 students and showed a positive response as all showed a percentage of ≥70%. Based on the data, it can be concluded that the apical Android-based economic teaching materials are packed with interesting, examples of questions and questions delivered clearly, encouraging

students' curiosity in studying economics, increasing understanding of economic learning, and increasing motivation in learning economy.

F. References

Ai Siti Farida. 2011. Sistem Ekonomi Indonesia. Bandung: Pustaka Setia.

Aplikasi Butan Sendiri Melalui, www.AppsGeyser.com

Azhar Arsyad. (2011). *Media Pembelajaran*. Jakarta: PT RajaGrafindo Persada

DendySugiono.(2008).*KamusBesarBahasaIndonesia(KBBI)*.Jakarta:PT GramediaPustakaUtama.

DeniHardianto.(2005).MediaPendidikansebagaiSaranaPembelajaranyang Efektif. *Majalah IlmiahPembelajaran*1, Vol. 1.Hlm 95-104

Eko Putro Widoyoko. (2011). *Teknik Penyusunan Instrumen Penelitian*. Yogyakarta: PustakaPelajar.

Endang Multyaningsih. (2011). *Metodologi Penelitian Terapan Bidang Pendidikan*. Bandung: Alfabeta.

http://Akhmad Sudrajat. *Let's talk About Education*. Pengembangan bahan Ajar. Depdiknas. 2006. Pedoman pemilihan bahan ajar. html.

IDC(*InternationalDataCorporation*).(2014).*SmartphoneOSMarketShare, Q3 2014*yangdiaksesmelaluihttp://www.idc.com/prodserv/smartphone-os-market-share. jspyang diaksespada20 Desember 2014 pukul 1.19WIB

Julias R Latamaerissa. 2011. Bank dan Lembaga Keuangan Lainnya. Jakarta: Slemba Empat

Lukman&Ishartiwi.(2014).PengembanganBahanAjardenganModel*Mind Map* untuk PembelajaranIlmu Pengetahuan Sosial SMP.*JurnalInovasi Teknologi Pendidikan.*(Vol. 1. No. 2. Hlm 112). http://journal.uny.ac.id/index.php/jitp/article/view/2523,yang diakses pada 16 Juni 2015 pukul8.08WIB

Luqman Arumanadi.(2014). "PengembanganAplikasi*PocketBook ofPhysics* (PBOP) Sebagai Media Pembelajaran Fisika SMA Kelas XI untuk *Platform*Android". *Skripsi*.FMIPAUNY

RestiYektyastuti.(2012). Pengembangan*Mobile Game Brainchemist*Sebagai Media Pembelajaran Kimia SMA/MApadaMateriLajuReaksidan Kesetimbangan Kimia.*Skripsi*.FMIPAUNY

Rohmi JuliaPurbasari.(2012).PengembanganaplikasiAndroidsebagaiMedia PembelajaranMatematika pada MateriDimensiTiga untukSiswa SMA kelas X.*JurnalPendidikan Matematika.*(Vol1. No2. Hlm3-11. http://jurnal-online.um.ac.id/article/do/detail-article/1/31/932, diakses pada tanggal 16 Juni 2015 pukul 7.32 WIB

Satyaputra danAritonang.(2014).*BeginningAndroidProgrammingwithADT Budle*. Jakarta: ElexMedia Komputindo

SugengPurwantoro,HeniRahmawati,danAchmadTharmizi.(2013).Mobile SearchingObjekWisataPekanbaruMenggunakanLocationBaseService (LBS)BerbasisAndroid.*Jurnal*.PoliteknikCaltexRiau.(Vol1hlm177). http://www.pdii.lipi.go.id/wp-content/uploads/2014/03/Seminar-Nasional-Infonnatika-_SNlf-2013.Diakses pada12Desember 2014 pukul 22.17

Sugiyono.(2011).*MetodePenelitianKuantitatif,Kualitatif,danR&D*.Bandung: Alfabeta

Innovative Learning : E-material

Doni Septu Marsa Ibrahim,Universitas Hamzanwadi
janganletih@gmail.com

Abstract

The development of information technology should be in line with its application in everyday life, especially in education and learning. Learning patterns using information technology media become mandatory nowadays along with the ease of access to information and the use of cheaper costs. E-material as a collection of digital assets in the form of materials and instructional instructions are placed online and packed in such a way that learners can access from anywhere easily. E-material is one of the innovations of distance learning (e-learning) that utilizes information and communication technology.
keyword :e-material, e-learning, blended learning

A. Introduction

The portion of th use of technology and information by the community covering various fields of life such as economic, social and educational fields has not been sufficiently proportional. Survey conducted by Mars Indonesia revealed that 90.5 million people of Indonesia have been connected to the internet. The use of technology in the field of economy and social take the largest portion of the field of education. The use of technology in the economic field can be seen from the growth of e-commerce or online shop that so rapidly. Data E-commerce Association of Indonesia (idEA) in 2016 record three years ago its members only amounted to 9 e-commerce companies. But now it has 185 member. It also with its social field, Indonesia entered the largest group of social media usage such as *Facebook, Twiter, Instagram* and other social media. According to We Are Social and Hootsuite research report states that Indonesia is ranked 4th in the world with the most active *Facebook* users. People are so quick to adopt technological developments in everyday life and apply them in interacting with others. Often these interactions do not produce a positive thing but instead using technology media for things that are negative. In terms of age of adolescents age became the largest user. From that age social media users come from school age. The use of media in the field of education is very low due to lack of resources capable of creating learning applications or educational programs that are friendly for school-age teens who can compete with current social media applications. There are some learning applications such as *Quiper Video*, *Edmodo* and others have not been able to meet the needs of educational application content is so great. School-aged teenagers are a very potential market as users of instructional applications. Therefore, application development and technology-based programs still have a large market share to be developed more broadly. The development of absolute learning applications is done so

that the benefits of technology so far so modern can be used as best as possible to improve the quality of education.

B. E-Learning

E-Learning refers to learning that utilizes electronic media and information technology in learning. This learning is also called online learning (online).

According to (Tafiardi, 2005) E-learning is a model of learning that is made in digital format through pe-electronics. Learning using e-learning is an effective learning process created by combining learning content that is delivered digitally using electronic devices to deliver learning materials (Ibrahim, 2014). Online learning (in network) requires adequate material resources that can accommodate the needs and learning characteristics online. Online learning has a disposition in the medium and is not bound by space and time.

The main focus of distance learning lies in the learners so that more independent and responsible for learning (K Sumardi, 2011). Learners play a more active role in making plans and looking for learning materials so that learning experiences are more meaningful. In order to meet the learning needs of a more complex educator not only upload material on the internet but there must be a special mechanism that can involve students in learning, there is a discussion room and assessment of learning outcomes, then e-learning must be supported online learning which is Learning Management System (LMS)..

C. Blended Learning

Blended learning is a combination of appropriate learning between synchronous and asynchronous learning strategies in order to create a learning experience to achieve predetermined learning outcomes.(Chairuman, 2017)

The term blended learning is used to describe a solution that combines several different delivery methods, such as collaboration software, Web-based courses, EPSS, and knowledge management practices.(Valiathan, 2002)

Blended learning also is used to describe learning that mixes various event-based activities, including face to-face classrooms, livee-learning, andself-paced learning. Unfortunately, there's no single formula that guarantees learning,but here are some guide lines from NIIT on how to order your learning activities.

Three models blended of learning

1. skill-driven learning, which combines self-paced learning with instructor or facilitator support to developspecific knowledge and skills
2. attitude-driven learning, which mixes various events and delivery media to develop specific behaviors
3. competency-driven learning, which blends performance support tools with knowledge managementresources and mentoring to develop workplace competencies.

(Valiathan, 2002)

D. E-Material

Learning materials have been presented in the form of material books both physical books and e-books. The weaknesses are not able to create interaction between learners. E-material is structured in such a way with the help of Learning Management System for which can create the learning experience in the form of discussion online. Formulate e-learning materials can be divided into several steps. This step refers to the Development of Learning Design Model developed by (Chairuman, 2017) which the researchers describe in the following steps; (1) designing learning activities, (2) determining learning settings (for learning settings that will fit in e-material that is asynchronous). (3) assemble the learning path (4) arrange assessment of learning outcomes.

E-Material can be said to be a collection of digital assets in the form of materials and instruction manuals that are placed online and packed in such a way that learners can access from anywhere easily. Presentation of e-materials to be understood independently by providing as many asset assets as a digital information source.

E-material is arranged in instructional steps based on the stages of the material in the illustration of figure 1 below.

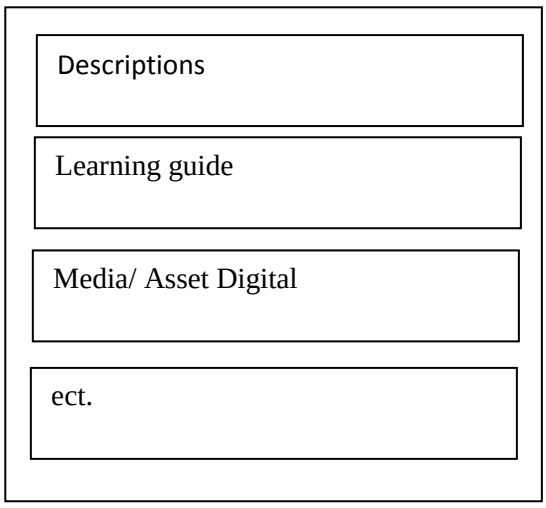


Figure 1 Form E-material

Table 1: Asset Digital

Text	Link articles, a piece of writing / reading (pdf, doc, xls), self-explanatory instructions.
Audio	Sound recording (mp3, mp4), audiocast, etc.
Visual	Slides presentations, infographics, illustrations, comics, diagrams, tables, graphs, sketches, etc.
Video	Video recording, videographic (MP4, flv, mov, etc)
Animated	Animated video, animated swf, html, etc.

Table 2 : Learning Setting

Operational	**Learning Modality**	**Experience**	**Seting**	
			Sync	**Asyn c**
Remembering / Understanding	Reading (text)	Abstract	-	vv
	Listening (Audio)		-	vv
Menganalisa	Look (visual)	Iconic	-	vv
Apply	Participate	Enactive	v	vv
	Modeling	Concrete	vv	v
	Practice		vv	v

***vv: is preferred**

Table 3 : Learning Activities

Sub-topic Discussion	**Learning Point**	**Learning Strategies**			
		Async itself		**Async Group**	
		Digital Assets	**Quiz Online**	**Discussions**	**Tasks Online**
Konsep kewirausahaan	*Pengrtian*	Slides *Pengertian kewirausahaan*	Quiz	*Diskusi mengenai profil dua orang pengusaha*	*Menganalisis faktor-faktor penyebab keberhasilan suatu*
	Sifat kewirausahaan	Slides *sifat kewirausahaan*	Quiz		
	Cara pikir kewirausahaan	Video *cara piker wirausahawan*	Quiz		

	Karakteristik kewirausahaan	Video *profil wirausahawan*			*usaha kecil*

Table 4 : Learning Flow

Learning Point	:	*Konsep Bilangan*
Guide Learning	:	*Sebelum membahas tentang bilangan mari kita perhatikan video berikut*
Asset Digital	:	*Insert video*
Forum Diskusi	:	*Bagaimana menurut anda tentang bilangan*
Deskripsi	:	*Berdasarkan tayangan tersebut dapat disimpulkan bahwa bilangan merupakan……*
Guide Learning	:	*Baiklah mari kita pahami lebih dalam dengan mempelajari slide dan link berikut*
Asset Digital	:	1. Slide 2. Link *Konsep Bilangan*
Ect.	:	

References

Chairuman, U. A. (2017). *Model Desain Pembelajaran Blanded.* Jakarta.

Ibrahim, D. S. (2014). The Effects Of The Use Of E-Learning On The Learning Motivation Andachievement In Mathematics Of The Students Of SD Negeri Tahunan Yogyakarta. *Prima Edukasia*, 66-79.

K Sumardi, D. S. (2011). Model Pembelajaran E-Learning (Lms) Untuk Meningkatkan Pemahaman Materi Termodinamika Teknik. *Jurnal invotec*, 53-68.

Tafiardi. (2005). Meningkatkan Mutu Pendidikan Melalui E-Learning. *Jurnal Pendidikan Penabur*, 85-97.

Valiathan, P. (2002). Blended learning models. *Learning Circuits*, 50-59.

Interaction and Negotiation of Meaning in Two Different Contexts of English Lessons

Iwan Jazadi[1], IGA Widari[2]
[1, 2]STKIP Paracendekia NW Sumbawa
[1]iwanjazadi@gmail.com, [2]igawidari@gmail.com

Abstract

This article compares a lesson of English as second language in Australia and that as a foreign language in Indonesia. It aims to describe the interactional situation that enables a negotiation of meaning to occur in the classroom and how the interaction contributes to comprehension and shared understanding between the teacher and the learners. Both classes share some similarilites: small classes, advanced learners, experienced teachers, and making use of reading texts about air pollution to trigger discussion. They are different in terms of the first language background of the teacher and students. In the ESL class, the students are from different Asian countries with an English native teacher, while the EFL class consists of Indonesian students and teacher. The data was collected through recording, transcribing, and selecting excerpts that expose the occurrence of meaning negotiation. The findings show similar results in both contexts; i.e., students were able to negotiate meaning by using English. This is due to their advanced level and the commitment of the teacher and students especially in the EFL context to use English only in the classroom. It is, thus, advisable for advanced class to maximize the use of English only as a medium of interaction although the teacher and students share the same L1 background.

Key words*: interaction, negotiation of meaning, second language, foreign language*

A. Introduction

Interaction has been considered one of key issues in second language acquisition (SLA) theories and research mainly since Hatch's study (1978) on interaction which states that modifications to the interactional structure of conversations that occur in the process of negotiating a communication problem help to make input comprehensible to the learner. That study was further developed by Long (1980, 1983) by combining it with Krashen' s input hypothesis (1977, 1980) that comprehensible input is necessary for SLA. This has been proven in several recent studies (e.g., Aijmer & Stenstrom, 2005; Stephens, 2011; Dose, 2013).

Moreover, Ellis (1991, p.203) adds that for acquisition to occur, modified input provided in the process of negotiating meaning has to be comprehensible and new features in it have to be noticeable so the learners can compare them with their own output. Doing so, the learners can modify their initial output which is facilitative to the process of integration as a determinant stage in acquisition.

This paper seeks to discuss how the theoretical stance above works out in two different classroom settings from a discourse analysis perpective; the following questions are formulated:

- What interactional situation is provided for a negotiation of meaning to occur in the classroom?
- How does interaction contribute to comprehension and shared understanding between the teacher and the learners?
- How would it be possible for an EFL class with participants of homogeneous first language background to apply full English in their classroom?

Theoretical Review

Some theories and studies underlying the importance of interaction in classroom second and foreign language learning are reviewed in this section.

In L2 classrooms, the value of interaction is seen compatible with the development of 'communicative language teaching' or 'communicative approach' which probably all of SL classrooms nowadays embrace. This approach has been developed since early the 1980s as the substitution of audiolingualism and grammar translation. 'Interaction' in the sense of this new approach implies the sense of genuine, live, person-to-person encounters within which learners in the classroom are actively involved (Allwright 1984, p.156; Littlewood, 1981; Jazadi, 2000; Syarief, 2005).

Moreover, there are several reasons why the learners should be involved in the classroom communication practice. Educationally, such classroom involvement is beneficial as a necessary and productive stage in the transfer of classroom learning to the outside world. Psychologically, such a genuine interaction is itself a learning process; that is, using communication to learn and to solve communication problems, not just to practice the language. Additionally, the actual communication is seen as a sort of 'investment'; that is, it is expected that learning is more effective as it moore deeply involves the learners whereby they bring their value systems to the arena of the classroom discussion and shared to others through interaction (Allwright, 1984, pp.156-8).

Several studies show how interaction is valuable for L2 acquisition. Hatch (1978), from a discourse analytic perspective, studies interactions which involve naturalistic child and adult SL learners. She concludes that the regularities in the way learners acquire the L2 grammar is the direct result of the kinds of interaction in which the learners take part. Long (1980, 1983,1989) finds that interaction promotes SL acquisition for it provides both comprehensible input and opportunities for the learner's production. Swain (1985) is also of the conclusion that interaction in which learners produce the target language may force them to pay attention to the means of expression required to convey the intended message successfully. Last, Tsui (1991, 1995) finds that the amount of input comprehensible depends more importantly on how much the learner is involved in struggling to 'obtain' the comprehensible input and that certain modification devices (e.g. clarification requests and confirmation checks) are better indicators of learner involvement in negotiation work as they are only performed in reaction to learner response.

Research by Allwright (1980, quoted in Ellis 1994, p.577) shows that there are three basic elements of SL classroom interaction: 1) 'samples' which include the examples or new features of the L2, in isolation or in use; 2) 'guidance' that involves instances of communication in relation to the nature of the L2; and 3) 'management activities' which aim at ensuring the profitable occurrence of the previous two elements. These elements are not mutually distinctive, but by themselves provide samples of the SL or FL.

Negotiation of meaning occurs as a result non-understanding or incomprehension to the total meaning of a message conveyed by speakers. Varonis and Gass (1985) have developed a model to describe the structure of 'non-understanding routines' where meaning negotiation takes place. Such routines generally consist of: I) a 'trigger', the utterance or part of the utterance which creates a problem of understanding; 2) an 'indicator', indicating that a previous utterance was not understood; 3) a 'response' to the indicator; and 4) a 'reaction' to the response.

B. Method

The researchers was engaged in two locations of observation and audio-recording of the lessons. First, a-2-hour L2 classroom research took place in one of advanced English for Tertiary Studies (ETS) classes in a language centre of an Australian university. It was taught by a very experienced professional teacher (T), both as a classroom teacher and expert/researcher in the field. Six non-native speaking learners were involved in the lesson, coming from various Asian countries: 3 from Thailand, the others from Indonesia, Vietnam and South Korea. They had been in Australia and studying at the centre for more than six months and were prepared shortly to start their university studies. The lesson focused on the issue of 'air pollution' in Indonesia and related neighbour ASEAN countries which was the headline of many mass media around that time, based on an authentic reading material from 'today's newspaper. The role of the one of researchers was non-participant observer. Second, -2-hour FL classroom research took place in an advanced class of an education college in Indonesia. One of the researchers served as the teacher (with 22 years of English teaching experience) with six students; both the teacher and students were homogeniously Indonesian. Thus, the classes under study were different in terms of the participants' first language background, the location, and the status of English being studied.

The data are of two kinds. First, the data obtained through classroom observation include the researchers' overall impression of the classroom, note-takings of the non-verbal behaviours, recording of what was written on the board and the attempt to remember and differentiate the learners' voice. The second data was obtained through audio-recording the lesson which was then transcribed. The transcription is a modification of the IPA transcription convention developed by Brown and Yule (1983, cited in Clennell l994, p.4).

For the purpose of the study, we have relied on recording transcripts as they cover almost all of the classroom activities along with the observational data as the samples of this small study. From this transcript, for detailed analysis, we again selected several salient sequences of turns which transparently show how teacher-learner interaction and negotiation of meaning occured. The samples can show the nature of teacher's input, interactional structures and learners' output. The reason for taking this sort of samples is that besides their quite long

sequences which reveal the complexities of the interaction, they do represent the nature of nearly the whole ranges of the classroom interaction. The analysis is generally based on the extract of each sample; however, it is preceded by a short macro analysis of the classroom and further followed up by some conclusion and implications of the study for SL and FL classroom teaching.

C. Research Findings and Discussion

This section includes a macro-analysis of the classrooms within which interactions and negotiation of communication problems took place; the process of the meaning negotiation, that is, how comprehension and understanding was achieved in such a process, and how each student was engaged in the process of interaction and negotiation of meaning.

A Macro-Analysis of the Classrooms

Both classrooms have differences and similarities. First, the status of English studied in the class in Australia is a second language whereby students lived an English speaking Australian environment, while that in the Indonesian class is a foreign language whereby English has no official status. Second, the students and the teacher in Australia were linguistically heterogeneous and so using English was a propensity, while the class in Indonesia consisted of participants with the same language background and so using English for them was optional, but obliged by the class rule. Third, both groups were in advanced English classes and in the learning process got access to print dictionary and mobile dictionary to help them with looking up difficult words so that they could understand the text and expressed themselves in English. The use of Indonesian in the second class was announced forbidden by the teacher at the beginning of the class and reminded a few times during the class, and the students looked happy with the rule. Thus, despite the different contexts, the classes shared more characteristics of learning. Therefore, similar research findings had been expected.

Furthermore, as shown in the transcripts of both classroom interaction contained three basic elements of samples, guidance and management activities. First, 'samples' were produced when each of the teachers and their students dealt with when brainstorming the topic and finding difficult words of the text. What is salient in these samples is that they are always contextual or in use, not in isolation as they either refer to any context in the learners' experiences or in the context of the reading passage. These contextual samples may ostensibly lead to genuine communication in which the negotiation of meaning may always be conducive to take place. Second, the target language used as 'guidance' to the classroom interaction has indicated a modified teacher talk or 'foreigner discourse' where the teachers (henceforth,Ts) modified their input and attempted to modify the structure of the interaction. Third, the management activities had a significant role for maintaining the teachers' agenda of the classroom activities. In these activities, Ts had always given opportunities for interaction in which meaning negotiation also took place.

As stated previously, negotiation of meaning occurs as a result non-understanding or incomprehension to the total meaning of message conveyed by the speaker. However, for pedagogic purposes in the classroom, Ts in both contexts sometimes pretended or actually did

not capture the leamer's output and further questioned their learners to explain until an intended message was achieved. The data show that there were many 'non-understanding routines' which Ts and their learners had used. Ts' agenda was for the students to brainstorm the topic 'air pollution', that is, to look for words, phrases or some short explanations that are worth associated with the notion 'air pollution'. It is apparent that Ts had always kept questioning by providing 'scaffolding which helped the learners to find more appropriate output in line with Ts' plan.

The Processes of Meaning Negotiation

To analyze how the negotiation of meaning occured, two extracts taken from each of the teaching contexts were used.

Extract 1 (of the class in Australia): *from 'material' to 'domestic uses'*

Turn	*Speaker*	*Expression*
36	T	do you understand /pollution +
37	S2	like the /material + that material cause air pollution +
38	T	/material
39	S2	/\yea + material that + that + that only to cause by air \pollution + like the + the + harm + like the ++ the waste + waste
40	T	/waste
41	S2	/\yea + \waste +
42	T	what sort of /waste +
43	S2	+++ what sort of /waste + any \waste [laughs]
44	S2	like the + the waste + because the waste come from + ee + the burning of fuel + fuel + oil + and come from the + the domestic++
45	T	\/domestic /uses +
46	S2	/\yea +++

When T asks 'do you understand /pollution+' (tum 36), S2 tested his hypothesis by using 'material' which causes air pollution (tum 37). The item 'material' seems to be still too general to be associated with the notion 'air pollution' and so, by repeating the selected key word 'material' in a rising intonation, T required some further confirmation from S2 about his meaning of that word in a more appropriate relation to the focus, air pollution. This had enabled S2 to produce more speech (turn 39) and some closer vocabulary items were introduced - 'harm' and 'waste'. More interesting is T's choosing the word 'waste', not 'harm' as a better word associated with the focus, yet it still needed to be checked for confirmation from S2 by which T specified to the sort of waste S2 meant to convey (tum 43). Therefore, S2 had been facilitated to produce lexical items which are more closely associated with the topic, including the item 'domestic...', which, while S2 was thinking of its next appropriate item, T realised S2's difficulty so that he took over the tum and completed the chunk as 'domestic uses'. At this stage, it seems that T assumed that S2 had come to the understanding of some concept associated with the topic.

Extract 2 (the class in Indonesia): *what is /bountiful forest here++*

Turn	*Speaker*	*Expression*
67	T	++ how about the words bountiful /forest++ what is /bountiful forest here++ Anybody /know+
68	S1	/plenty
67	T	/\plenty, right
68	S1	/a lot of forests
69	T	what do you mean by alot of /forests+++ there are forest /one + forest /two
70	S1	Mmm
71	T	/\yeah ++ I understand what you mean + but we have to make it very clea+. but what bountiful word here /means ++ does it mean there are more than one /forest++ or only one /forest ++ the term bountiful word is not about number ++ but something else+ what is /it++ what is bountiful /forest++ the forests are already more than one of course that is plural++ the forests that are bountiful. \/is it about number of forests or something /else++
72	S2	\/maybe
73	T	mmm
74	S2	bountiful forests is emm because as we know the forests in Indonesia is very emm very huge I mean ++and the forests in Indonesia has rich emm has a rich++
75	T	/rich+
76	S2	/\yea
77	T	bountiful means /rich+
78	S2	/\yea
79	T	so rich of /what++ do you have an /idea++ what are the forests rich /of++
80	S2	/\rich of forests+
81	T	is it the bountiful of /trees+
82	S3	/\like palm oils
83	S4	/\animals
84	T	So the forests are rich of many things+trees+animals+and many others inside+that's bountiful+
85	Ss	\yes

The extract shows that the students had a general understanding of the word 'bountiful', but seemed to find some difficulty to explain it to the teacher (T) who wanted to ensure their full understanding of the concept. Thus, in turns 68 and 74, S1 and S2 offered the notions 'plenty', 'huge', and 'rich' to characterize 'bountiful'. However, they failed to identify what the bounties were. As shown in turn 68, S1 referred to the number of forests, and in turn 80 S2 referred to [something as being] 'rich of forests', whose meaning is that forests make up

the bounties. The role of T in guiding the class to reach the full sense of the concept as in turns 71, 74, 79, 81, and 84 had facilitated the students' understanding so that, as in turns 82 and 83, S3 and S4 successfully mentioned 'palm oils' and 'animals', in addition to 'trees' mentioned earlier by T, as what the forests are bountiful of. Turn 85 indicated students' agreement and understanding of the notion.

D. Conclusions

The research lead to a few conclusions. First, classroom activities, or precisely classroom interaction is really a collaborative endeavour whereby both T and the learners at any stage play equal roles - interactants; that is, not only the learners who need modified input to be able to comprehend some message, but also the teacher. In this relation, Allwright (1984, p.157) remarks "we can no longer see teachers simply as teachers, and learners simply as learners, because both are, for good or ill, managers of learning". Second, as evident in the extracts, Ts had employed a huge number of interactional devices which require the learners' active involvement and output production. By doing this, the teachers had taken the class to a stage of success, namely of achieving a shared understanding of a previously strange message (cf. Tsui 1991, 1995). Third, despite the different contexts of teaching, especially in the homogeneos L1 background of the teacher and students, as long as there is a commitment and support (such as access to the dictionary for instant looking-up) and the student level is high enough, the use of full English or another foreign language in the classroom is possible. It is evident in the data that students who were shy or did not contribute orally at the beginning of class were gradually attracted and eventually contributed actively in the oral interaction and negotiation of meaning in the class.

E. References

Aijmer, K. & Stenstrom, A.B. (2005). Approaches to spoken interaction. *Journal of Pragmatics*, *37*, 1743-1751.

Allwright, R. (1980). Turns, topics and tasks: patterns of participation in language teaching and learning'. In D. Larsen-Freeman (ed.), *Discourse analysis in second language research*. Rowley, Mass.: Newbury House.

Allwright, R. (1984). The importance of interaction in classroom language learning. *Applied Linguistics*, *5*(2), 156-171.

Brown, G. and Yule, G. (1983). *Teaching the spoken language*. Cambridge: Cambridge University Press.

Clennell, C. (1994). Investigating the interlanguage communication strategies of low-level learners of English in two-way tasks. In J. Burton (ed.), *Perspectives on the classroom* (pp.1-19). Adelaide: CALUSA.

Clennell, C., Mickan, P. and Burton, J. (1997). *Second language learning -TESOL, study g*uide. Adelaide: FLC-Uni-SA.

Cook, V. (1993). *Linguistics and second language acquisition*. London: Macmillan.

Dose, S. (2013). 'Describing and teaching spoken English: an educational-linguistic study of scripted speech'. Unpublished PhD dissertation, Universitat Gieben, Germany.

Ellis, R. (1991). The interaction hypothesis: a critical evaluation. In E. Sadtono (ed.), *Language acquisition and the second/foreign language classroom* (pp.179-211). Singapore: SEAMEO RELC.

Ellis, R. (1994). *The study of second language acquisition*. Oxford: Oxford University Press.

Hatch, E. (1978). Discourse analysis and second language acquisition. In E.Hatch (ed.), *Second language acquisition*. Rowley, Mass: Newbury House.

Jazadi, I. (2000). Constraints and resources for applying communicative approaches in Indonesia. English Australia Journal, *18*(1), 31-40.

Krashen, S. (1977). Some issues relating to the monitor model. In H. Brown et al.(eds.), *On TESOL '77*. Washington DC: TESOL.

Krashen, S. (1980). The theoretical and practical relevance of simple codes in second language acquisition. In R. Scarcela and S. Krashen (eds.), *Research in second language acquisition*. Rowley Mass: Newbury House.

Krashen, S. and Terrell, T. (1983). *The natural approach: language acquisition in the classroom*. Oxford: Pergamon Press.

Littlewood, W.T. (1981). *Communicative language teaching*. Cambridge: Cambridge University Press.

Long, M. (1983). Native speaker/non-native speaker conversation and the negotiation of comprehensible input. *Applied Linguistics*, *4*, 126-141.

Long, M. (1989). Task, group, and task-group interactions. *University of Hawai'i working papers in ESL*, *8*(2), 1-26.

Stephens, M.A. (2011). Why exposure to prosody should precede the teaching of reading. *The Language Teacher*, *35*(4), 68-73.

Swain, M. (1985). Communicative competence: some role of comprehensible input and comprehensible output in its development. In S. Gass and C. Madden (eds.), *Input in second language acquisition* (pp. 235-253). Mass: Newbury House.

Syarief, K. (2005). Communicative language teaching: exploring theoretical foundations and practical challenges. *Jurnal Ilmu Pendidikan*, *12*(3), 1-13.

Tsui, ABM. (1991). Leamer involvement and comprehensible input. *RELC Journal*, *22*(2), 44-60.

Tsui, ABM. (1995). *Introducing classroom interaction*. London: Penguin.

Varonis, E. and Gass, S. (1985). Non-native/non-native conversations: a model for negotiation of meaning . *Applied Linguistics*, *6*, 71-90.

Development Management of Lessson Study Learning Community (Case Study at Muria Kudus University)

Sri Utaminingsih[1], Muh. Syafei[2], Slamet Utomo[3],Edris Zamroni[4], Ika Ari Pratiwi[5]
[1, 2, 3, 4, 5]Muria Kudus University
[1]utami_ningsih28@yahoo.com, [2]muh.syafei@umk.ac.id [3]edris.zamroni@umk.ac.id

Abstract

The purpose of this article was to describe the development management of lesson study learning commmunity as an effort to improve the learning quality at Muria Kudus University. This study used a qualitative descriptive approach. Methods of collecting data used observation, interview, documentation and FGD. The LSLC Development Management Model at UMK included Planning, Organizing, Coordinating, Communicating and Evaluating. Aspects of planning included problem identification, goal setting, strategy & methods, funding, indicators of successful program, and organizational aspects included the establishment of LSLC program unit, with good success criteria. Activities undertaken were workshop and socialization of lesson study in 2015-2017. Coordination was to codify the implementation of the program in order to run smoothly by building cooperation between individuals and institutions, communicating with leaders, lecturers and school partners, with very good criteria. Evaluation of the program was qualitative and quantitative based on indicators with fairly good criteria. The conclusion of this article that the implementation of LSLC management at UMK was in good criteria, then need commitment together with all academic community to develop LSLC as an effort to improve the quality of learning.

Keywords: *management, development, lesson study, learning community*

A. Introduction

Presidential Regulation number 8 of 2012 on the Indonesian National Qualification Framework (KKNI) is published to encourage all elements of education to innovate. Indonesian human resources are expected to meet the qualifications of competence as outlined by the Presidential Regulation. As a follow up, the Ministry of Research, Technology and Higher Education issued a Regulation of Minister of Research, Technology and Higher Education number 44 of 2015 on National Standards of Higher Education as the main reference of higher education governance, especially the implementation of Tri Dharma Perguruan Tinggi which includes Education, Research and Service to Society. This triggered all higher education institutions to clean up, especially in providing an effective and efficient education to produce Indonesian human resources that compete globally or at least meet the Indonesian National Qualification Framework (KKNI).

Muria Kudus University (UMK), as one of the Institutions of Higher Education on the north coast of Central Java, with the accreditation of the institution B, at this time continue to improve through the process of improving the quality of graduates through various means. One of them is to make curriculum improvements to better suit the demands of society's needs as

well as the national standard of higher education. The activity was carried out through various policies, especially regarding curriculum policy for the entire course should be oriented to the national standards of higher education as well as improving the quality of learning for the academic community. These activities are implemented by the Institute of Education (Lemdik) Muria Kudus University through a variety of workshops such as the Workshop on Higher Education Curriculum, *Learning* Model *Problem Based Learning,* Learning Model *Student Centered Learning (SCL)* and Revitalization lecturer in Harnessing Research Center as a refreshing way science is taught to students.

The learning process undertaken by lecturers so far has not been able to develop high-level thinking skills, this is suspected by the performance of students in solving the problem (only one alternative answer to solve a problem). The lectures performed by most lecturers are limited to providing rote knowledge, and less emphasis on high cognitive aspects, such as the sharpness of the power of analysis and evaluation, the development of creativity, the independence of learning, and the development of affective aspects. Passive students and acquired knowledge are often less useful in life and work.

The results of other evaluations in the lecturers' learning process during this time indicate that the lecture material is less oriented in the field of science, field research results, and long-term needs. Most lecturer at BK, PBI and PGSD FKIP MSE uses the same pattern tends learning from year to year. Curriculum changes have no impact on changing teaching materials, methods, and learning strategies. Most lecture competencies / goals are still limited to low level cognitive and psychomotor domains. Third Prodi as LPTK very aware that teachers resulting from the PT (Universities) are less innovative and creative, will have an impact on teachers' teaching styles that tend to imitate his teachers. If the professor much apply a lecture in the lecture the teacher produced will use the lecture method also in teaching the students. Thus it would be a lot of teachers who can not adapt to the changing times and the lack of creativity in teaching their students.

Guidance and Counseling Study Program, English Education Study Program and Elementary School Teacher Education Study Program (PGSD), has conducted alumni search in order to get a picture of the quality of education implementation. From the tracer study conducted since 2014, 2015 and 2016 shows that waiting period to get a job long enough (over 1 year), the first salary earned is quite low (average 500 thousand), and not all graduates absorbed become teachers in time one year after graduation. From these three indicators it appears that the quality of education in the Program Study Program is still low and need to be improved its quality. Improving the quality of education can be done through improving the learning process.

As a form of implementation of ideals to produce prospective professional teachers, FKIP has endeavored to organize various training and workshop activities especially related to learning innovation. Activity ever undertaken, among others, is to encourage every new lecturers to participate in training activities Basic Skills Instructional (PEKERTI) and *Applied Approach* (AA) although it has had a basic ability pedagogic as an undergraduate and masters penididikan done in an effort to continue to encourage faculty to renew the study mainly teaching strategies so that students get the competencies they need to achieve effectively. In addition, the introduction of Lesson Study has also been done by the Faculty of Teacher

Training and Education by bringing Mr. Ryo Suzuki (JICA) and Dr. Asep Surpiyana, M.Si. (UPI Badung) on 18 to 19 April 2016. In addition FKIP has also adopted the approach of Student Centered Learning (SCL) in lectures throughout the course owned. The curriculum prepared by each course has been adapted to the National Standards of Higher Education. All of the current study programs have a KKNI-oriented curriculum that each has a special identification such as Counseling for Young Learner Indonesia (CYLIN) in the Counseling and Counseling Study Program, Teaching English for Young Learner in Indonesia (TEYLIN) in Language Education Studies Program UK and TEBLIN in the Primary School Teacher Education Study Program. Every beginning and end of the semester also implemented Monitoring and Evaluation (M & E) study in an effort to supervise implementation of the learning that has been and will be implemented in a single semester.

Overall activities as described previously are expected to improve the quality of learning and the quality of graduates as well. Lecturer is expected to teach as well as a model of prospective teachers that will be generated mainly related to the innovations made in the lecture. This model could eventually be transmitted properly to the students so as well as the dissemination of effective ways to improve the overall quality of education. The mission is expected to produce professional counselors from the Study Program Guidance and Counseling as well as professional teachers from English Education Study Program, Mathematics Study Program and Study Program Penididkan Indonesian Language and Literature, as well as Professional Class Teachers from Elementary School Education Program.

The mission could fail, because although the faculty has mengariskan use *Student Centered Learning* approach in the learning process, but the fact is not all courses of conduct and follow the policy. Although, if seen from the percentage is not too much, but this could be an obstacle to the achievement of goals. This is caused by some academic human resources that sometimes still difficult to implement new innovations, especially in learning. Could be this is caused by the mastery of the old learning model that has been too ingrained and considered effective by each lecturer so reluctant to turn to choose another model.

The strategy seeks to overcome these problems include the supervision at the beginning and end of the semester to control the extent to which the effectiveness of a variety of workshops and policies that have been made in changing patterns of teaching faculty. In addition, it is currently being planned a more intensive workshop on lesson study and forming community learning to continuously optimize the various innovations in learning. Implementation of Lesson Study was chosen based on the experience obtained from Universitas Pendidikan Indonesia (UPI), Yogyakarta State University (UNY) and State University of Malang (UM). The experience of the three institutions in implementing LPTK Lesson Study shows increase learning ability of students in higher-level cognitive aspects, increase the professionalism of teachers and increase accountability of job implementation of lectures by professors (a climate of openness, responsibility, work planned and evaluated) .Tujuannya once again is the effectiveness of lectures with various learning innovations to improve the quality of graduates in the Faculty of Teacher Training and Education.

B. **Discussion**

Lesson Study

The concept and practice of Lesson Study was first developed by the teachers of basic education in Japan, which in Japanese is called by kenkyuu jugyo. Is Makoto Yoshida, a man who is considered a great meritor in developing kenkyuu jugyo in Japan. The success of Japan in developing Lesson Study seems to be followed by some other countries, including in the United States, which was cultivated and popularized by Catherine Lewis who has been doing research on Lesson Study in Japan since 1993. While in Indonesia is now starting intensively socialized to serve as a model in order to improve the learning process of students, even at some schools have begun to be put into practice. Although initially, Lesson Study was developed in basic education, but now there is a tendency to apply also to secondary education and even higher education.

Lesson Study is not a strategy or method in learning, but is one of the coaching efforts to improve the learning process conducted by a group of teachers in a collaborative and sustainable, in planning, implementing, observing and reporting learning outcomes. Lesson Study is not a momentary project, but it is an ongoing continuous activity and an effort to apply the principles in Total Quality Management, which is to improve the process and outcomes of student learning continuously, based on data. Lesson Study is an activity that can encourage the formation of a learning community that consistently and systematically perform self-improvement both on individual and managerial level. Slamet Mulyana (2007) provides the formulation of Lesson Study as one of the models of professional education through collaborative learning and continuous learning based on the principles of kolegalitas and mutual learning to build the learning community. Meanwhile, Catherine Lewis (2002) mentions that: "Lesson study is a simple idea. If you want to improve instruction, what could be more than collaborating with fellow teachers to plan, observe, and reflect on lessons? While it may be a simple idea, lesson study is a process complex, supported by collaborative goal setting, careful data collection on student learning, and protocols that enable productive discussion of difficult issues ".

Bill Cerbin & Bryan Kopp argued that the LS has four (4) main objectives, namely to: (1) obtain a better understanding of how students learn and teachers teach; (2) to obtain certain results that can be utilized by other teachers, outside the Lesson Study participants; (3) improving systematic learning through collaborative inquiry. (4) establish a pedagogical knowledge, where a teacher can gain knowledge from other teachers.

Based on interviews with a number of teachers in Japan, Caterine Lewis argued that the LS is very effective for teachers because they have advantages and opportunities for teachers to be able to: (1) think through more carefully about the objectives, specific material that will be taught to students, (2) to think deeply about the learning objectives for the future interests of students, for example about the importance of a friendship, the development of perspective and ways of thinking of students, and the fondness of students to science, (3) reviewing the best things that can be used in learning by learning from other teachers (participants or participants of Lesson Study), (4) learning about the content or subject matter of other teachers so as to increase knowledge about what should be given to students, (5) developing skills in teaching, both at planning the learning as well as during the learning activities , (6) building skills through collegial learning, in the sense that teachers can learn from each other what they feel is still lacking, both about their knowledge and skills in teaching students, and (7)

developing "The Eyes to See Students" (kodomo wo miru me), in the sense with the presenting of the observer (obeserver), the observation of student learning behavior can be more detailed and clear.

Meanwhile, according Lesson Study Project (LSP) some other benefits to be drawn from Lesson Study, among others: (1) teachers can document the progress of work, (2) the teacher can obtain feedback from members / communities, and (3) the teacher can publish and disseminate the final results of the Lesson Study. In the context of education in Indonesia, this third benefit can be used as one of Teacher's Script Writing, both for the promotion and certification of teachers.

In relation to the implementation of the Lesson Study, Slamet Mulyana (2007) presents two types of Lesson Study implementation, the school-based Lesson Study and MGMP-based Lesson Study. A school-based learning lesson is carried out by all teachers from different fields of study with the principal in question. with the goal of keeping the quality of the process and learning outcomes of all subjects in the school can be improved. While the MGMP-based Lesson Study is an assessment of the learning process undertaken by a particular group of subject teachers, with an in-depth study of the learning process on a particular subject, which can be implemented at the district, district level or may be further expanded.

In terms of group membership, the University of Columbia's Lesson Study Reseach Group recommends only 3-6 people, consisting of teachers and principals, and other interested parties. The principal needs to be involved primarily because of his role as a decision maker in the school. With his involvement in the Lesson Study, it is expected that the principal can make an important and appropriate decision to improve the quality of learning in his school, especially in the subjects studied through the Lesson Study. In addition, it can also invite other parties who are considered competent and have concern for student learning, such as school supervisors or experts from universities.

Lesson study gives a lot of things, according to the researchers considered to be effective in changing teachers' teaching practices such as the use of learning materials in concrete terms to focus on issues that are more meaningful, take the learning context and experience of teachers were explicit, and also provide support to teachers in peer relationships. In other words, lesson study provides many opportunities for teachers to make meaningful educational ideas in their teaching practice, to change their perspective of learning, and to learn to observe their teaching practices from a student perspective. In lesson study, we see what happens in learning more objective and it helps us understand the important ideas without having to pay more attention to other issues in our class.

Lesson Study Management

As stated earlier, Lesson Study basically covers three parts of the activity namely planning (Plan), implementation (Do), and reflection (See). Meanwhile, Slamet Mulyana (2007) presents three stages in the Lesson Study, namely: (1) Planning (Plan); (2) Implementation (Do) and (3) Reflection (See). While Bill Cerbin and Bryan Kopp of the University of Wisconsin explores six stages in the Lesson Study, namely:

1. Form a Team: form a team of 3-6 people comprising as much as the teacher concerned and the other parties who are competent and have the interests of the Lesson Study.

2. Develop Student Learning Goals: memdiskusikan team members what will be taught to students as a result of Lesson Study.
3. Plan the Research Lesson: teachers design learning in order to achieve the learning objectives and anticipate how students will respond.
4. Gather Evidence of Student Learning: one of the teachers implement instructional team, while others make observations, collect evidence of student learning.
5. Analyze Evidence of Learning: the team discusses results and assesses progress in achieving student learning objectives
6. Repeat the Process: the group revises learning, repeats stages from the 2nd to the fifth stages as mentioned above, and the team shares the findings

Lesson Study at FKIP Muria Kudus University

Pioneering the application of *Lesson Study* in FKIP Muria Kudus University started since 2014. Currently, conducted various stages for the implementation of *lesson study* could actually be an academic community that is able to meningatkan quality of learning. Hold the activities carried out are as follows:

1. Developing *Teaching Plan* and *Teaching Materials.* Each Prodi Group class into two groups of Expertise Areas (KBK) and lecturers of the KBK Kependidikan and KBK Scholarship. Lecturer grouping is based on the subjects that diampu. If the lecturer teaches the subjects of education, then the concerned grouped in KBK kependidikan. If a lecturer teaches a scientific course then the group is grouped in a scientific KSE. Each cluster of science is determined by the responsible person, namely chairman and secretary.
2. Each clump of subjects determine the courses that will be used as an object for *Lesson Study*. Clumps are clumps educational courses on odd semester and a clump of scientific subjects in the second semester. Prodi BK selected clusters of scientific courses Personal Development Counselor, cluster of education subjects Development of Learners. PBI Prodi elected clump education courses *Teaching English as an Additional Language* (Teel), Essay scholarship Wraiting clumps. while the PGSD of selected educational backgrounds is the course of Management of Education & Learning, Scientific class of Sain Concept for PGSD.
3. *Lesson Study* implementation schedule *for Learning Community*, made with regard to subjects which are used as an object *lesson study* that does not interfere with the task of lectures from professors. Two hours of lecture (100 minutes) on the chosen course schedule, used for learning activities, plus approximately two hours (120 minutes) thereafter for reflection and discussion of subsequent lecture plans. All lecturers in the Group of Expertise (KBK) are actively involved in the discussion of the lecture plan, observation and reflection.
4. *Lesson Study* activities follow the order of presentation of the course material for the courses selected.
5. Preparation of Events Unit Class (SAP) is done jointly or by lecturers appointed, and discussed / addressed by the lecturer. In the preparation of SAP it is focused on, among others:
    1) Student learning independence.

2) Achievement of cognitive aspects at a high level, namely: analysis, evaluation and creativity.
3) Growing boldness expresses responsible opinions, self-confidence and other affective aspects.
4) Application and development of innovative learning process, for *example: Problem Solving, Problem Base Learning, ICT base learning, Collaborative Learning* or *Contextual Teaching and Learning.*
5) Involvement in addressing global challenges by developing local potential.
6) Development of contextual teaching materials with the reality of life.
7) Application of research results related to the development of learning or teaching materials.
8) Development of student competence on psychomotor aspect.

6. Group of lecturers discuss the tools and media that need to be used for the implementation of the plan of lectures, as well as the observation that in accordance with the things that are emphasized in the lecture plan. Learning media adapted to the desired competencies to have students and materials that will be given to students, for example: handouts, diktat, student activity sheet that contains problems to be solved and instructions, utilization of ICT and so forth.
7. Practicing *Open Lesson* and Reflection in Learning. SAP and lecture media results of group discussions are implemented in the classroom by an agreed model lecturer, while other lecturers observe. Observation focused on student learning activities, because the subject is student learning. The documentation team takes pictures with photographs or videos that can be used for discussion on reflection or learning materials.
8. After the implementation of the class is completed, immediately executed reflection. In the reflection discussion activities led by the head of this group, the first opportunity is given to the model lecturer to convey impressions and obstacles in implementing the plan. Furthermore, other lecturers presented the results of the observations along with their analysis (based on facts, not just theories / opinions) for the improvement of lecture plans that have been prepared or as a consideration for preparing the next lecture plan. Activities begin to design until reflection is a one-cycle activity and activities will be implemented up to 4 cycles with an interval of 2 weeks.

Results of Lesson Study Implementation

The results of this activity are:

1. Identification of learning problems in guidance and counseling courses, English Education and Elementary School Teacher FKIP MSEs and alternative solutions based on the use of *hands-on activity, mind-on activity, daily life* and *local materials.* This can be a very valuable input for the effort to improve the quality of graduate candidate's education in Guidance and Counseling, English Education and Teacher Education of FKIP UMK Elementary School
2. Their innovative teaching model in Guidance and Counseling Program, English Education and Elementary School Teacher and school FKIP UMK UMK FKIP partners involved in the activities of this *lesson study*.

3. The establishment of learning communities among lecturers, between students and between students and lecturers is very useful to improve the effectiveness of academic communication in order to improve the quality of learning in the Study Program Guidance and Counseling, English Education and Teacher Education Primary School FKIP UMK
4. The discovery of various learning models appropriate to the curriculum and learning problems in Guidance and Counseling Program, English Education and Elementary School Teacher FKIP FKIP partner school UMKdan MSEs based on the condition of the student / students and campus / school-based learning through *hands-device* utilization *activity on, minds-on activity, daily life* and *local materials.*
5. Increased student / student learning ability in Guidance and Counseling Study Program, English Education and Teacher Education of FKIP Elementary School of UMK / school especially in high level cognitive aspect and affective aspect.
6. Increasing the fulfillment of learning rights of every student / student

C. Conclusion

From the illustration above, it can be concluded that the activities of Lesson Study is basically a research activity about learning and sharing experiences of learning observation for improve the quality of learning. Lesson activities appeared to have a broad enough impact for the emergence of other activities are innovative. If the Lesson Study done really well prepared so that everyone who follows the feeling gained invaluable knowledge, then either consciously or unconsciously follow-up of these activities will happen by itself can take place at the level of individual, group, or system.

D. Reference

Bill Cerbin & Bryan Kopp. (2017). *A Brief Introduction to College Lesson Study. Lesson Study Project.* online: http ://www.uwlax.edu/sotl/lsp/index2.htm

Baba,T. and Kojima, M. (2003*). Lesson Study, In Japan International Cooperation Agency (Ed.) Japanese Eductional Experiences*. Tokyo: Japan International Cooperation Agency.

Catherine Lewis (2004) Does Lesson Study Have a Future in the United States?. Online: sowi-online.de/journal/2004-1/lesson_lewis.htm

Fernandez, C., and Yoshida, M. (2004). *Lesson Study: A Japanese Approach to Improving Mathematics Teaching and Learning*. New Jersey: Lawrence Erlbaum Associates Publishers.

Indonesia (2005). Undang-Undang Republik Indonesia Nomor 14 Tahun 2005 Tentang Guru dan Dosen. Indonesia (2005). Peraturan Pemerintah Republik Indonesia Nomor 19 Tahun 2005 Tentang Standar Pendidikan Nasional.

Lewis, C., Perry, R., and Hurd, J. (2004). *A Deeper Look at Lesson Study*. Educational Leadership.

Nonaka (2005). *Knowledge Creation*. Makalah Presentasi pada Seminar Nasional yang diselenggarakan Universitas Indonesia.

Saito, E., Harun, I., Kuboki, I. and Tachibana, H. (2006). Indonesian Lesson Study in Practice: Case Study of Indonesian Mathematics and Science Teacher Education Project. *Journal of In-service Education*. 32 (2): 171-184.

Saito, E., Sumar, H., Harun, I., Ibrohim, Kuboki, I., and Tachibana, H. (2006). Development of School-Based In-Service Training Under an Indonesian Mathematics and Science Teacher Education Project. *Improving School*. 9 (1): 47-59.

Slamet Mulyana. 2007. Lesson Study (Makalah). Kuningan: LPMP-Jawa Barat

Stevenson., H.W., and Stigler, J.W. (1999). *The Learning Gap*. New York: Touchstone.

Stigler, J.W., and Hiebert, J. (1999). *The Teaching Gap: Best Ideas from the World's Teachers for Improving Education in the Classroom*. New York: The Free Press.

Supriatna, A. (2009). *Peningkatan Profesionalisme Pendidik Melalui Lesson Study Dan Penelitian Tindakan Dalam Kegiatan Lesson Study*. Makalah Disampaikan dalam Seminar Nasional di UNJ tanggal 21 Desember 2009.

The Effect of Local Excellence-Based Cooperative Script through Lesson Study Activities in Increasing the X Graders' Cognitive Learning Achievement

M. Marzuki

Biology Education Study Program, Hamzanwadi University, Indonesia

email: mohamedart456@hamzanwadi.ac.id

Abstract

The purpose of this research is to know the influence of local excellence-based cooperative script through lesson study activities in increasing the X graders' cognitive learning achievement. This is an experiment research. The population is all the X grade students of SMAN 1 Pringgasela in the school year 2011-2012. The sample of research is taken through simple random sampling, and X-A is the experiment class and X-E is the control class. The lesson study is applied in three cycles. Each cycle consists of plan, do, and see. The design of this research is pretest posttest control group design. The instrument used is a multiple choice comprehension test. The result of the analysis indicates that the mean of the posttest in experiment class is 80.13 and in the control class is76.32. The hypothesis test is done through statistical analysis using t-test formula in significance level 5%. It results t-count 17.42. This result is then compared to t-table (1.995). It is found that t-count (17.42) > t-table (1.995). In short, local excellence-based cooperative script through lesson study activities have positive influence in increasing the X graders' cognitive learning achievement of the X graders of SMAN 1 Pringgasela in the school year 2011-2012.

Keywords: *cooperative script strategy, lesson study, cognitive learning achievement*

1. INTRODUCTION

Education is the expedient conducted to make environment in such a way to create a more effective process of learning. Effective education gives opportunity to students to develop their social ability in order to adapt with the problems they face. The local knowledge that is used as a lesson material is nothing but a description of the environment confronted to the child, so that they can do activities or can adapt to the situation described. For example, in the biology subject, the students' knowledge can be constructed in the surrounding environment (Pudyo Susanto, 1999 : 1-2).

Biology subjects in high school are developed through analytical, inductive, and deductive thinking skills to solve problems related to natural events. The characteristics of biology learning are more emphasized on building or construction of knowledge about the concept being discussed. The process of constructing this knowledge enables teachers creativity to create "PAIKEM-GEMBROT" (active, innovative, creative, fun, joyful and weighty learning) so that students participate actively that they have meaningful learning experiences, and teachers act as facilitators and motivators.

The empirical facts found by the researcher through observation activities in class X SMAN 1 Pringgasela in the academic year 2010-2011 was a monotonous learning so that students looked bored. They felt as if they were only objects sitting only for teachers who were explaining. In addition, learning takes place only for a certain group of students. The teachers as the main factor who determined the good or bad of education just looking upon the process of learning that passes by, regardless of how the development process was done. Additionally, based on the results of interview conducted by researcher to the biology teachers, the average value of the students in the first semester in the academic year 2011-2012 was 65. From the average score, it is seen that the students' biology learning results did not reach the target of minimum standard. While the minimum completeness criteria (KKM) established by the school on Biology subject is 70.

According Chotimah (2008), there have been efforts made by schools to educate the children of the nation. Among others is by providing additional hours of learning for learners. Other efforts include providing higher education, training, and workshops for teachers. However, after the training, teachers generally do not gain new experience. This can happen because in the training, the material is delivered through only lecturing, so the teachers only get the knowledge, not the ability to self-reflect. This weakness can be overcome through Lesson Study activities.

Lesson Study activities are believed to improve teachers' professionalism. Furthermore, to create lessons that do not make students feel bored, students are expected to have tasks and participate actively in the learning process which is by making local excellence-based script through Lesson Study. Students will show the ability to write, socialize, promote, and share to all other students. All can happen if the activities are focused on training and improving the teachers' professionalism. Lesson Study is the foundation in this case. The students are then provided with the knowledge about local excellence-based cooperative script well.

The ability of students is the main thing to achieve the learning mastery. Consequently, proper Biology learning strategy is needed to improve the students' cognitive learning outcomes. Based on the description, the researcher conducts a

research on the influence of cooperative script strategies based on local excellence through lesson study activities to improve the cognitive learning outcomes of students of class X SMAN 1 Pringgasela.

4. METHOD

This research is an experimental research. Experiment is a study that seeks for the effect of certain variables on other variables under controlled conditions. The design is Quasi Experiment—a design that has a control group but cannot function fully to control the extraneous variables that affect the implementation of the experiment. The design of Quasi Experiment used in this research is Pretest-Posttest Control Group Design (Sugiyono, 2009: 77).

The population in this study was all students of class X SMAN 1 Pringgasela in the school year 2011-2012 which consists of 5 classes covering 185 students. The research sample is determined by simple random sampling resulting X-A class that consisted of 38 students was the experiment class, and X-E class that of 38 students was the control class. The instrument used in this study was an achievement test in the form of multiple choice on ecosystem material. Because this study used experimental group and control group, the hypothesis test used is t-test (Sugiyono, 2009: 138).

5. FINDINGS AND DISCUSSION

The results of this study show that the pretest and post test data about students' mastery on ecosystem material. The pretest and post test data of students' cognitive ability was analyzed through parametric analysis technique using t-test. The data obtained in the Lesson Study activities revealed the improvement of teachers' ability in implementing cooperative script learning strategies became research variables. The observation data on the Lesson Study activity was obtained based on the response shown by the teacher when the Lesson Study activity was conducted.

Lesson Study in this study is not included in the variables that measured the effect on the dependent variable, but only as a means to train the competence of teachers in teaching students using Cooperative script. The Lesson study conducted in three times shows the improvement of teachers' ability in using Cooperative script learning strategy. The improvement of teachers' ability in using cooperative script learning strategy shows that phase I is not better than phase II, and either is phase II not better than phase III. The phases of the teachers' skill improvement by using Cooperative script strategy through Lesson Study activities were expressed by the observers

(teachers) in phase I to III which was 33.33% in Phase I, in Phase II was 77.77%, and in Phase III was 100%.

The results of this study is in line with the results of a research conducted by Husnul Chotimah about the development of school-based lesson study in SMA Laboraturium State University of Malang. She states that the activities in Lesson study give a positive impact in improving the quality of learning in SMA Laboraturium State University of Malang. Furthermore, according to Chotimah (2007), one of the positive impacts is the effectiveness that can improve the quality of learning in class. The quality of learning includes teaching learning as well as learning materials in the classroom (Herawati, 2001: 74).

The results of the data analysis obtained can be seen in the final test result given to the students, whereas the experimental class gained higher mean score (80.13) compared to the mean of the control class (76.32). The hypothesis test using statistical analysis with the t-test formula at the level of confidence 5% obtained t count 17.42. After being compared to the t-table, it resulted t-count (17.42)> t-table (1.995). From the data analysis, it shows that the students' cognitive learning outcomes in the experimental class is higher than the control class. This is influenced by the applied learning strategy. In this case, the experimental class is the students who learned by using Cooperative script strategy, while the control class is the students who were taught using conventional methods.

The influence of cooperative script learning strategy is better than conventional strategy because it has advantages. The benefits of Cooperative script are 1) it is a student-centered learning so that it can add confidence in the ability of self-thinking, find information from various sources, and learn from other students; 2) it can develop the ability to express ideas or ideas verbally and compare it to other students' ideas; 3) it can help empower each student to be more responsible in learning; and 4) the interaction during Cooperative script progresses can increase motivation and provide stimulation for thinking.

According to Lutfi Maratus Solikhah (2010), the results of research conducted on the implementation of cooperative script learning strategies for improving learning outcomes and thinking skills of students of X-5 SMA Negeri 3 Malang in 2009-2010 concluded that there is a positive and significant influence. Another research conducted by Joko Susilo (2010) on grade VIII students of SMP Muhammadiyah 4 Giri-Gresik shows that there is a significant difference between the students' learning comprehension of the experimental class and the control class. The implementation of cooperative script learning strategy is quite effective in improving the understanding

of students in learning. Thus, cooperative script learning strategy can be said to improve the expected learning outcomes.

6. CONCLUSIONS AND SUGGESTION

Based on the results of the research and the discussion, it can be concluded that there is an influence of local excellence-based cooperative script strategies through lesson study activities to improve the cognitive learning outcomes of students of class X SMAN 1 Pringgasela in the school year 2011-2012. From the result of the hypothesis test by using statistical analysis with t-test formula at confidence level 5%, it was obtained t-count 17.42. After being compared to the t-table, it resulted t-count (17.42)> t-table (1.995). Thus, the results of hypothesis testing are significant.

Other researchers who do the same research as this research should pay attention to the things that need to be improved and developed especially related to the instrument model and analysis developed by the researcher. In addition, the implementation of cooperative script-based strategies of local excellence is not limited to ecosystem material, but it can be developed on other materials or subjects.

7. REFERENCES

Ahmadi, dkk. 2012. *Mengembangkan Pendidikan Berbasis Keunggulan Lokal Dalam KTSP*. Jakarta : Prestasi Pustaka

Ali, Mohamad. 1985. *Penelitian Pendidikan Prosedur Dan Strategi*. Bandung : Angkasa

Amri, Ahmadi . 2011. *Proses Pembelajaran Kreatif Dan Inovatif Dalam Kelas*. Jakarta : Prestasi Pustaka Raya

Anneahira.2000. *Pembelajaran Biologi*. Online : http://www.anneahira blogspot.com

Arends,Richard I. 2008. *Learning To Teach Belajar Untuk Mengajar*. Yogyakarta : Pustaka Belajar

Arikunto, Suharsimi. 2002. *Dasar-Dasar Evaluasi Pendidikan*. Jakarta : PT. Bumi Aksara

Dr. Rusman, M.Pd. 2011. *Seri Menejemen Sekolah Bermutu, Model-Model Pembelajaran Mengembangkan Profesionalisme Guru*. Jakarta : PT. Rajawali Pers.

Education. 2000. *Pokok Bahasan Animalia*. Online : http://classic.sidwell.edu/us/science)

Nana, Ibrahim. 2010. *Penelitian Dan Penilaian Pendidikan*. Bandung : Sinar Baru Algensindo

Nanik siswidyawati (2009) dalam penelitiannya yang berjudul *Implikasi Model Problem Based Learning Untuk Meningkatkan Hasil Belajar Siswa Pada Peljaran Biologi Kelas Vii-A Smp Negeri 1 Gesi Tahun Ajaran 2007/2008*

Retno Mayasari, *Penerapan pembelajaran kooperatif model Cooperative Script untuk meningkatkan interaksi dan motivasi belajar akuntansi pada siswa kelas XI IS-1 SMA Negeri 1 Gondangwetan Pasuruan*.

Sanjaya, Wina. 2006. *Strategi Pembelajaran Berorientasi Standar Proses Pendidikan*. Jakarta : Kencana Prenada Media

Uno, hamzah. B. 2011. *Perencanaan Pembelajaran*. Jakarta : Bumi Aksora

Yuditya, Falestin. 2010. *Skripsi (Peningkatan Prestasi Belajar Akuntansi Melalui Penerapan Model Pembelajaran PBL Pada Siswa Kelas XI IPS 2 SMA Negeri 6 Surakarta*). Surakarta : Fakultas Keguruan Dan Ilmu Pendidikan Universitas Sebelas Maret .

Zaifbio. 2012. Tujuan pembelajaran biologi. Online : http://www.zaifbio. Wordpress.com

Suharsimi, Arikunto. 2006. *Prosedur penelitian suatu pendekatan praktik*. Jakarta: Rineka Cipta

Improvement of Student Learning Outcomes Through The Application of Student Facilitator and Explaining (SFAE) Learning Model on Digital Map Making Material (Action Research on Semester Vi Students of Geography Education Studies Program FKIP UM Mataram 2016/2017)

Sukuryadi[1], Agus Herianto,[2]Ibrahim Ali[3]
[1, 2, 3]Muhammadiyah University of Mataram
[1]syukur80@yahoo.com,[2]agusherianto_82@yahoo.com,[3]ibrahimali.geo@gmail.com

Abstract

The purpose of this study is to determine whether through the use of student learning model facilitator and explaining can improve student learning outcomes on the material of making digital map Lesson 2016/2017. Constructivist based learning model has not been used and applied by lecturers of geography education program at Faculty of Teacher Training and Education University of Muhammadiyah Mataram. The lecturers usually use the lecture method, Q & A on the teaching and learning activities, so that the students do not play an active role in the learning process, because they just sit quietly listen to lectures from lecturers. It affects the value of student learning outcomes that have not been able to meet the criteria of graduation is sufficient.

This type of research is a Classroom Action Research (PTK) or Classroom Action Research (CAR). The research model used is action research, there are four stages, namely (1) planning, (2) implementation, (3) observation, (4) reflection. The variables of this research are divided into two, namely (1) variable action is the use of student learning model facilitator and explaining, (2) expectation variable is the result of learning. Data collection techniques used are test and documentation techniques. The instrument research by using the items and the sheet of observation.

Technique of data analysis in this research is to use formula of completeness in classical that is compare result of test of cycle 1 with result of cycle 2 test. From result of this research show that there is improvement of student learning result result with KKM 75 in digital map making material by using student learning facilitator model and explaining. Learning outcomes in learning cycle 1 is 36.4% of students complete learning, while 63.6% of students are not complete while the second cycle is 91% of students complete while 9% of students are not complete.

Thus, the results of this study indicate that the learning by using group discussion methods based on Student facilitator and explaining can improve student learning outcomes in the sixth semester of geography education program 2016/2017.

Keywords:*learning outcomes, learning model, student facilitator and explaining.*

A. Introduction

The educational system adopted is no longer an effort of the intellectual life of the nation in order to be able to recognize its own reality and world but a deliberate and planned effort of consciousness (Berybe, 2001) through its development process. Children need to prepare themselves to enter the era of democracy. An era characterized by behavior, by involvement and experiencing directly.

Based on the preliminary observations made in the learning process in Geography Education Study Program of Muhammadiyah University of Mataram there are various problems about learning in the classroom. These problems include the average student passive in the learning process because it only receives material explanation from the lecturer, the student is not creative and not eager, the students are many sleepy and less attention to the material given and have a high level of dependence on lecturers and have a low level of independence . As a result, students do not dare to express their opinions when asked by lecturers.

Students are less courageous in expressing their opinions if in the process of discussion and having less involvement in the process of interacting and communicating with fellow students and lecturers during the learning process this can have a negative impact on student motivation to improve learning outcomes. This is due to the learning process applied by lecturers in each course is a conventional learning, in the form of explanations by lecturers without involving students communicate with other students to be active in the learning process. Learning requires mental involvement and student work. This can be seen from the result of recapitulation of student's task and quiz and the result of previous semester examination which is still much below the minimum completeness criteria (KKM) of course that is below 70, while the standard criteria of classical completeness in the study program of geography education is 85%. Judging from the problem so I need to test the results of student learning in the sixth semester by applying a constructivist based learning model (knowledge formation) that comes from the students themselves.

One of the constructivist-based learning model that can be used in the learning process in the geography education study program to improve learning outcomes is the learning model of Student facilitator and explaining (SFAE). Learning model Student facilitator and explaining is a learning model where students / learners learn to present ideas / opinions to other students (Rachmad Widodo (2009)). Learning model Student facilitator and explaining is one model of cooperative learning that involves the activity of students in the learning process. Model of cooperative learning by using small groups with the number of members of each group of 4-5 students on a heterogeneous (Trianto, 2007: 52). The purpose of this study is to improve student learning outcomes through the application of learning model Student facilitator and explaining (SFAE) in semester VI students of Education Studies Program of Geography Muhammadiyah University of Mataram.

B. Methods

The type of research used is Classroom Action Research (PTK). PTK in this research is a research to solve various problems that exist in the class under study by giving action in the form of SFAE model in learning process that take place.

Research Design

This research is a classroom action research conducted collaboratively and participatively. This means that researchers do not conduct their own research but work with other lecturers. Participatively, together with the research partners, will carry out this research step by step (Suwarsih Madya, in the educational journal (2006 :)). This research creates collaboration or participation between researchers and lecturers. Researchers directly involved in the research process from the beginning to the results of research in the form of reports.

Subjects and Research Objects

Subjects in this study are students of geography education program semester VI which amounted to 33 people Lesson Year 2016/2017. Objects in this study is the improvement of student learning outcomes in learning Geography facilitated by learning model Student facilitator and explaining (SFAE).

Research procedure

This research procedure is designed by using two cycles which in the activity of cycle I between laian:

1. Planning phase (planning)
2. Implementation of Action (acting)
3. Observation (Observing)
4. observation
5. Reflection

The activities in cycle II, among others:

1. Planning phase (planning)
2. Implementation of action
3. Observation
4. Evaluation
5. Reflection

Data collection technique

In this study the process of collecting data through several ways that is by observation / observation, documentation, test. If the data collection is done through observation, then the

instrument is the observer itself, with aids in the form of observation guidelines. Data collection is done through testing, then the instrument is a test.

Research Instruments

The research instrument is a tool used to collect data. The research instrument is a data gathering tool or information about the state of the subject. According to Suharsimi Arikunto (2008: 101) "research instruments are tools or facilities used by researchers, in collecting data to make the work easier and the results better in the sense of accurate, complete and systematic, making it easier to process. A research instrument is said to be valid if the measuring instrument used to obtain data (measure) is valid.

The study was conducted in two cycles, in which one cycle there were two meetings. The stages are action plan, action implementation, observation, and reflection. Each cycle is implemented in accordance with the objectives of the change to be achieved. The process of problem identification is done by class observation and field notes with lecturer geography teaching in semester VI. Classroom action research planning is designed and implemented in accordance with classroom action research procedures. The instrument used is observation sheet of learning implementation using SFAE model, documentation, field note format, RPP, syllabus, and test questions of cycles I and II.

C. Result and Discussion

Result

Based on the findings in cycle 1 and cycle II it can be seen that the learning by applying the SFAE learning model has been done well in the students of the semester six semester education program. The implementation of SFAE learning model has increased by 36.4% and cycle 2 is 91%.

The above description shows that the learning by applying SFAE learning model in cycle II has reached the success criteria so that the increase from cycle I to cycle II Therefore from the learning process can be stopped in cycle II, learning by applying SFAE learning model can be done well and improve ability of students' opinion and achievement.

Discussion

Learning model Student facilitator and explaining (SFAE)

Learning model Student facilitator and explaining (SFAE) is one of the cooperative learning model types. In the cooperative class students study together in small groups of 4-6 students who are equal but heterogeneous, ability, gender, ethnicity / race, and each other help each other. The purpose of the group is to provide opportunities for all students to be actively involved in the thinking process and teaching and learning activities (Trianto, 2007: 41).

Devira (2012) explains that Model Student facilitator and explaining (SFAE) is a model that provides an opportunity for students or participants to present ideas or opinions to other

fellow participants. Model Student facilitator and explaining (SFAE) has advantages that students are invited to be able to explain to other students, students can expose ideas that exist dipikirannya so that they can better understand the material.

Learning model Student facilitator and explaining (SFAE) is a learning model used by educators with the intention of asking learners to play a role as a resource to his classmates. Rachmad Widodo (2009) explains that the learning model of Student facilitator and explaining (SFAE) is a learning model where students / learners to present ideas / opinions to other fellow learners. This learning model is effective for training students to talk to convey ideas / ideas or opinions themselves. This model is an easy model to gain overall classroom activity and individual responsibility. This model provides an opportunity for each learner to act as a "teacher / explanatory material and one who facilitates the learning process" of other learners. With this model, learners who have been unwilling to engage will participate in active learning.

According to Suprijono (2009: 128) there are six steps in the implementation of learning model Student facilitator and explaining (SFAE), as follows:

a. The lecturer conveys the competence to be achieved.

The lecturer explains the learning objectives, conveys a summary of the content and links with a larger picture of the syllabus or work scheme.

b. The lecturer demonstrates or presents the material.

The lecturers present the material learned at the time and the students take notice. After completing explaining the lecturers divide the students into groups in heterogeneity. The lecturer explains and exemplifies to the students how to create a concept chart / map. Lecturers can then ask students to record what they already know or can do, relating to any aspect relating to the material. Lecturers can also ask students to exchange ideas so that they are more confident.

c. Provide opportunities for students to explain to other students for example through the concept chart / map.

In this stage the lecturer gives the opportunity to the students to explain to other students for example through concept chart / map. Ask a volunteer to come forward and explain in front of what class he knows. Other students may ask, and the volunteer has the right to say "pass" if he / she is unsure of the answer and the lecturer may add comments at a later stage.

d. Lecturers conclude ideas / opinions from students.

When the volunteers explain what they know in front of the class, the lecturer notes important points to review. Inaccurate information, inaccurate or half-explanatory ideas, misconceptions, missing parts, these can be handled directly so that students do not form the wrong impression, or they can make up the basis of an improved plan of learning for the next few lessons.

e. The lecturer explains all the material presented at the time.

The lecturer explains the whole of the material so that the students better understand the material already discussed at that time.

f. Cover.

Every existing model has advantages and disadvantages, as well as the model Student facilitator and explaining (SFAE) has both of these. According Prasetya (2009) as for the advantages and disadvantages of this model are:

a. Advantages

1) Can encourage the growth and development of students' critical thinking potential optimally.
2) Train active, creative students in facing every problem.
3) Encourage the growth of tolerance, willing to listen and appreciate the opinions of others.
4) Encourage the growth of demonstration attitude.
5) Train students to improve their ability to exchange opinions objectively, rationally to find a truth in the cooperation of group members.
6) Encourage the growth of courage to express student opinions openly.
7) Train students to always be independent in facing every problem.
8) Train student leadership.
9) Expanding students' insights through exchanging information, opinions and experiences among them.

b. Deficiency

1) Unhealthy taste between students one to another.
2) lazy learners may submit their work to a smart student.
3) Individual judgment is difficult because it is hidden behind the group.
4) Student facilitator and explaining (SFAE) model requires complicated preparation compared to other models, such as lecture models.
5) In the event of a negative competition the work result will deteriorate.
6) lazy learners have the opportunity to remain passive in their group, and are likely to influence their group so that the group's efforts fail.

Learning Outcomes

Learning outcomes are patterns of action, values, understandings, attitudes, appreciation and skills (Suprijono, 2009: 5). Learning outcomes are the behavioral changes that learners gain after learning activities. The acquisition of these behavioral change aspects depends on what the learner learns (Anni, 2007: 5).

According to Gagne, as quoted by Suprijono (2007: 5), the result of learning in the form of attitude is the ability to accept or reject the object based on the assessment of the object. Attitudes in the ability to internalize and externalize values.

The focus of improvement in this research is the improvement of student learning outcomes through the model of student facilitator learning and explaining the advantages of this model can improve student learning outcomes, able to deepen the understanding of students, fun students in learning, develop positive attitude, develop student leadership attitude, develop student curiosity , improve student self-confidence, develop a sense of belonging, as well as develop skills for the future. The results of learning achievement in cycle I is still not optimal, some of the shortcomings in action research on cycle I, among others, in conveying the purpose of lecturers learning too fast, so that students do not understand what should be understood when learning, in addition lecturers less motivate students to be more active expressed his opinion, it is necessary to change group members so that when working in a group of students can express opinions well, less intensive in the guidance members in each group when the discussion activities, the conclusion at the end of learning needs to be done together with students, in learning time management needs to be improved so that learning takes place effectively and efficiently. All students must be positive activities in learning so that students get the benefits of learning through student learning model facilitator and explaining.

In the second cycle of research, the improvement of students' learning outcomes is focused on the shortcomings of the cycle I. The use of learning model student facilitator and explaining in cycle 2, during the learning process, the students seem more positive activity, giving motivation to the students able to generate good interaction among the students when the discussion . Students start actively in expressing opinions or responding to the opinions of other students.

Submission of conclusions simultaneously at the end of the activity. Make a summary at the end of the lesson. Good time management makes learning activities more affective and efficient. That through the use of student learning model facilitator and explaining can improve the learning outcomes of Geography of the sixth semester students in the study program of geography education of Muhammadiyah University of Mataram in the academic year 2016/2017 with the material of digital map making practice. Comparison of classical completeness of the pre-cycle, cycle I, cycle 2, ie 9%: 36.4%: 91%.

D. Conclusions and Suggestions

Conclusion

Based on the results of research and discussion it can be concluded that through the use of student learning model facilitator and explaining can improve student learning outcomes of semester VI in study program of geography education university Muhammadiyah Mataram 2016/2017 academic year with practice material of digital map making. Comparison of classical completeness of prasiklus condition, cycle I, and cycle 2 is 9%: 36.4%: 91%. At the end of cycle 2 shows that the classical completeness of student learning achieves 85% has been completed.

Suggestion

Based on the above conclusions and implications, the researchers suggested several things to note:

1. For lecturers

With the implementation of this research lecturers can be inspired to apply student learning model facilitator and explaining. Because the student facilitator and explaining learning is very suitable for materials that are difficult to understand by students and the most difficult to be taught by lecturers. because if the lecturer uses the model in then a lecturer should be ready to receive input and criticism from fellow lecturers because in this journey the lecturers are required to put forward the attitude to admit mistakes to perfect the learning done and simultaneously build a teaching culture centered on inkuiiri and improvement.

2. For students

With the use of student learning model facilitator and explaining the students are expected to further deepen the understanding of the students, pleasing students in learning, developing positive attitude of students, developing student leadership attitude, developing student curiosity, improving student self confidence, developing mutual ownership.

3. For educational institutions

College as a formal educational institution should be able to motivate and inspire lecturers in order to apply varied and selective learning model so as to maximize the process and learning outcomes and minimize students' saturation to conventional learning.

4. For further researchers

It is suggested that more maxima again in the application of this learning model in order to obtain maximum results so dapt prove that student learning model facilitator and explaining really to be applied in school and lecturer learning that apply it can improve students' learning outcomes.

E. Reference

Amri, Sofan. 2013. Development and Learning Model Curriculum 2013. PT. Achievement Pustakaraya. Jakarta

Arikunto, 2005. Research Procedure. Jakarta: Rineka Cipta.

Budiningsih, Asri. 2012. Learning and Learning. Jakarta: Rineka Cipta.

Daniel Muijs and David Reynolds. 2008. Effective Teaching Theory and Applications. Yogyakarta: Student Literature.

Dahar, R, 1998. Learning Theory, Jakarta: Dirjen Dikti.

Derdiknas, 2003. Law of the Republic of Indonesia No. 2 About National Education

Degeng N.S 1997. Behavioristic Views vs. Constructivistic Problem Solving Learning Century XXI Malang Seminar Paper TEP.

Dimyati and Mudjiono, 2002. Learning and Learning. Jakarta: Rineka Cipta

Furcahan, 2004. Introduction to Education in Education. Jakarta: Rineka Cipta

Hanafiah, Nanang & Cucu Suhana. 2010. Concept of Learning Strategy. PT. Refika Aditama. Bandung

Huda, Miftahul. 2014. Teaching and Learning Models: Methodist and Paradigmatic Issues. Student Library. Yogyakarta

Kasbolah, K. (2001). Classroom action research. Malang: State University of Malang

Kunandar. 2011. Easy Steps Classroom Action Research. PT. Raja Grafindo. Jakarta

Margono, 2009. Educational Research Methodology. Jakarta: Rineka Cipta

Padmono, H.Y. (1999). Classroom Action Research 1. Surakarta: UNS

Siregar, Eveline and Nara, Hartini, 2010, Learning and Learning Theory, Bogor: Ghalia Indonesia.

Sutiana, 1999, Statistics for Research. Bandung: CV. Altabet

Slameto, 2005, Learning and influencing factors. Jakarta: Rineka Cipta.

Susanto, Ahmad. 2013. Learning and Learning Theory at Elementary School. Fajar Interpratama Mandiri. Jakarta

Trianto. 2010. Integrated Learning Model. PT. Earth Script. Jakarta

Wardhani, IGAK & Kuswaya Wihardit. 2008. Classroom Action Research. Open University. Jakarta

The Lesson Study Approach to Increase the Teaching Quality of Student of Islamic Religious Education

Udin Supriadi & Munawar Rahmat

Lecturer of Islamic Religious Education

Indonesia University of Education

udinsupriadi@*UPI*.edu; munawarrahmat.*PAI*@*UPI*.edu

Abstract.

Field Experience Program (PPL) is a curricular activity that must be taken by every student of the study program of education. The purpose of PPL in the student to get the experience of education in the field. The experience in question is the preparation of learning, learning implementation, learning evaluation, instructional administration, simple guidance and counseling, to extracurricular activities and school activities in general such as picket, flag ceremony, and commemorate national and religious holidays. Based on the track record of the counseling process with the student and discussions with fellow PPL lecturers, the student face great difficulties in preparing lesson plans (RPP), developing the substance of Islamic religion, the learning process with the scientific approach, and developing the affective evaluation. The biggest main problem is in developing the substance of the Islamic religious. The study aimed to improve the professional ability of a candidate of PAI teacher (Islamic Religious Education) in preparing the substance of Islamic religious in junior high school (SMP) with Lesson Study approach. The preparation of the substance of the material using the approach of "Thematic Digital Quran." The research method used is research and development (R&D). In the first year of research, producted the draft of the model of learning and a trial`s limited in SMPLab SchoolUPI. The study found, with the approach of Thematic Digital Quran the PPL teachers can more understand the substance of Islamic teachings; and with lesson study approach, they proved able to teach the meaning and stipulation of prayer more substantively. This R&D needs to be followed by a model wider`s trial then model validation with experiment method.

Keywords: *Prospective teacher of PAI, Lesson Study, Thematic Digital Quran, the substance of Islamic teachings*

A. Introduction

The government and society's demands on teacher professionalism has been lately more intense. Associated with the birth of *Undang-undang Nomor 14 Tahun 2005 tentang Guru dan Dosen*(Law Number of 14 Years 2005 on Teachers and Lecturers), legitimacy as a teacher is a professional certificate. It's just that in this Law, education is done by a consecutive model (connectivity). After student complete their

undergraduate degree, either in the educational or non-educational disciplines, they must continue their education in the *PPG* program (Teacher Professional Education). Whereas *LPTK* (Teachers Training Institute) prepares teacher candidates with concurrent model (integrated), namely the distribution of subject matter substance of the subject matter and the substance of the teaching profession along the lecture in tandem. That is, the introduction to the substance of teachers starting from the prospective teacher entered college. The substance of this material is given in tandem with the substance of the subject matter subject to the teaching field of the teacher. So the guidance of teacher attitudes and behavior was introduced and done from the beginning of college. The question is whether the concurrent model will be more professional or equal to a consecutive model? If the result is the same, especially if it is worse, then the existence of educational programs becomes futile. Therefore, the implementation of the *PPL* must be really carried out, in earnest, and in its best so that it can be proof that the concurrent model is indeed the most appropriate model in providing professional teacher candidates.

Based on the recording of the counseling process with the student and discussions with fellow lecturers of *PPL*, since 2010-2016 the student of the *PAI* (Islamic Religious Education) study program faced great difficulties in four problems: preparing instructional administration (especially RPP), developing substance material of Islamic religion, learning process with the scientific approach, and developing affective evaluation. Through research and development (R&D) this research will try to reduce the difficulties of the student in overcoming the four problems. However, in the first year, will be done the lesson study approach to overcome the difficulty of developing the substance of *PAI* material.

The experience some teachers of *PAI* Junior High School in Bandung, they get great difficulty in teaching the substance of prayer material. They reported, the first year, they taught in grade VII and their second year in grade VIII. The goal, to know the impact of teaching on the mastery of the substance of prayer. Prior to teaching, only 30% of grade VII student mastered the substance of prayer. With the mastery learning approach, all the grade VII student mastere the substance of prayer (100%). After a long holiday, in grade VIII her student were tested again about the prayer. Very surprising, it turns out the student who still control the substance of prayer is only 30%. This amount is the same as their condition when at the beginning of grade VII a year ago. When asked to the teacher, why does it happen like this? They answered, because only 30% of student are accustomed to praying; while another 70% rarely does prayers. Is there a teacher's mistake in teaching the substance of the prayer? Of course there is. The teacher is wrong in understanding the substance of prayer. This worship of prayer is not merely a movement and a read, but an awareness to worship God. The teachers may teach the ordinance of the prayer. However, what needs to be emphasized is the

awareness about the importance of the prayer. This is precisely the substance of the prayer. Likewise when teaching the pillars of faith. The teacher is satisfied if the student already believe in the presence of angels and know the duties of angels. If believing in an angel is interpreted as this, then it is almost certain that all humans believe about the existence of angels; Even the devil also believes in the presence of angels. However, the devil was convicted as disbelieve by Allah. That is, the substance of faith to the angels is not just believed in the existence of the angels, but more than that. Moreover, knowing the duties of the angels, this is not the domain of faith but the domain of knowledge. These two cases (the lack of understanding of the substance of the prayer and the faith in angels) show that the substance of the *PAI* material is not well understood by the teachers, especially by the student. Therefore, efforts to develop the substance of *PAI* materials in schools need to be done.

Theoretically, the weaknesses of the student can be overcome with Lesson Study guiding model. This guidance model requires an integrated mentoring process starting from preparation, implementation, to evaluation and reflection on *PPL* activities; either the activities which was already done, is being done, or what will be done. The mentorship process involves lecturer's *PPL*, tutor, and student. According to Mardiyono (2008), Rector of *UNY* at that time, the lesson study proved able to improve three things at once, namely improving capture, responsiveness, and social awareness. In addition, lesson study can foster a culture of control across education and discipline. For example, the student of *IPA* can be observed by the student of *IPA* or *IPS* and language. Abdurrahman (2007) in his research report found that, with the guidance of the Lesson Study model, the student are better prepared to perform the tasks of the teaching profession compared with the student who do not use the guidance with Lesson Study. The R&D first year aims to produce *PPL* guidance model through Lesson Study approach, which can improve professional ability of the student of *PAI* program, especially in mastery of material substance of Islam with approach of "Thematic Digital Quran."

B. Research Method

The lesson study is actually a research of classroom in which some teachers collaboratively plan, implement, observe, revise, and dissemination of teaching outcomes (Cerbin & Kopp, 2006). Overall, this R&D will be for three years. In the first year of research, is production the draft of the model of teaching and a trial`s limited in *SMPLab School UPI* by the focus of the guidance of substance of Islamic teaching. In the second year, a model trial`s broader and model validation (with experimental methods) with broader guidance focus (the teaching planning, the substance development, the learning process with the scientific approach, and the affective evaluation development); and in the third year, the model dissemination, among others,

in collaboration with the *MGMPPAI* (The organization of Islamic religious education teachers) *SMP* in various city and districts in West Java. The guidance steps for the student follow the seven steps essential of lesson study developed by Cerbin & Kopp (n.d.) as follows:

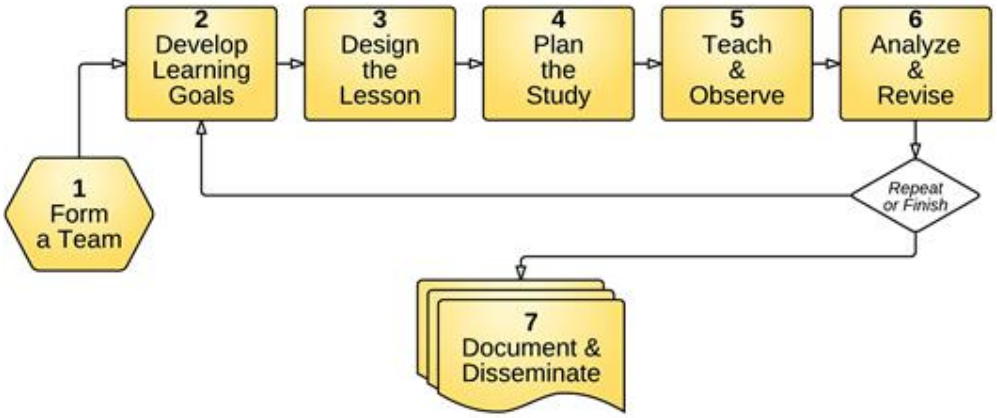


Figure 1. The essential steps of lesson study (Cerbin & Kopp)

a. Form a Team are usually composed of 3-6 instructors. The team consists of three student and three tutors (teachers), accompanied by a lecturer of *PPL* supervisor and a research team.
b. Develop learning goals, in these case tutors and student understand the substance of *PAI* material, namely: (1) the meaning and provisions of prayer; and (2) the meaning and nature of faith in His angels.
c. Design the lesson. Since the first and main source of Islamic values is the Qur'an, the *PAI* learning design uses the "Thematic Digital Quran" model (Digital Quran ver 3.1, 2013). This model has been tested and validated, that the student proved to better understand the material substance of Islam with this approach (Rahmat, 2015).
d. Plan the study. The team developed an instrument to observe student learning activities and student' understanding of the substance of the *PAI* material.
e. Teach and observe. A student taught the substance of Islamic religious material, while the other members of the team observed and collected evidence that student mastered the substance of the *PAI* material.
f. Analysis and revise. The team discusses the results and assesses student progress toward learning goals.
g. Documentation and disseminate. The team documented the results of the lesson study and disseminated it to the student and the *PAI* teachers *SMP*.

C. Study Findings and Discussion

1. Study Findings

Following the essential lesson study steps from Cerbin and Kopp, tutors (teachers) and students agreed: The **first** step was to form a team (three students and three tutors), accompanied by *PPL* supervisors and research teams). **Second**, develop the learning objectives. Agreed on two purposes, namely: (1) the students understand the meaning and provision of prayer, and (2) the students understand the meaning and the nature of faith to his angels. **Third**, develop the instructional design. A team previously agreed to the development of material substance of Islam with the model/approach of "Thematic Digital Quranic). Students of study program of *PAI* at *UPI* are accustomed to using this method/approach; While the tutors by reading *Memahami Agama Islam dengan Metode/Pendekatan Tematik Digital Quran* (Understanding Religion of Islam with the Thematic Digital Quran Method/Approach) works of Rahmat, Fahrudin, dan Supriadi (2017) and short training turns out they are skilled also to use this approach. Meaning and conditions of prayer developed by students and tutors, as follows:

Table 1. The meaning and provision of prayer

No.	QS ... verse ...	The translation of the Qur'an	The verse message	The tentative conclusions
1.	2: 2-3	(Those who fear Allah, i.e.) who believe in the Unseen, are steadfast in **prayer**, and spend out of what We have provided for them.	Steadfast in prayer is one of the characteristics of those who fear Allah.	Among the characteristics of those who fear Allah are steadfast in prayer.
2.	2: 43	And be steadfast in **prayer**; practise regular charity; and bow down your heads with those who bow down (in worship).	The order to steadfast in prayer (five times).	The law of steadfast in prayer (five times) is mandatory.
3.	2: 45	Nay, seek (Allah's) help with patient perseverance and **prayer**: It is indeed hard, except to those	The command to ask for help to Allah with patient perseverance and prayer those who	The way to ask for help to Allah is to be patient perseverance and prayer those who

		who bring a lowly spirit.	bring a lowly spirit (*khusyu`*).	bring a lowly spirit (*khusyu`*).
4.	4:142	The Hypocrites - they think they are over-reaching Allah, but He will over-reach them: When they stand up to **prayer**, they stand without earnestness, to be seen of men, but little do they hold Allah in remembrance.	Lazy to steadfast in prayer and prayers to be seen of men (*riya`*) is a characteristic of a hypocrite.	Among the characteristics of the hypocrites are they stand up to prayer without earnestness and prayers to be seen of men (*riya`*).
5.	6:162	Say: "Truly, my **prayer** and my service of sacrifice, my life and my death, are (all) for Allah, the Cherisher of the Worlds.	The intention of prayer is only for Allah, the Cherisher of the Worlds.	The intention of prayer must be *lillahi ta`ala* (for Allah only), there is no other intention.
6.	9:54	(A *fasiq*, or a people rebellious and wicked): The only reasons why their contributions are not accepted are: that they reject Allah and His Messenger; that they come to **prayer** without earnestness; and that they offer contributions unwillingly.	Lazy to steadfast in prayer is a feature of *fasiq* (a people rebellious and wicked).	Among the characteristics of a *fasiq* (a people rebellious and wicked) are they come to prayer without earnestness.
7.	20:14	"Verily, I am Allah: There is no god but I: So serve thou Me (only), and establish	The command to establish regular prayer for	The purpose of the prayer is for

		regular **prayer** for celebrating My praise.	celebrating to God.	celebrating to God.
8.	29:45	and establish regular Prayer: for **Prayer** restrains from shameful and unjust deeds; ...	The Prayer restrains from shameful and unjust deeds.	The true prayer can restrains from shameful and unjust deeds.
9.	74: 42-43	"What led you into Hell Fire?" They will say: "We were not of those who **prayed**;	The cause of humans into Hell Fire were not of those who prayed.	The cause of humans into Hell Fire were not of those who prayed.
10.	107: 4-5	So woe to the worshippers. Who are neglectful of their **prayers**,	The people who are neglectful of their prayers are threatened into Hell Fire.	The people who are neglectful of their prayers are threatened into Hell Fire.

The verses of the Quran which speak of prayer are 92 verses. However, with the "Thematic Digital Quran" approach, by examining 10 verses it can be concluded about the meaning and conditions of prayer as follows:

a. The characteristic of those who fear Allah are steadfast in prayer; while a *fasiq* (a people rebellious and wicked) and a *munafiq* (a hypocrites) are they stand up to prayer without earnestness and prayers to be seen of men (*riya`*).
b. The law of steadfast in prayer (five times) is mandatory.
c. The purpose of the prayer is for celebrating to Allah. That is, throughout the prayer must constantly for celebrating to God, to avoid the prayer of *sahun* (negligent, not *khusyu`*). The people who are neglectful of their prayers are threatened into Hell Fire.
d. The intention of prayer must be *lillahi ta`ala* (for Allah only), there is no other intention.
e. The true prayer can restrains from shameful and unjust deeds. If one performs the prayer but also commits great sins (adultery, corruption, etc.) and minor sins constantly (lying, dating, etc.), then it can be ascertained that the prayer is meaningless (neglectful, not *khusyu`*, and not celebrating to God).
f. The cause of humans into Hell Fire were not of those who prayed.

With the substance of such a prayer material, the team then developed a learning design. The model design begins with a model scenario, followed by model steps, and the last of the model implementation. The development of learning model follows the model of teaching from Joyce & Weil (1980), Joyce, Weil, and Calhoun (2011), dan Dahlan (1990), but has been simplified by Rahmat (2015) so that it is easier to apply in *PAI* learning.

Fourth, planning the research. The lesson study team under the guidance of the research team develop a classroom observation instrument and a brief test of the mastery of the material substance. After step 1-4 are completed, in the **fifth** step, a student teaches in one class while the other (other students, tutors, and lecturer of *PPL*) as the observer. The **sixth** and **seventh** step of Cerbin & Kopp (n.d.) this will be done in the second and third year.

The learning model scenario in each face (two times face-to-face) is done in three stages: opening learning, core activities, and closing learning. The first stage, open learning. At this stage, the students of *PPL* explain the subject (i.e the meaning and provision of prayer) and the learning objectives (students of *SMP* will understand the meaning and provision of prayer). Second, core activities. At this stage, the *PPL* teacher deliver the main message of learning. He conveyed the goal of Indonesian national education with emphasis on increasing the faith and piety of God Almighty. The cautious person, he added, is a person glorified by God. In Islam, he said, among the characteristics of the righteous is to establish prayer. So, if a Muslim does not establish a prayer, that person does not want to be a noble person. Then explained for the purpose of prayer is to remember Allah. He explained, because the purpose of prayer to remember Allah then throughout the prayer (start *takbiratul ikhram* to salutation), the body performed movement and recitation of prayer but the heart to remember Allah. This is what is meant by '*khusyu*' in praying. If not remember God, then assessed *sahun* (negligent, i.e prayer is not in accordance with the purpose of prayer). If the prayer is a year, then it must be remembered other than God. Perhaps remembering his unfinished task, remembering missing items, or remembering anything other than God. The intention of prayer should be sincere *lillahi Ta`ala* (for Allah only), there can be no other intention and no *riya`*. Like there is an intention to be called a godly child.

At the second meeting of the *PPL* teacher asked students, is it a light or heavy prayer? Students answer in unison, weight (That is, establishing the prayer is heavy). However, there is also a student who answers it, he *PPL* teacher ask again, do your school friends and friends around your house do more prayers or leave prayers? The sound is quite clear, there are those who do the prayers and some are not working. Then the *PPL* teachers asked again, what are your friends who do the prayer, pray it constantly every time or a lot of holes (not every time)? There was a simultaneous reply, "It's a lot of holes!" The *PPL* teachers then explained, rightly, how hard it was to

establish the prayer. He asks again by illustrating a degree, whether to win this degree a student must study seriously or simply learn in a relaxed manner? The students answered in unison, having to study earnestly. Hearing the student's answers, the *PPL* teacher then asserted, that prayer worship is similar to learning to earn a bachelor's degree. Thus, in order to achieve the title of *muttaqin* (those who fear Allah) then a Moslem must establish prayer solemnly and continually. If not so then by God is convicted as a hypocrite and wicked. Do you want to be convicted as hypocrites and wicked? All students responded in unison, no! If you do not want to, answer the *PPL* teacher, then you should learn to establish prayers every time. If lazy, then have to force yourself. Third, close learning. At this stage, the *PPL* teacher ask students to reflect on the main messages of learning, then he briefly explains one by one message of learning. He also reminded students that the establishment of prayer was very heavy. However, strictly speaking, it should be remembered that the weight of God's command is even harder to leave it. If you abandon God's commands, you will be faced with the punishment of God. God implies those who abandon prayer and neglect it with His hell. Finally, the *PPL* teacher are giving out short written test questions (quizzes).

2. Discussion

Tutors (teachers) and *PPL* teacher, including supervisors and research teams observed learning activities. In two times face-to-face, *PPL* teachers are actually delivering the substance of prayer: the importance of prayer to achieve piety, the purpose of prayer to remember Allah, intention of prayer lallahi Ta`ala without riya`, khusyu` in prayer, avoiding prayer a year, prayer must be done earnest -right, should not be lazy, and the dangers of leaving the prayer. *PPL* teacherss did not say anything about ordinance of prayer. During these two learning activities *PPL* teacher more aware of students about the importance of prayer; awaken the students about the need to do prayer in khusyu` and avoid prayer in sahun; and awaken the students about the need to establish prayers, in earnest, should not be lazy. The material substance of the meaning and provisions of the prayers unearthed with the "Thematic Digital Quran" approach is really substantive. Based on the written test at the end of the lesson, the students around 80% of them can understand the main messages of learning. The material substance of Islam seems to succeed in making students aware of the meaning and conditions of prayer. During the study there were some students who uttered istighfar (asking God's forgiveness), probably because he had not performed a meaningful prayer. Several other students seemed to be amazed, such as wanting to perform meaningful prayers. Although most students are mediocre (as in general learning: there are those who pay attention and some do not pay attention to the *PPL* teacher's explanation).

The findings of this study are in line with the findings of Caterine Lewis (2002). Based on interviews with a number of teachers in Japan, Lewis pointed out that Lesson Study is very effective for teachers because it has given advantages and opportunities to teachers to: (1) think more thoroughly about the purpose, certain materials that will be learned to the students, (2)) to think deeply about the learning objectives for the future of the students, for example about the importance of friendship, the development of students 'perspective and ways of thinking, and the students' fondness for science, (3) studying the best things that can be used in learning Through learning from other teachers, (4) learning about the content or subject matter of other teachers so as to increase knowledge about what should be given to students, (5) developing skills in teaching, both when planning Learning and during learning activities, (6) building ability through collegial learning, in the sense that teachers can learn from each other about what they feel is still lacking, both about knowledge and skills in enabling student learning, and (7) to develop "Eyes to See Student" (*Kodomo wo miru me*), in the sense with the presenting of the observer, the observation of student learning behavior can be more detailed and clear.

It is not known whether the substantive approach in the teaching of the prayer is directly proportional to the increasing number of students performing the prayers? This issue needs to be explored continuously. However, at least, the substantive teaching of Islam from the Qur'an contains two fundamental values: first, the substance of the material is true and more complete (because prior to the commencement of this R&D, the *PAI* teachers tend to emphasize that the students are skilled at performing the prayers, rather than awaken to the importance of prayer); and secondly, more awaken the students about the importance of establishing prayers. Awareness of prayers is expected to last longer, although today, for example, students have not done prayers. However, someday after the full awareness of the students may be more diligent and earnest prayer. With the teachings of prayer (through practice) proven, this prayer skill does not last long, like the experience of some *PAI* teachers at the beginning of this article.

D. Conclusion

The study found, with the approach of Thematic Digital Quran the *PPL* teachers can more understand the substance of Islamic teachings; and with lesson study approach, they proved able to teach the meaning and stipulation of prayer more substantively. About 80% of *SMP* students can understand the main messages of learning. In addition, the substance of this material can make students aware of the true meaning and provisions of prayer. This R&D needs to be followed by a model wider`s trial then model validation with experiment method.

References

Abdurrahman, M. (2007). Efektivitas Model Kegiatan Lesson Study Dalam Meningkatkan Keprofesionalan Guru Bahasa Arab. *Simposium Nasional Penelitian Pendidikan*. Jakarta: Pusat Studi Kebijakan Depdiknas.

Caterine Lewis. (2002). Does lesson study have a future in the United States? *Nagoya Journal of Education and Human Development*, *1*, 1–23.

Cerbin, Bill & Kopp, B. (n.d.). Lesson Study Guide. *Lesson Study Project, Center for Advancing Teaching and Learning, University of Wisconsin-La Crosse, 1725 State Street*.

Cerbin, Bill & Kopp, B. (2006). Lesson study as a model for building pedagogical knowledge and improving teaching. *International Journal of Teaching and Learning in Higher Education*, *18(3)*, 250–257.

Dahlan, M. D. (1990). *Model-model Mengajar: Beberapa Alternatif Interaksi Belajar-Mengajar*. (M. D. Dahlan, Ed.).

Digital Quran ver 3.1. (2013). Al-Quran dan Terjemahnya (Bahasa Indonesia). Al-Quran dan Terjemahnya penerbit Kementerian Agama Republik Indonesia.

Joyce, Bruce; Weil, Marsha; and Calhoun, E. (2011). *Models of Teaching. Terjemahan.* (II). Yogyakarta: Pustaka Pelajar.

Joyce, Bruce & Weil, M. (1980). *Models of Teaching*. New Jersey: Prentice-Hall Inc.

Mardiyono, S. (2008). Lesson Study. *Tersedia dalam Https://www.uny.ac.id*.

Rahmat, Munawar; Fahrudin; dan Supriadi, U. (2017). *Memahami Agama Islam dengan Metode/Pendekatan Tematik Digital Quran*. Bandung: Departemen Pendidikan Umum FPIPS UPI.

Rahmat, M. (2015). Implementasi Metode "Studi Al-Quran Digital Secara Tematik" untuk Memahami Makna Beriman Kepada Para Malaikat. *Ta`lim*, *13 No. 1*.

Undang-undang Nomor 14 Tahun 2005 tentang Guru dan Dosen.

Implementation of Lesson Study in Higher Education as a Strategy in English Instruction Lecture at Dakwah Faculty of Islamic State University Mataram,

M. Mugni Assapari, M. Pd. B.I

(KPI)Department, Dakwah Faculty of Islamic State University Mataram,
Jl. Pendidikan. Mataram. Provinsi Nusa Tenggara Barat. Indonesia

arymugni@gmail.com

UIN Mataram

ABSTRACT

Strategy in English Instruction is an obligated lecture at KPI (Communication of Islamic broadcasting Department), Dakwah Faculty of Islamic State University Mataram. This lecture was given to student as a candidate teacher. There are some problems happened during this lecture such as: student activity in questioning do not fluent, reading motivation, English communication practice, English speaking practice and the capability of student in discussion still weak, sometime lecture preparing not optimal. Lesson study is an activity to improve lecture quality. Generally, it consist of three parts, those are: plan, do, and see. To implement lesson study at Strategy in English Instruction lecture is conducted several stages, those are: discuss with the colleague for preparing lesson plan, work sheet for student, all activity in open lesson, and reflection after open lesson. There are four times for open class activity. The method that used in each open class depends on the topic of discussion. The student are divided into small group with 3 to 4 student, doing student worksheet, reading the topic that can be discuss, and then presentation their result discussion in class. The result of the implementation lesson study can be improving the quality of this lecture such as: the increasing of student activity in questioning, reading motivation, English communication practice and English speaking fluently the capability of student in discussion, and lecture preparing can be optimal.

Keywords: Lesson Study, Strategy in English Instruction Lecture

1. INTRODUCTION

Education has important role in human life since it determines the development and character of human. Whether a nation is well developed or less developed could be seen from the development of its education. A nation which has good education would

results people with good character and civilized. One of the factors determining the education direction of a country is the curriculum.

Strategy in English Instruction is an obligate lecture at Communication of Islamic broadcasting Department, Dakwah Faculty of Islamic State University Mataram. This lecture was given to student as a candidate teacher. There are some problems happened during this lecture, such as: student activity in questioning do not fluent in English communication, reading motivation and the capability of student in discussion still weak, sometime lecture preparing do not optimal.

Lesson study is an activity that can be improve the lecture quality. Lesson study is a teaching improvement process that has an origins in the world education, where it is a widespread professional development practice. Working in a small group, teacher or lecturer collaborate with one another, meeting to discuss learning goals, to plan an actual classroom lesson (called a research lesson), to observe how it works in practice, and then to revise and report on the results, so that other teachers can get benefit from it.

Cooperative learning is a model of teaching that can be conduct student to help each other. Student team learning is making cooperation in learning teams a routine part of a classroom organization, not an occasional fun activity. More importantly, carefully controlled studies have demonstrated that use of learning teams under specific conditions increases student achievement in English and other subjects. Roger and David in told that do not all group discussion be a cooperative learning. To get a maximum outcome, there are five substance can be conduct in cooperative learning: 1) Positive dependence, 2) Invidual responsibility, 3) Face to face, 4) Communication between member, and 5) group evaluation. The successfully of group is depend on the effort of member. All members try to be good and do the best for their group.

Students in small heterogeneous groups take roles and learn to share knowledge and tasks with one another through a variety of structures with this strategy. While different experts categorize these differently, common features of effective cooperative learning include team building, positive interdependence, group interaction, structured activity, and individual accountability. The researcher and the Lesson Study Team kept on giving random questions to each student individually after they did the worksheet to take control on their focus. Although they still did grammatical mistakes in doing their worksheet, but they seemed reluctant in confirming them to the teacher. As Brown (2007:228) said that students' errors will be reinforced in small group where students will simply reinforce each other's errors and the teacher will not get a chance to correct them.

Implementation lesson study at strategy in English instruction lecture at Dakwah Fakulty, the student divided into some group with 3 or 4 member in each group base on their cognitive ability. Each group try to find the information base on the topic that can be discuss in class. Assignments method is one of method that can be make student more active to get the information. This method was applied to ask student responsibility about their task. They have to find, read, discuss, and prepare their slide presentation about the topic. After student presentation, lecturer and student do the activity, discuss about the subject matter. At the end of this lecture student give feedback by guiding of the lecturer making a conclusion.

2. DISCUSSION

2.1 Lesson Study

Only a small part of students in classroom who participate actively during teaching learning process in TEYL in higher education (10 students = 30% from 40 students). The students are categorized as active students if they (1) actively pay attention when lecturer delivers materials; (2) actively ask question deals with the material that they do not understand yet; (3) actively answer the lecturer's question that its aim is to clarify the students understanding; (4) actively give a comment and suggestion for others presentation and performance. The rest of the students showed that they had low self-confidence so that they could not fulfill the requirement of active students. According to the result of the observation, it could be reported that when the lecturer gave a chance to the students to ask question about material – some students made a note about her/his question then gave it to her/his friend, some students did discussion with their friend then when the lecturer came to their seat and
asked about the problem they nodded their head, then the rest of them were silent, played their mobile phone, or chatted with their pair.

Lesson study (LS) is an activity in which aimed at enhancing the learning outcomes and teaching process continuously through teacher group collaboration (Sudrajat, 2010). LS commonly consists of model teacher and its collaborator. Model teacher, lecturer is selected teacher in which his/her teaching process will be improved. Then, collaborator is a teacher, lecturer as team which help model teacher, lecturer to improve her/his teaching through planning activity, observing teaching process, then giving reflection.

LS is conducted through several steps: design, implementation, testing, and improvement (Rock and Wilson, 2005: 78). Moreover, Carbin and Kopp in Sudrajat (2010) propose six steps LS include: 1) Form a team: select the team which covers model teacher, lecturer and collaborators. It may consist of 3-6 teachers with good understanding and competence in LS program. 2) Develop student learning goals: team discuss the learning material for students as the result of LS. 3) Plan the research lesson:

model teacher, lecturer and its collaborator design teaching model to reach the teaching objectives. 4) Gather evidence of student learning: model lecturer practice the teaching plan, then collaborators observe the teaching process and collect the data as the material for analyze teaching process. 5) Analyze evidence of learning: team discusses the result of teaching practice then analyzes its progress whether it reaches teaching objectives or not. 6) Repeat the process: team revises the teaching model based on the result of discussion and finding evidence in teaching practice. Then, team do the previous steps, it may be conducted 2-5 times.

Lesson study is a teaching improvement and knowledge building process. Lesson study was implemented at strategy in English instruction lecture. In this paper, will be discuss about how was lesson study be implemented in this lecture. There are three steps activity in this lecture; they are plan, do, and see.

a. Plan

In this section team lecturer in the same subject begin by selecting a topic and goals for student learning. They select a topic that interest to them. They are some topic selected from the syllabus: 1) opening and closing skill, 2) cooperative learning, 3) problem based learning, and 4) direct instruction. Figure 1. Team lecturer discuss about plan.

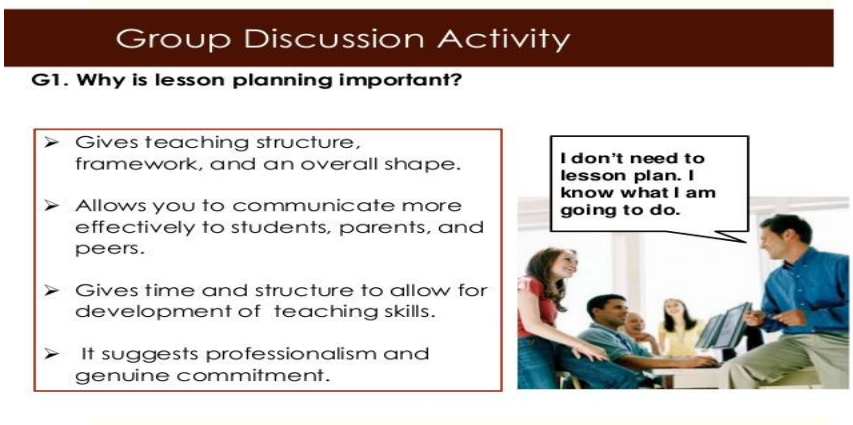


Figure 1. Team lecturer discuss about plan

In plan section, the lecturer also discuss about a time and strategy that can be done in this lecture. After discuss about plan, one of the lecturer be a model of lecturer in teaching. All material, such as worksheet, lesson plan, and observation sheet have to prepare before do section.

b. Do

In this section lecturer model be implemented lesson study to conduct that lecture. There are some strategy used in this lecture. The student divided into a group with 2-3 member. Before starting a lecture the student asked to sit in group. During this lecture the student have to follow some activity, present the topic that will be discuss in class, asking and answering question about their friend presentation, and making conclusion based on their discussion. The groups that will be present choose randomly by a lecturer.

There are some observer can be observe all activity of student during the lecture. The observer can be used the observation sheet, to know about student activity. There are some question in that sheet: 1) when the student start concentrate to study? How was the process? 2) Are there any student do not study or discuss? 3) Why they don't study or discuss? 4) Is the lecturer try to handle the student who don't study or discuss? 5) What are the advantages of this lecture that can you get today? 6) The blank space to give a chance for observer to write some comment from their observation.

There are some strategy that implement during the lecture is based on the topic will be discuss. 1) Student asked to read the topic and see the more new vocabulary before start lecture, 2) finding new vocabulary and oral practice fluently 3) make small group discuss 4) English practice well, use the contextual vocabulary around the area

By using many variation strategy to conduct this lecture, the student can be more active, and enthusiasm follow all the activity. At the end of the lecture the student must be make a small resume based on their discussion.

c. See

It is an activity to discuss or give a reflection after do. In this section all observer can be discuss all thing that be happened during do. See or reflex must be done as soon as possible after do. Participant includes the lesson study team members and guest observers. The moderator can start to be a guide discussion. In this discussion participant share the idea based on their observation. Based on the discussion the lecturer who takes responsibility to open the class revise the plan to the next open class.

There are some information get from the observer: 1) some student do not concentrate at the beginning of lecture, but after fifteen minutes they start to follow all activity in class, 2) some of them do not discuss in group although the lecturer try to remind them, 3) in general, the lecture be success based on plan, 4) variation strategy in teaching can make the student be more active and enjoy the class, 5) based on the discussion, team try to find another alternative, in next meeting for lecture,

Participants share their observations and examine additional evidence from the lesson, such as student written work, searching for pattern that may reveal important insight into teaching practice and student learning.

2.2 Lesson Study as a Teaching Improvement Process

In our view, lesson study is an exceptionally fertile context for college teaching improvement. It scaffolds reflective practice in which instructors carefully examine goals for student learning and development, design goal-oriented learning experiences, conduct a lesson, observe and analyze student learning and revise the lesson design to improve learning. Teachers examine and discuss a wide range of key issues including,

1. What are the most important goals for learning and development in the course and academic program,
2. What are the differences among students that matter most in their classroom performance,
3. How do specific strategies support changes in student thinking,
4. What knowledge do students have that serves as a foundation for the lesson,
5. What misconceptions do students have that hinder their learning, and
6. What aspects of their written work or actual classroom interactions indicate how they interpret and make sense of the topic?

Lesson study encompasses the full complexity of teaching and learning in the context of a single class lesson. Essentially, teachers have opportunities to question, explore and reflect on every phase of the teaching and learning process. Lewis (2005) suggests that lesson study creates multiple "pathways for learning" that lead to instructional improvement. According to her model, teachers' thinking and practice may improve in multiple ways as a result of,

1. Increased knowledge of subject matter,
2. Increased knowledge of instruction,
3. Increased ability to observe students,
4. Stronger collegial networks,
5. Stronger connection of daily practice to long term goals,
6. Stronger motivation and sense of efficacy, and
7. Improved quality of available lesson plans

Lesson study offers a different way of thinking about teaching and learning. For many college teachers entering into a lesson study means approaching teaching with different assumptions and expectations. This is most evident in the way that lesson

study is oriented toward student learning. An underlying principle of lesson study is that teachers need to know how their students learn in order to teach them effectively. Thus, how students learn is central at every step in the lesson study process. In the lesson planning phase teachers consider how their students are likely to interpret, construe and respond to the parts of the lesson. Observers attend to learning and thinking as the lesson unfolds. Data collection focuses on student learning and thinking throughout the lesson. After the lesson the group analyzes the evidence of student learning as a basis for making changes to the lesson.

We propose that certain features of this learning oriented inquiry are likely to mediate changes in college teachers' pedagogical thinking and practices. The patterns below have emerged in our work, but further research is needed to verify that these are, in fact, what teachers learn about teaching through lesson study.

3. CONCLUSION

During implementation of lesson study at strategy in English instruction lecture, some advantage that can be get:

a. The experience of learning by student are increase:
   1) Their activity in questioning,
   2) Their motivation to read,
   3) Their capability in communication,
   4) Their responsibility in group discussion
   5) Their responsibility in doing task
   6) Their enthusiasm in lecture

b. Based on the lecture:
   1) The plan for preparing lecture can be better
   2) The implement of lecture can be optimal
   3) The quality of lecture can be improve
   4) The lecturer can be handle the situation during learning process

c. Suggestion:
   1) In activity at open lesson, more observers attend that class, can be better,
   2) Hopefully, lesson study can be implementing for all subject,
   3) All observers must be give their report based on their observation
   4) This activity can be support with good equipment.

REFERENCES

Ares, B., O'Brien, L., & Rogers. T. (1992). *Working together, sharing, and helping each other: Cooperative learning inc first grade classroom that in-chides students with disabilities.* Syracuse, NY: Inclusive Education Project, Syracuse University.

Brown, H. Douglas. (2007). *Teaching by Principles: An Interactive Approach to Language Pedagogy, 3rd Ed.* New York: Pearson Education.

Cerbin, William and Kopp, Bryan. (2006). Lesson Study as a Model for Building Pedagogical Knowledge and Improving Teaching. *International Journal of Teaching and Learning in Higher Education, 18(3), 250-257*

Lie, Anita. (2002). *Cooperative Learning*. Jakarta: Grasindo

Lewis, C. (2005). How do teachers learn during lesson study? In P. Wang-Iverson & M. Yoshida (Eds.). *Building our understanding of lesson study*. Philadelphia: Research for Better Schools, Inc.

Rock, Tracy C. and Wilson, Cathy. 2005. *Improving Teaching through Lesson Study*. Teacher Education Quarterly,http://www.teqjournal.org/Back%20Issues/pdf Downloaded on Agustus 22, 2017 at 10.20p.m.

Sudrajat, Akhmat. 2010. *Lesson Study untuk Meningkatkan Proses dan Hasil Pembelajaran.*

The Influence of use of Video in Increasing Learning Achievement in Cultural Speech Basis of Sport Physiology

Herman Afrian
Study Program of Physical Education of Health and Recreation
Faculty of Teacher Training and Education, Hamzanwadi University
armaskm132@yahoo.com

Abstract

This research is to know the influence of student achievement in the basic subjects of sports physics. The population is a student of Physical Education Education Program and Recreation Faculty of Teacher Training and Education University Hamzanwadi even semester Academic Year 2016/2017. Type of pre-experimental design study using one-group pretest-posttest design. The sample is 31 people or population sample. Technique of collecting data with observation sheet and pre test result and post test. Data analysis with SPSS 20 through paired sample t test.

The results of this study indicate there are differences in student learning outcomes before and after learning using video tools. The average pretest value (mean) = 66.61 is lower than the mean (posttest) mean = 71.65 at the significance level of α 5% (0.000), with t count 4,167 > t table 1,679. So need to remain used vido tool as one of the method to improve student achievement or learning outcomes.
Keywords: *learning toll Video, Student Learning Achievement*

Preliminary

The process of learning is the interaction between teachers and students and between students and students, to achieve competence, skills, knowledge and attitude. In that context, the lecturer acts as a teacher or facilitator, while the student plays a role as a learner. In the process, the lecturers are expected to have the ability to sharpen the learning conditions in directing and creating an atmosphere that can enhance the learner activity in learning (Aunurrohman, 2009)

So to support the professions of a teacher, it is required to be able to manage the class with various strategies and techniques. In order to memcitakan and generate interest and innovation of learners in order to stimulate the motivation of learning activities, even provide psychological influence on learners (Hamalik, 1986 in Arsyad, 2009). Traffic learners to follow the learning process one of them is determined by the use of tools as an effort to transform the science and skills. The use of learning tools of one strategy to increase the interest and learning achievement of learners has been done as the result of previous research from Levied an Levie (1975) in Arsyad, (2009), that the use of audio visual stimulus tool in teaching and learning process can give positive

effect Better to remember, recognize, recall and relate facts and kosep. The research of Siti (2009) describes the difference of mean of student achievement using VCD learning tool which is signifikan between control group and experiment group (t count 2,126> t table 1,697).

Learning tool is a supporting factor in teaching and learning activities. Learning tool is a tool used by teachers to facilitate the delivery of learning materials. Ibrahim and Syaodih (2003) described the teaching tool as all things that can be used to distribute the message or the content of the lesson, stimulate the students' thoughts, feelings, concerns and abilities so as to encourage teaching and learning activities. One component of communication as messengers from communicators to communicant (Criticos, 1996 in Daryanto, 2010).

Different forms of tools can be used to enhance the learning experience towards the concrete. Using the tools not only use words (verbal symbols), so we can expect the learning experience to be more meaningful by students in the learning process more active. The development of information and communication system technology gives a positive effect on the development of the world of education. This is evidenced by the rapidly growing variety of models and forms of learning tools currently in use, including visual-based tools (images, charts, graphs, tarspansi, and slides), audio-visual based tools and computer-based tools (Arsyad, 2009). It shows that the dynamics of the education world increasingly complex especially in making efforts to improve the transformation of knowledge by teachers to learners.

Learning tools that can be used vary widely, one of which is a video tool. The video tool is anything that allows audio signals to be combined with sequential motion pictures. Vidio is a very effective tool to help the learning process, both for mass learning, individual, or group (Daryanto, 2010).

The basic courses of sports physics as slah one subject with the material that tends to describe the process changes, and mechanical work system of human organs in supporting the process of activity and berolahrga. So it should be put forward a direct and factual representation through a more interactive tool based on technology. The results of the evaluation of several semesters for the subjects of fiheology, the average grade of graduation in very good category is only 5%, 20% Good, 60% less category, 15% not graduated from the total programmed. Besides, the percentage of liveliness in questioning and opinion is still less (20%).

Improvement efforts in the process of transformation of science in lecturing process in health education and recreation education program. Shingga students have a better learning achievement and more active in developing and criticizing the concepts in the field of sports and health. The use of video about the process of respiration is one form of learning alat for learners directly, to help smooth the process of self-study of students individually or group in the context of learning physics sports.

Methodology

This study uses experimental research, because this study wanted to analyze the effect of a particular treatment on others in controlled conditions (Sugiyono, 2011: 107). Is a quantitative research and data analysis using statistics with SPSS 20. Research methods pre-experimental design that focuses on improving learning achievement. The research subjects are physical health education study program students and even semester recreation academic year 2016/2017. The design of one-group pretest-posttest design research is that it uses only one group without any control group (Sugiyono, 2010).

Sample selection using saturated sampling method is a sample determination technique when all members of the population are used as a sample where all members of the population are sampled (Sugiyono, 2010). The sample amounted to 31 students of class A semester two. Methods of data collection using student observation sheet and achievement test result and data analysis used is hypothesis analysis (One sample t-test) using software SPSS 20

Results and Discussion

The determination of whether or not the influence of the practitioners of the use of vidio tools in the teaching and learning process of the students of the Penjaskesrek Program in the basic courses of sports physics with the process material and the mechanism of respiration of the human organs system is done through t test. T test results with SPSS 20 through paried test samples t test with a significant level of α 5%

Table 1
Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Postes result	70.65	31	8.440	1.516
	pretes results	66.61	31	7.680	1.379

Table 2
Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Postes result - pretes results	4.032	5.388	.968	2.056	6.009	4.167	30	.000

Table 1 results of data analysis of both pretest and postes of 31 students showed the average value (mean) pretesnya is 66.61 while for the postes average value after treatment using video equipment an increase of 70.65, with the difference increase The average value is 4,032. The value before and after treatment using learning tool vidio with the average value of the category well showed an increase with the difference of 12.90% increase, and good category 22.58%, while for the category of sufficient and less decreased ie 29.00% and 6 , 45%.

Based on the data of t test t test results from table 2 that the value of sig (2-tailed) 0.001 <α 0.05 or in other words t count 4.167> t table 1.679, so in conclusion there are differences in learning results before the after use of vidio tools On the basic courses of sports physics that is with the discussion of the process and mechanism of respiration of the human organs of the body in the activity and exercise. The results of the observation sheet made during the lecture process, also showed an increase of student's attitudes in conveying opinions or arguments related to the material displayed in the vidio tool with the percentage of 40% active for until even semester ends.

As indicated from the results of research on the evektifitas use of vidio tools as a learning tool. For example, Muchtarom and Winarno, (2016) concluded from the results of his research that there is a difference in the average learning outcomes of experimental class and control class, with t count 4.63> t table 1.99. Similarly, Novrizal, (2015), that there is a significant effect of the use of vidio tools on student learning outcomes between the control group and the experimental group with a t value greater than t table. The same thing is delivered by Fasyi, (2015), that the average value of the experimental group posttest is higher than the control group average, with t value greater than t table. From some of these studies reinforce that the use of vidio tools as one effort to improve learning outcomes of learners is significant. The use of video

learning tools has a positive effect, when compared with learning without using vidio tools. Both in increasing the liveliness to ask the students even more in terms of academic achievement.

Conclusions and Recommendations

Based on the results of this study that there is a positive influence on the improvement of student learning achievement through the use of alat vidio in the basic courses of sports physics premises the subject of the process and mechanism of respiration of the human organs system in the activity and exercise. This is indicated by the difference between the average pre test and post test results. Where the value of sig (2-tailed) 0.001 <0.05 or in other words t count 3.686> t table 1.679, So that the use of vidio as a learning tool needs to be continuously done to support the lecturing process in the basic courses of sports physiology in physical education, health and recreation program FKIP Hamzanwadi university to increase student learning outcomes and activeness

Bibliography

Al Fasyi, Chusnul, Muhammad. (2015). *Pengaruh Penggunaan Alat Video terhadap Hasil Belajar IPA Siswa Kelas IV SD Negeri Ngoto Bantul Yogyakarta Tahun Ajaran 2014/2015*. Program Studi Pendidikan Guru Sekolah Dasar Jurusan Pendidikan Prasekolah dan Sekolah Dasar Fakultas Ilmu Pendidikan Universitas Negeri Yogyakarta

Arsyad, Azhar.(2009). *Alat Pembelajaran*. Jakarta: PT. Raja Grafido Persada

Arief, S. Sadiman, dkk. (2011). *Alat Pendidikan pengertian, pengembangan, danpemanfaatannya* . Jakarta : Rajawali Pers

Aunurrahman. 2009. *Belajar dan Pembelajaran*.Bandung: Alfabeta.

Daryanto.(2010). *Alat Pembelajaran*. Yogyakarta : Gava Alat

Munadhi, Yuhdi.(2010). *Alat Pembelajaran : Sebuah Pendekatan Baru.* Jakarta: Gunung Persada.

Nana, Sudjana.(2009). *Penilaian Hasil Proses Belajar Mengajar*. Bandung: Remaja Rosdakarya.

Muchtarom, Moh, Turyati dan winarno.(2016). *Pengaruh Penggunaan Alat Video Edukasi Terhadap Hasil Belajar PKn Siswa Kelas VII SMP Negeri 2 Gondangrejo*. Program Studi PPKn FKIP UNS Surakarta. Jurnal pkn progresif.vol.11 no. 1 Juni 2016.

Novrizal, Alfian.(2015).*Pengaruh Penggunaan Alat Vidio terhadap Hasil Belajar Siswa pada Mata Pelajaran Geografi(Penelitian Quasi eksperimen pada Kelas*

X di SMAN 8 Kota Tangerang Selatan). Jurusan Pendidikan IPS Fakultas Ilmu Tarbiyah dan Keguruan UIN Syarif Hidayatullah Jakarta

Purwanto. (2008). *Evaluasi Hasil Belajar*. Yogyakarta: Pustaka Pelajar.

Sugiyono, (2010). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, fan R dan D.* Bandung: Alfabeta.

Umami, Siti.(2009).*Pengaruh Alat Pembelajaran VCD terhadap hasil belajar siswa Fiqih Kelas VII MTsN Bantul Kota TA 2008/2009*. Jurusan PAI Fakultas tarbiyah UIN Sunan Kalijaga Yogyakarta

Effort To Increase Dribble Basketball Learning Outcomes Through Approach To Playing Student Class X Ma Nw Abbul Baroqat Village Bunkate Lesson 2016/2017

Didik Daniyantara. M.Or
Daniyantara_didik@yahoo.com

Faculty of Teacher Training and Education, Study Program of Physical Education Health and Recreation, Hamzanwadi University

Abstract

Background: Physical education is held in formal educational institutions of elementary, junior high school, high school (SMA) and college. Physical education is a part of national education as a whole, therefore in line with general educational goals, physical education must be improve. Through structured physical activity is expected to develop individuals as a whole, which includes aspects of cognitive, affective, psychomotor, mental, emotional, social, and spiritual. Objective: To improve the learning outcomes of basketball dribbles in learning penjasorkes through the application of play approach on the students of class X MA NW Abull Baroqat village Bunkate academic year 2016/2017. Research Method: The research method used is Classroom Action Research (PTK) with data collection techniques through 1.Observasi, conducted to obtain data about student activities during the learning process dribble basketball through play approach, 2.Tes, to measure how far the results Obtained by the students after the giving of the action, the test is prepared and done to obtain data about the skill dribble basketball students, 3. Interview, used to get the supporting data that ditujukkan to teachers who carry out the learning activities and also some students during the learning process takes place.

Result: Based on the results of Class Action Research (PTK), the application of the play approach is very effective in improving the learning outcomes of dribble bolabasket students of class X MA NW Abull Baroqat academic year 2016/2017. From the data of the research result showed that the result of student's learning achievement increased from 31,42% at initial condition to 60% in cycle I and increase 82,85% in cycle II.
Keywords: Improving Efforts, Dribble Basketball, Play Approach

Preliminary

A. Background

Physical education is held in the formal educational institutions of elementary school (SD), junior high school (SMA), High School (SMA) or Higher Education. Physical education is part of the national education as a whole, therefore in line with general educational goals, physical education must be improved. Through structured physical

activity is expected to develop individuals as a whole, which includes aspects of cognitive, affective, psychomotor, mental, emotional, social, and spiritual.

To achieve the objectives of physical education, there are several supporting factors that are needed, among others, teachers as informants, students as recipients of information, facilities and learning models. The chosen learning model should be suitable to be used in the process of learning theory or practice skill, this is because to improve the effectiveness and efficient process. The learning process can be said to be effective if the behavior changes that occur in students at least reach the optimal level.

Management of physical education learning process in principle children should be cheerful, happy, much moving, passionate, and passionate, but many teachers are less concerned about it. To achieve active and fun learning needs to apply the learning model in accordance with the subject matter that exist in the school curriculum at this time.
Basketball is one of the major soccer games summarized in the subject matter of physical education in High School. The game of bolabasket in high school is one of the media in physical education to encourage the development of physical ability (psychomotor), knowledge and reasoning (cognitive), as well as appreciation of attitude values (mental-emotional-social-spiritual attitude). Basketball games are less popular in the community, losing to more populist sports such as soccer, volleyball and more. That's all due to several factors including the lack of bolabasket clubs and coaching, but it is also influenced by factors that require facilities and funds eligible places.

LITERATURE REVIEW

1. Theory Review

A. Understanding Sports

In general, exercise can be defined as an activity that can be healthy from the outside or from the inside or better known as a healthy physical body. In harmony with that Giriwijoyo (2005: 30) said that exercise is a series of organized and planned movement that people do consciously to improve its functional ability. Further Supandi (1990) cited by Kusmaedi (2002: 1) states that the word sport comes from:
1) Disport, ie moving from one place to another.
2) Field Sport, an activity performed by nobles consisting of shooting and hunting activities.
3) Desporter, throw away tired
4) Sports, satisfaction or hobby
5) Sports, bodybuilding exercises to strengthen the body, such as swimming, playing ball, to grow into health Which requires funds and eligible places.

The term sports according to Zakrsjek in Rusli Lutan (1991: 5) comes from the word disport (sometimes spelled dysporte) and first appeared in the library, in 1303 meaning "Sport, past time recreation and pleasure", the meaning of the term sport (sport) It changes over time, but the essence of understanding is mostly related to the three main elements of play, physical exercise and competition. Sports are all systematic activities to nurture, and develop physical, spiritual, and social potential. Sports in SKN Law No. 3 of chapter 1 verse 1-4 (2005: 10) are all aspects related to sports that require regulation, education, training , Coaching, development, and supervision.

Rijsdorp in R. Lutan et al (2004: 8) in the opening of the 1975 ICHPER congress (International Coucil for Health, Physical Education and Recreation) in Bali, briefly summarizes the meaning of sport as a generic term consisting of the word sport and body. The word sports used, for example, "cultivate the soil" in agriculture, is so familiar with its use, which in English is called "Cultivation" meaning so close to "Culture" and "Civilizion". In this case, what is processed is the body in the broad sense that includes the whole human dimension, Rijsdorp further explained that the sport in accordance with the contents and objectives in for a sports education, competitive sports (achievements), sports (recreation) sports rehabilitation and sports Disabled.

B. Types of Sports

There are several types of sports which are presented in the book of National Sports System Act No.3 Year 2005, namely:

1. Sports Education: Sports Education is a physical and sports education that is carried out as part of an orderly and sustainable education process to acquire knowledge, personality, skills, health and physical fitness.
2. Sports Recreation: Sports Recreation is a sport performed by the community with a passion and ability that grows and develops in accordance with the conditions and cultural values of local communities for health, fitness, and pleasure.
3. Sport Achievement: Sport Achievement is a sport that foster and develop sportsmanship in a planned, tiered and sustainable through the competition to achieve achievement with the support of science and technology sport.
4. Amateur Sports: Exercise Amateur is a sport that is done on the basis of love and love to exercise.
5. Professional Sports: Professional Sports is a sport performed to earn income in the form of money or other forms based on the skills of exercise.
6. Disabled Sports: Persons with Disabilities are exercises that are performed in accordance with the physical and / or mental condition of a person.

C. Basketball Games

The basketball game was created by the American Dr. James A. Naismith in 1891. Basketball is a team game played by two teams, each team consisting of five players. The goal of a basketball game is to make as much value as possible by inserting the ball into the opponent's basket and preventing the opposing player from making a score. As stated in the FIBA Central Board (2008: 1) that: "The basketball is played by two (2) teams consisting of five (5) players each. The goal of each team is to insert the ball into the opponent's basket and try to prevent the opponent from inserting the ball ". Aip Syarifuddin and Muhadi (1991: 167) stated:

The basketball game is played by two teams of 5 players each. Each team tries to insert the ball as much as possible into the opponent's basket and prevent the opponent from inserting the ball into his basket and getting the ball. Balls can be thrown, rolled, reflected and pushed in accordance with the rules. Based on the above opinion it can be concluded that the game of basketball is a team game played by two squads, each team consists of five players. The purpose of a basketball game is to make as much as possible by inserting the ball into the opponent's basket and preventing the opposing player from making a score.

D. Basic Techniques for Playing Basketball

According to Suharno (1993: 43), "The basic technique is a technique that the process of movement in doing so is fundamental, the movement with simple and easy conditions". In basketball games, there are some basic techniques that a player must have as Muhammad Muhyi Faruq (2009: 37) states: "the basic technique of basketball is a way of playing a ball, in accordance with established rules By the authority ". The authorized institution is the Indonesian Basketball Association (PERBASI) for the national scale, while the international Federation International Basket Ball Association (FIBA), the basic technique consists of: (1) throwing and passing ball, (2) Bouncing balls (dribbling ball), (3) firing the ball into the basketball ring (shooting). Regarding the basic technique of basketball, Zsolt Hartyani (2006: 19) states, "In basketball there are three ways used to move the ball in a basketball game, namely dribblling, passing, and shooting.

Thus the basic technique in basketball can be divided into three namely dribblling (lead), passing (feeding) and shooting (shooting). Explanation of the three basic techniques according to Zsolt Hartyani (2006: 19) are as follows:

1) Dribblling or herd

It is one way to bring a player's ball in his effort to escape from opponent's guard to pass or to get a good firing position.

2) Passing or feeding

Is one way to play the ball quickly and effectively from one player to another player.

An accurate operant is a player's pass close to the basket and is able to receive operands well to score easily. A good assist has the same value as printing a number.
3) Shooting or shooting
Shooting is the final movement in an attempt to score. Usually in basketball games, shooting is done every 15-20 seconds of attacking time and almost half of successful shot attempts.

Three (3) basic techniques of playing basketball above have their own advantages, depending on the situation experienced by the game. It is influenced how players practice basic techniques continuously or never at all. If a player trains the basic technique on an ongoing basis then he or she will get maximum results if the player rarely practices the basic technique then the player will not get the desired result either. From the above opinion is known that in sports techniques is a basic ability that must be learned. Mastering the basic techniques of basketball is a fundamental factor and should be mastered in basketball games. The basic technique in basketball is divided into 3, namely: dribbling, passing and shooting.

1. **Basic Dribble Basketball Technique**

A. Understanding Dribble Basketball

One of the interesting sides of the basketball game is the dribbling that varied both direction and speed to break through the opponent and then insert the ball into the basket. Many numbers are created because it begins with a good dribble and ends with an accurate shot. Dribbling in principle brings the ball with bounced-bounce with one hand that is done by walking or running. According Vic Ambler (1990: 10) "Dribbling is to bring the ball in a way bounce it". Another opinion was expressed by A. Sarumpaet, Zulfar Djazet, Parno and Imam Sadikun (1992: 229) that, "Dribble ball is allowed only with one right or left hand only and alternately between the right and left hands". With regards to dribbles, Muhajir (2007: 15) states. Dribbling is one of the ways allowed by the rules to bring the ball running in all directions. A player may carry the ball more than one step, provided the ball is reflected either by walking or running. Dribbling is an attempt to bring the ball into the front / field of the opponent.

Based on the definition of dribble mentioned above can be concluded that, dribble is a way to bring the ball forward by bouncing the ball to the floor with one hand or two hands alternately either by walking or running. Another thing that is not less important and must be considered in the dribble is to protect the ball so that the ball is not easy to be seized opponent. As Wissle Hal (2000: 95) says: "The ability to dribble with weak arms and strong hands is the key to improving your game. To protect the ball, keep your body between the ball and the opponent ". In performing a dribble the body has an important role, if the hand is used to dribble

weakly then the body serves to protect the ball. Therefore, when dribbling the ball, the body must always be between the ball and the opponent. This is to say, If the opponent will seize the ball then the body is ready to block the opponent.

B. How to Conduct Dribble Basketball

Judging from the strategy and tactics of dribble games is a technique in basketball that can support the creation of numbers. Many benefits are derived from good dribbles. According to Aip Syarifuddin and Muhadi (1991: 174): The dribbling goal is to (1) go faster to the opponent's area in an effort to insert the ball into the opponent's basket, (2) more easily infiltrate and penetrate into the opponent's defense area, and to disrupt the opponent's defense and, (3) the opponent's game becomes undeveloped , So the game becomes obstructed.

Many benefits derived from dribble is faster toward the opponent's basket, which is to break through the opponent's defense and to control the game. Therefore it is necessary to understand how to do dribble well. Dribble can be done well if mastered good and correct technique. To obtain a good dribble quality then a player must understand and master the dribble technique. Aip Syarifuddin and Muhadi (1991: 174-175) provide guidance on how to perform the right dribble, among others: (1) The attitude of the horse's legs, knees slightly bent, (2) the body slightly leaning forward, weight on both legs , (3) upward and downward hand movements, elbows as the axis of motion, (4) the ball as if attached to the palm of the hand, (5) forward view or to the opponent.

Instructions how to do the dribble must be understood and mastered to obtain good dribble quality and true. In the execution dribble can be done with high dribble ball and low dribble ball. It is based on his needs in the game. As stated by A. Sarumpaet et al (1992: 229), "In accordance with the needs of the type of dribble there are two ways: (1) high ball dribble (waist-high), (2) dribble low ball (knee-high)". Dribble waist-high balls are used for fast forward to straight forward needs. While low dribble is used to break through or bend while controlling the ball.

2. **Play Approach**

A. Play

According to Yudha M. Saputra (2001: 6), "Playing is an activity that looks fun. Playing activities are well liked by the students. Playing done in an orderly manner, has great benefits for student development ". He further added, "Aspects that can be developed include physical, motor, social, emotional, personality, cognition, skills, sports, and so on." Based on the above opinion, it can be taken to mean that playing is an activity that everyone likes, including students at school. This can be seen from the activities of students who mostly used to play at leisure time while at school and at home. Play can also provide great benefits to aspects of

student development. Besides playing can also provide a very valuable learning experience for students. The experience can be fostering friendship and channeling feelings of distress. Therefore, it is expected that teachers can utilize play activities to develop various aspects of student development.

B. **Understanding the Play Approach**

According to Wahjoedi (1999: 121), "The approach of play is the learning given in the form or situation of the game". Another opinion put forward by Beltasar Tarigan (2001: 17), "Teaching through a play approach is to increase students' awareness of the concept of play through the application of appropriate techniques according to the problem or situation in the real game".

Thus it can be concluded that the play approach is a form of learning that applies the technique into a game or technical exercise of a sport that is formed in the game models. Approach to play in the nuances of joy and pleasure has an inherent purpose in it.

C. **Playing Approach as Teaching Media**

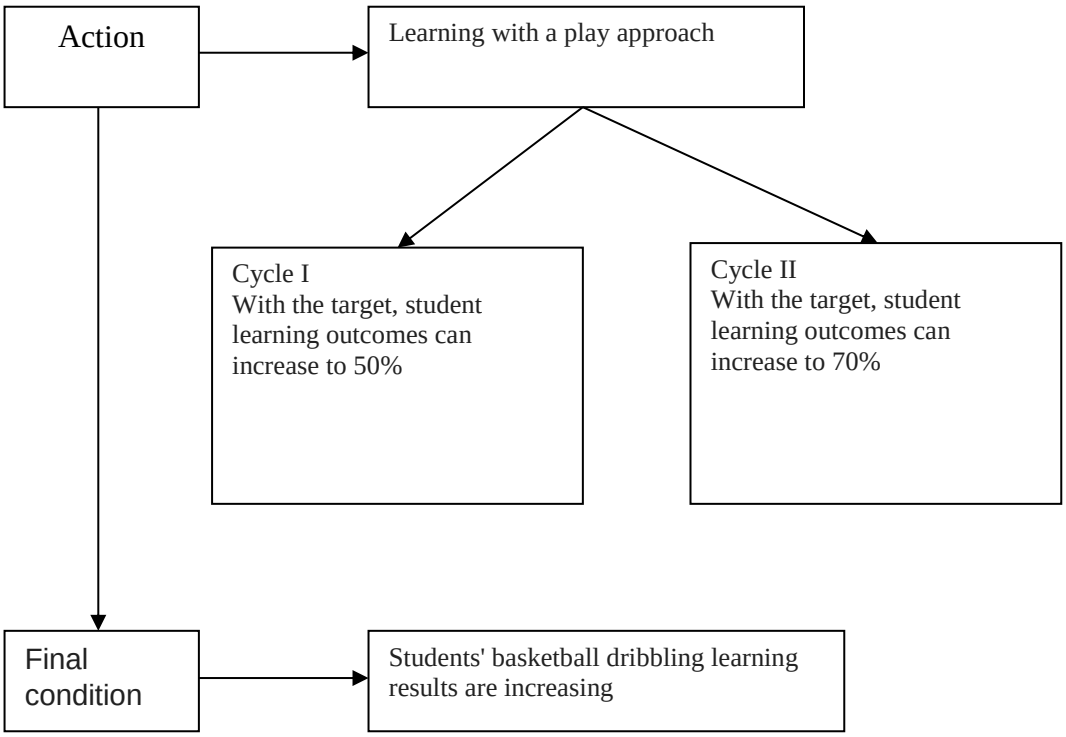
For students, playing is a serious affair, and the seriousness associated with educational goals will provide educational value. Play is a way for children to explore and experiment with the child's environment. Because the child will establish or build relationships with his environment, others and himself. By playing the child can adjust to the environment, how to master new skills, how to gain confidence, how to overcome the problems of life, which is all the benefits of playing. Playing gives a tool or a way for children to cope with an endless number of life situations. Playing is the best way for children to learn to deal with the problems they face in the real world. With a child's play approach can learn basic life patterns and allow children to accept and develop various roles, feelings, attitudes, and emotions and can display skill and strategy in the game.

In this case the play approach is used in conveying the material to learn more about the dribble skills of basketball. Because with the play approach students can more easily understand what the teacher delivered because students do it with feelings of joy and happiness.

Thinking Framework

The frame of mind that the approach to play in the learning process of basketball dribble is expected to improve and improve the quality and learning

outcomes dribble basketball students, so that learning objectives physical education and exercise health can be achieved optimally.



RESEARCH METHODS

A. Place and Time

1. Place of Research

This research was conducted in MA NW Abull Baroqat village of Bunkate Kec.Jonggat, Central Lombok.

2. **Time of Research**

The study was conducted in January-February of 2017.

B. Research Methods

The research method used is Class Action Research (PTK). Each action of goal achievement is designed in one unit as a cycle.

C. Classroom Action Research Preparation

Preparation before PTK implemented, made various instruments that are applied for treatment in PTK, that is:
1. Learning implementation plan (RPP).
2. Appraisal sheets and student observation sheets.

D. Research Subject
Subjects studied were students of class X MA NW Abull Baroqat which amounted to 35 students. With the composition of male students 9 people and 26 female students.

E. Data Sources
The data obtained in this study is a score of students' abilities and observation results that have been grouped based on aspects of observation. The data sources in Classroom Action Research (PTK) are as follows:
1. Students, to get the evaluation data learn dribble basketball through approach to play on the students of class X MA NW Abull Baroqat Village Bunkate academic year 2016/2017.
2. Teachers, as collaborators, to see the success rate of dribbling basketball learning through a play approach on the students of class X MA NW Abull Baroqat Desa Bunkate academic year 2016/2017.

F. Data Collection Technique
Data collection techniques in Classroom Action Research (PTK) are among others as follows:
1. Observation. Observations were made to obtain data about student activities during the learning process of dribbling basketball through a play approach.
2. Test, to measure how far the results obtained by students after giving the action. The tests were prepared and performed to obtain data on students' basketball dribbling skills.
3. Interview, used to get the supporting data that ditujukkan to teachers who carry out learning activities and also some students during the learning process takes place.

RESEARCH RESULT AND DISCUSSION

A. Description of Initial Conditions
Before the research action is applied, firstly conducted the initial survey activities to find out the actual conditions and find information about the obstacles encountered in the learning process dribble bolabasket in MA NW Abull Baroqat class X. Preliminary survey activity conducted as a preliminary observation to find out how much activity and learning outcomes dribble bolabasket students before being given an action that is

learning dribble bolabasket with play approach. Initial conditions were measured through performance tests, observations, and questionnaires. After the researchers approached the teacher in the high school and observed the state of the student through learning observations, the researchers found that learning bolabasket on dribble material is still difficult for students. This causes the activity and learning outcomes of students to be less so the value of lesson penjasorkes unsatisfactory, it can be seen the result of learning skill dribble bolabasket students MA NW Abull Baroqat class X still very less, that is only 11 students or 31.42% students who are able to complete the test Dribble bolabasket skill with predetermined standard of mastery. Standard time of mastery for male students is 13 seconds and female students is 15 seconds, then from the observation of learning activities obtained an average value of 18.34 from five aspects of observation that dihharapakan

In this initial condition, the researcher also dug the data through questionnaire to find out the students 'learning result in writing or cognitive about dribble bolabasket material which is then included in the final data of the students' learning result in Deribble basketball material and obtained the average value of 63.2. This indicates that the value of subjects penjasorkes on dribble bolabasket material is still classified as less. Of 35 students only 11 or 31.42% of students who are able to achieve KKM (KKM = 72), that means there is no half of the number of existing students who can complete KKM on the material.

B. Description of Action Results

In the description of the results of this study will be disclosed about the research process carried out in two (2) cycles consisting of four (4) stages, namely: (1) planning stage, (2) implementation stage, (3) stage Observation, and (4) the stage of reflection. As for the implementation of the action the researcher directly acted as a teacher who applied the approach to play in learning dribble bolabasket with teacher penjasorkes MA NW Abull Baroqat as a collaborator. The following is a description of the results of the actions of cycle I and cycle II.

1. Results Cycle I From the cycle I treatment, it can be seen the result of learning dribble bolabasket of students as a whole that is, 21 or 60% of students are able to complete KKM (KKM = 72). This indicates that there is an increase in student learning outcomes compared to the initial conditions before being given action even though the increase has not been maximized. At initial conditions only 11 or 31.42% of students reach KKM on dribble bolabasket material, so there is an increase of 28.58%. The target achievement indicator in cycle I is 50%. From the results of student learning shows that students who complete the KKM is 21 students or 60%, it means achievement targets in the cycle I has been achieved.

Stage Reflection Action I

Based on the observations that have been made during the giving of the action can be obtained the findings of success in applying the play approach in learning dribble bolabasket, because the learning conceptualized in the form of the game so it is fun and students do not feel bored during the lesson. But in addition to the success, also known as the constraints or shortcomings in the implementation of research actions. Based on these observations, the researchers together with the collaborators discussed solutions to remedy the remaining deficiencies in the hope of obtaining a more optimal outcome. Thus it can be said that research in the cycle I need to proceed to get maximum results in the next cycle. In this regard, the researcher along with the collaborator continues the action for the next cycle.

2. Results Cycle II

From result of treatment of Cycle II can be seen that 29 student or 82,85% student able to complete to reach KKM (KKM = 72). This indicates that there is a significant increase in learning outcomes compared to the initial condition and cycle I. The target achievement indicator in cycle II is 70%. From the result of student learning shown in the table, the percentage of students' learning result completeness is 82,85%, meaning that achievement target in cycle II has been reached.

Stage Reflection Action II

The results of data analysis and discussion between researchers and collaborators on the implementation of learning by applying the approach to play, in general has shown a significant increase, where student learning activities increased. With the learning activities of students who are increasing then the process of teaching and learning activities more fun. From the analysis of observation data in cycle II, students' mastery level in the overall score indicates that 82.85% of students have been completed. With the indicator of achievement target in cycle II is 70% so the result already shows the achievement of the target that has been planned. On the basis of these provisions and see the results obtained in the observation data, the learning by applying the play approach implemented in cycle II is said to be successful, so no need to continue in the next cycle. Thus this research can be said to be successful.

Average Student Score Table in Preliminary Condition, Cycle I, and Cycle II.

		Initial Condition	Cycle I	Cycle II
Psychomotor	Product	16,28	18,28	22,42
	Proces	15,57	15,71	18

Affective	18,34	19,37	23,48
Cognitive	13,14	15,31	16,22
Total Value	**63,2**	**68,7**	**80,14**

Table Percentage of Student's Completion at Initial Condition, Cycle I, and Cycle I

	Initial Condition	Cycle I	Cycle II
Dribble Bolabasket Skill Test	11 siswa (31,42%)	18 siswa (51,42%)	31 siswa (88,57%)
Total Value	**11 siswa (31,42%)**	**21 siswa (60%)**	**29 siswa (82,85%)**

Based on the dribble bolabasket test score before the research action, it can be seen that the percentage of mastery of the students' learning outcomes is still relatively low

Conclusions and suggestions

A. **Conclusion**

Based on the results of Class Action Research (PTK) on the students of class X MA NW Abull Baroqat Bunkate village academic year 2016/2017, data analysis has been done and the discussion has been disclosed in Chapter IV, the conclusion that: Applying the play approach is very effective in improving Learning result dribble bolabasket class X student MA NW Bunkate village year lesson 2016/2017. From the data of the research result showed that the result of student's learning achievement increased from 31,42% at initial condition to 60% in cycle I and increase 82,85% in cycle II

B. Suggestions

1. For Guru Penjas MA NW Abull Barokat village Bunkate
   a) In the process of learning the teacher should consider the condition and response of students and using varied teaching methods. Thus will increase student activity and learning outcomes.
   b) Should be learning by applying play approaches can be developed and used in dribble bolabasket learning in schools.
   c) For teachers who have not implemented a learning model with a play approach should try such techniques in learning Penjas so that later can be useful to improve learning outcomes of students
2. For students of class X MA NW Abull Baroqat Village Bunkate

a) Students must be ready to follow the learning with any teaching methods that teachers provide and always willing with their own awareness to follow the direction given by the teacher.
b) Students need to further enhance various activities and develop various learning methods as well as a means of broadening their knowledge and insight. Learning independently, doing the tasks of the teacher to practice practicing the techniques and movements that are present in the lesson.

BIBLIOGRAPHY

Ambler, V. 1990. *Petunjuk untuk Pelatih dan Pemain Bola Basket*. Bandung: Tarsito.

Depdikbud. 1990. *Kamus Besar Bahasa Indonesia*. Jakarta: Balai Pustaka.

Dimyati & Mudjiono. 2009. *Belajar dan Pembelajaran*. Jakarta: PT Rineka Cipta.

Faruq, M.M. 2009. *Meningkatkan Kebugaran Jasmani melalui Permainan dan Olahraga Bola Basket*. Surabaya: PT Gramedia Widiasarana Indonesia.

FIBA. 2008. *Peraturan Resmi Bola Basket 2008.* Beijing: International Basket Ball Federation.

Hartyani, Z. 2006. *Bola Basket untuk Semua*. Jakarta: Bidang III PB PERBASI.

Husdarta & Saputra, Y.M. 2000. *Belajar dan Pembelajaran*. Jakarta: Depdiknas. Direktorat Jenderal Pendidikan Dasar dan Menengah Bagian Proyek Penataran Guru SLTP Setara D-III.

Kristiyanto, A. 2010. *Penelitian Tindakan Kelas (PTK) dalam Pendidikan Jasmani dan Kepelatihan Olahraga*. Surakarta: UNS Press.

Lutan, R. 1988. *Belajar Keterampilan Motorik Pengantar Teori dan Metode*. Jakarta: Depdikbud. Dirjendikti.

Lutan, R., & Suherman, A. 2000. *Supervisi Pendidikan Jasmani Konsep dan Prak*tik. Jakarta: Departemen Pendidikan Nasional.

Margono, A. 2010. *Permainan Bola Basket*. Surakarta: UPT Penerbitan dan Percetakan UNS.

Muhajir. 2004. *Pendidikan Jasmani Teori dan Praktek SMA*. Jakarta: Erlangga.

Prusak, K.A. 2007. *Permainan Bola Basket*. Klaten: PT Citra Aji Pratama.

Rusyan, A.T., Kusdinar, A., & Arifin, Z. 1989. *Pendekatan dalam Proses Belajar Mengajar*. Bandung: Remadja Karya CV.

Samsudin. 2008. *Pembelajaran Pendidikan Jasmani Olahraga dan Kesehatan*. Jakarta: PT Fajar Interpratama.

Saputra, Y.M. 2001. *Dasar-dasar Keterampilan Atletik*. Jakarta: Depdiknas. Direktorat Jendral Pendidikan Dasar dan Menengah Bekerjasama dengan Direktorat Jendral Olahraga.

Sarumpaet, A., Djazet, Z., Parno, & Sadikun, I. 1992. *Permainan Bola Besar*. Jakarta: Departemen Pendidikan dan Kebudayaan. Dirjendikti. Proyek Pembinaan Tenaga Kependidikan.

Soeharno. 1993. *Metodologi Pelatihan.* Yogyakarta: IKIP Yogyakarta.

Sudjana, N. 2006. *Penilaian Hasil Proses Belajar Mengajar*. Bandung: PT Remaja Rosdakarya.

Sugiyanto. 1996. *Belajar Gerak 1*. Surakarta: UNS Press.

Suhermana A., & Mahendra, A. 2001. *Menuju Perkembangan Menyeluruh, Menyiasati Kurikulum Pendidikan Jasmani di Sekolah Menengah Umum*. Jakarta: Depdiknas.

Suparno, S. 2001. *Membangun Kompetensi Belajar*. Jakarta: Departemen Pendidikan Nasional. Direktorat Jenderal Pendidikan Tinggi.

Syarifuddin, A., & Muhadi. 1991. *Pendidikan Jasmani dan Kesehatan*. Jakarta: Depertemen Pendidikan dan Kebudayaan. Direktorat Jendral Pendidikan Tinggi. Proyek Pembinaan Tenaga Kependidikan.

Tarigan, B. 2001. *Pendekatan Keterampilan Taktis dalam Pembelajaran Bola Basket*. Jakarta: Depdiknas. Direktorat Jendral Pendidikan Dasar dan Menengah Bekerjasama dengan Direktorat Jendral Olahraga.

Wahjoedi. 1999. *Jurnal Iptek Olahraga*. Jakarta: Pusat Pengkajian dan Pengembangan IPTEK (PPPITOR). Kantor Menteri Negara dan Olahraga.

Wissel, H. 2000. *Bola Basket Dilengkapi dengan Program Pemahiran dan Teknik*. Alih Bahasa Bagus Pribadi. Jakarta: PT Raja Grafindo Persada.

Relationship of Explosive Muscle Limb Power with Smash Ability in Volleyball Gameat SME Penjaskesrek Hamzanwadi University.The Goal to be Achieved in this Research is to Determine Whether or not the Relationship of Explosive Muscle Limb Power with Smash Ability in Volleyball Game on SME Penjaskesrek Hamzanwadi University in 2017

Lalu Erpan Suryadi

Study Program of Physical Education of Health and Recreation
Faculty of Teacher Training and Education Hamzanwadi University

ABSTRACT

Usefulness: (1) Theoretical usefulness is for, the information obtained in this study is useful for scientists in the field of sports to be able to develop the concept in order to improve sports achievements, especially in volleyball. (2) Practical Usefulness The results of this study are expected to serve as one of the theoretical considerations for students in smashes, in volleyball games and can make a valuable contribution to the community, especially the masseuse teachers in helping and nurturing students.The population in this study is "the volleyball players who are members of SME PenjaskesrekHamzanwadi University in 2017, which amounted to 15 people '.To obtain the data in this research, then used the test method of deed as the principal method, while the method of documentation is used as auxiliary method.While the method of data analysis using product moment formula. From the calculation result, the r-count value obtained in this research is 0,565, while the r value in table with 5% significant level is 0,396, this fact show that the value of r-count obtained is bigger than r-table value. Thus hiptesisnihil (Ho) is rejected and the Alternative Hypothesis (Ha) which reads "There is a relationship of explosive muscle limb power with smash achievement in volleyball game on SME Penjaskesrek East Hamzanwadi University in 2017" Accepted.

Keywords: Relationship of explosive muscle limb power, smash ability, volleyball.

I. INTRODUCTION

A volleyball game is a team sport played by two teams in each game field separated by the net and aims to get every team to skip the ball precisely, over the net until the ball touches the floor in the opposite area and prevents the ball being missed by not touching the floor in the field own. Although the nature of the team, but individual skills will make it easier to cooperate to achieve a good outcome.

To be able to start a game of volleyball, should first know the basic ways or movements in the game itself. One factor that must be mastered by a player to achieve

a satisfactory result is to know the basic techniques of the game of volleyball. The technique of volleyball is a part of the game in doing so demanded physical activity. Mastery of technique is absolutely necessary, because if the wrong technique is considered to be a violation. So the correct mastery of techniques is crucial to achievement or victory. The basic techniques in the game of volleyball include passing, service, Smash and block.

Speaking of smash problems, can not be separated from posture, because after all success in the game volleyball is a series of mutually supportive systems, can not be separated from one to another. In other words, athletes who are able to achieve good achievement is a combination of several aspects such as engineering, tactics, mental and physical itself. Many things related to the physical condition, one of them is the explosive power of the leg muscles. However, researchers do not know clearly and clearly the extent to which the explosive power of leg muscles significantly influence smash ability. One of the factors that support the achievement of a good smash blow is to have good leg muscle explosive power. This is what is interesting for researchers to conduct further research on the relationship of explosive muscle limb power with smash achievement in the game of volleyball at the club SME PenjaskesrekUniversiitasHamzanwadi Year 2017.

II. LITERATURE REVIEW

A. Theory Description

1. Volleyball Games

A. History of Volleyball Games

The game of volleyball is a form of game that was created in 1985 in Holyoke (East America) by William G. Morgan Physical Education coach at the Young

Men Christian Association (YMCA).

The game of volleyball in America is very fast development, so in 1922 the YMCA held a national volleyball championship. Then this volleyball game spread all over the world. In 1947 the first game of volleyball competed in Poland with a lot of participants, then in 1948 established the International Volley Ball Federation (IVBF) which was then membered 15 countries and based in Paris.

The game of volleyball entered Indonesia at the time of Dutch colonization (After 1928). The development of volleyball in Indonesian society is very fast. This is evident at the 2nd National Sports Week (PON) of 1951 in Jakarta contested. Until now volleyball games including one of the official sports yag competed.

In 1955 precisely on January 22, established the Indonesian Volleyball

Association with the name of Volleyball Association of Indonesia (PBVSI) with its chairman W.J. Latuneten. After the existence of this volleyball parent organization, then on the stairs 28 to 30 May 1955 held the first national congress and championships in Jakarta.

B. Basic Techniques Ball Volleyball

The basic techniques in the game of volleyball are as follows:

1). Pass DownIs taking and passing the ball (Passing) or reflecting the ball with one or both hands of the lower arm from the bottom (Syarifuddin, 1997: 68).

2). Pass UpIs how to take the ball or pass the ball from the top of the fingers. The ball comes from above taken fingers on the top, in front of the head (Syarifuddin, 1997: 69).

3). Service BottomIt is a way to blow the start of the service plot by hitting the ball with the hand from below in an effort to turn the ball into the game (Syarifuddin 1997: 70).

4). Service UpIt is a way to blow the start of the service area by hitting the ball off the top of the head as an effort to turn the ball into the game (Syarifuddin 1997: 58)

5). BlockingIs a form of movement of a person or some players who are near the net or nets (Syarifuddin, 1997; 58)

6). Smash (Spike)Is the movement to hit the ball is done with a strong and hard and the way the ball fast, sharp and dive difficult to accept the opponent when it is done quickly and precisely (Syarifuddin, 1997: 58)

Smash is a technique that has a complex movement consisting of:

1. Initial Step
2. Ask to jump
3. Hit the ball as it hovers in the air
4. On landing again after hitting the ball

C. Rules Ball Volleyball

1). Field and Size

A rectangle-shaped volleyball field with a length of 18 meters and a width of 9 meters, all the boundary lines of the field, the center line, the attack area is 3 meters (Front area). The boundary line is no more than 5cm.

The game field of volleyball is divided into two equal bgian which each cover 9 x 9 meters. In the middle of the field is bounded midfield which divides the field into two equal parts. Each field consists of attack area and defense area. The attack area is an area bounded by the center line of the field with an area of 9 x 3 meters wide.

2. Net (Net)

The net for volleyball is not more than 9.50 meters wide and no more than 1.00 meters wide with 10 x 10 cm plot or mesh netting, mesh height for 2.43 meters and princess 2.24 meters, Top edge there is a 5 cm wide white band.

3. Stick or Rod

In a national and international volleyball game, over the edge of the net is a rod or rod up to 80 cm from the edge of the net. The stick is made of fiberglass with the size of 180 cm witha contrasting color.

4. Ball

The ball should be made of soft material (flexible), rounded with inside of rubber material or something and brightly colored and the ball used in it weighs 250-280 grams and around t

5. Players

The number of players per team is 11 people and as many as 6 people are allowed to play as well as 5 people as a backup player.

6). A Rally Victory

In a game of volleyball each won one rally earning a single digit. If the receiving team wins a rally it will get one number and get a service turn, will do the clockwise rotation or rotation.

7). Winning a Set\

A set except for set V was won by the team that first got the number 25 with a minimum of two numbers difference. In the 24 -24 position the game continues until the two-point difference is reached. (24 and 26, 25 and 27 and so on).

8). Libero Players

1. Appointment of libero players, namely;
   - Each team is entitled to show a defender "libero" among a list of 11 players.
   - Before the game, libero must be listed in the score sheet in the list of positions that have been provided. The number should be listed on the position sheet in the first set
   - Libero is not the captain of the squad or the captain of the player.

2. Libero Equipment

   Libero must wear a uniform (jacket / hat specially designed), the shirt should be contrasted compared to the other team members, thelibero uniform must have a different but numbered design like the rest of the team.

3. Liberal movements in play
   - Libero is allowed to replace every player in the back row position

• Libero is limited to playing rearguard and is not permitted to attack from
anywhere(including on the playing field, and in free area).
• Libero is not allowed service, block or try to block

D. Touch (Contact) Net

Touching the net is not a mistake, unless the player touches when trying to play the ball or intentionally holding the net.

E. Time Out or Technical Time Out

All time Out requested duration 30 seconds. For the World Championships and official FIVB matches on set 1 -4, there is an additional technical time out

III. CONCLUSIONS AND SUGGESTIONS

A. Conclusion

From the results of data analysis done in this study proves that: The higher the explosive muscle power of the legs, the more achievers the ability to jump smash in a game of volleyball on SME PenjaskesrekHamzanwadi University Year 2017.

B. Suggestions

From the above conclusions, the authors have suggestions that may be useful for the
purposes of sports volleyball:

1. To the trainers should provide volleyball game training to students intensively and continuously so that the achievement of players in terms of sports games, especially volleyball branch can be improved.
2. To the players in doing volleyball games do not just train the smash but the leg muscle strength training needs to continue to be leveled, because very large influence on smashnya ability.
3. It is hoped that other researchers interested in continuing this research are expected to further extend the scope, variables and problems so as to enrich the treasures of science, especially about the sport of games in relation to the game of volleyball.

Refrences

Arikunto,Suharsimi*., 2006.Prosedur Penelitian*, RinekeCifta:Yogyakarta.

_____.*2002,ProsedurPenelitian,*RinekeCiftra: Yogyakarta*;*

Donie, 2009. *Pembinaan Bola Voli*, Wineka Media, Jakarta.

Hadi,Sutrisno.1978 *Metode Research Jilid I,Andi Offest:* Yogyakarta:

_____.1990. *Metode Research Jilid III; Andi Offest:*Yogyakarta

Hasanudin, 2009.*Korelasikekuatanotottungkaidengankemampuan smash dalampermainan bola voli*, Skripsi FPOK IKIP Mataram

Kamrin. 2006, *Pengaruh Daya Ledak Otot Tungkai Terhadap Smash:* IKIP Mataram.

Margono,s. 1997,*Menetukan Metode dan DesainPenelitian,Dasar-Dasar*Penelitian *Ilmiah;Usaha* Nasional: Jakarta;.

Mawardi, 2008.*Hubungandayaledakotottungkaidengankemampuan smash dalampermainan bola voli*, Skripsi FPOK IKIP Mataram

Moeliono.1993,*Kamus Besar Bahasa Indonesia (BBI);*Balai Pustaka;Jakarta;

Nurhasan.2001,*Tes dan Pengukuran*,Karunika:Jakarta;. *Nasution,Thomas;Didaktik*

Netra,IB.1974,*Statistik Asas-asas Mengajar,Guntmg* Mulia:Jakarta.

People,James.1974,*BelajarBulutangkis; Inferensial;Usaha*Nasional:Surabaya

Sudjana, 2002.*MetodeStatistik*, Tarsito. Bandung

SuhadiIbnu, 2003, *Dasar-DasarMetodologiPenelitian*, UniversitasNegeri Malang

Sulaeman, 2006.*Pengaruhdayaledakotottungkaiterhadappukulan smash dalampermainan bola voli*, Skripsi FPOK IKIP Mataram

SyahrirAlhasin, 2007, *Gemarbermain bola volis.* CV. Setiaji, Surakarta

Tim. 2011,*Pedoman Pembimbingan dan Penulisan Karya Ilmiah*, :IKIPMataram.

TatangMuhtardkk, 2007.Bola Voli II.Universitas Terbuka Jakarta.

Improving Basic Stability Of Students Locomotors In Physical Education Learning, Health And Recreation (Penjaskesrek) Through Traditional Games

(Study on grade V students SDN Bogak Praya, Central Lombok 2016/2017)

Suryansah
suryansahtkd@yahoo.com / suryansahm.pd@gmail.com
Study Progrem of Physical Education Health and Recreation (Penjaskesrek), Faculty of Teacher Training and Education Universitas Hamzanwadi Lombok Timur
2016/2017

ABSTRACT

Where education as a conscious and planned business process to create an atmosphere of learning and learning process so that learners actively develop their potential to have spiritual spiritual strength, self-control, personality, intelligence, noble ahlak, and skills needed him, society, nation and country. According to Rusli Lutan (1997: 26) educational activities in elementary schools have a positive impact on the growth and development of children including mental, emotional, attitude, spiritual, and physical skills (multilateral skills). So that in implementing the principle of the implementation of education must be in accordance with the objectives of national education, so that an education has targeted pedagogical goals and precisely, therefore education is incomplete without the learning of physical education, health and recreation through traditional games, To improve locomotor basic movement ability in learning physical education, health and recreation through the traditional game in class V. This research was conducted at SDN Bogak Praya, Central Lombok, with the subject of the study of the V student students amounted to 39 students in the academic year 2016/2017. This research uses classroom action research method consisting of two cycles with four main activities namely planning, action implementation, observation and reflection. From the research result, it can be concluded that by using traditional game can improve locomotor base motion ability in physical education, health and recreation learning (penjaskesrek).

Keywords: *Locomotor base motion, Health education and recreation learning (penjaskesrek), Traditional Court.*

A. PRELIMINARY

In traditional sports it is important to note the separation between children and adults games. Traditional sports for adults are included in various competitions such as presean, pandanus war, karapan cow, sheep race and so on. While traditional sports for children there are various types depending on the tribe who have the sport. Basically traditional sports have elements of physical skills, and speed of thinking (Ardiwinata 2006: 4). The traditional game is a game performed by the majority of children and adolescents from generation to generation. Traditional games become part of the culture of the nation that seeks its own

characteristics for the country and the region. Traditional games tend to be almost the same from one region to another and the only difference is the name and rules of the game that are tailored to the conditions in their respective regions.

In general, humans have a tendency to always want to move, as well as children, they make a movement or motion while having fun to channel all the potential that is in him. Usually these forms of activity are channeled through the game. Playing for children is an important need in her life, even almost part of her time is spent playing. It is very meaningful for children to train themselves and can stimulate the growth and development of the child.

When observed the behavior of elementary school children (6-12 years) seen that their motion activity is so high. Time at school for example, before the first bell, ahead of the break or coming home, they want to quickly leave the classroom. As soon as the bell rang they were so enthusiastic about pouring out, jumping and running along with their friends. Unconsciously they often play by performing basic movements in it, which is a common motion that every individual does. Motion performed by humans in general is walking, running, jumping, jumping, flying, gliding, prancing, and climbing in which motion is included in locomotor base motion. Every human will surely do this motion in every activity he does. For children, locomotor base motions such as walking, running, jumping, jumping, flying, gliding, prancing, and climbing are essential to their developmental needs. Children are individuals who are happy to move. Motion in children is needed for the development of children during the process toward adulthood. Moving, in addition to beneficial to health also affects the child's sensory. The sensitivity of the child will be good if the child moves according to the stage of growth. For children to play is their way to channel the activity of motion, through the activities of basic locomotor motion play they will grow because of playing a need that is like the other basic needs.

In the field of education, the activities of children to move can be channeled through learning physical education, health and recreation (Penjaskesrek), many kinds of activities Penjaskesrek often children do, whether it plays individually or in groups. In the game they can unleash basic locomotor skills, have fun and interact with their friends. But one of the main problems in Penjaskesrek in Indonesia is the ineffectiveness of teaching of Penjaskesrek in schools (Toho Cholik M and Rusli Lutan, 1997: 2). This is due to several factors such as the limited facilities and infrastructure that are used to support the learning process and the limited ability of teachers to do learning locomotor base motion.

Teachers are still fixated on the rules, the use of field, media and teaching aids in sports activities, and then there is no teacher effort to modify the learning. At the moment big ball games, small ball games, athletics, gymnastics are games

that are always taught to students in learning penjaskesrek. This causes teachers to be less creative to create games that can improve students' locomotor base motion abilities. As seen in the acquisition of grade V students in SDN Bogak Praya, students who have achieved value above the KKM only 68.5% of the existing students are 39 students (School Document, KKM SDN Bogak Praya, 2016). In learning Penjaskesrek for locomotor basic skills of students can increase and students do not feel bored or tired in receiving learning materials, then educators must be able to create appropriate learning for their students.

Judging from some of the problems above, then teachers should start looking for alternatives or models that are innovative and creative in a lesson to be able to improve the basic motion capabilities of child locomotor, one of them by using traditional games. Traditional games for children are of different kinds depending on the race of the people who have the sport, basically the traditional sport has elements of physical skills, and the speed of thinking (Ardiwinata: 2006: 4. Traditional games are very rare / less interested can actually develop Students' overall physical skills, namely locomotor, mental and intellectual basic motion.There are many traditional forms of play that can be used to improve the locomotor's basic motion skills and involve the child's knowledge of other subjects such as inserting lessons other than the Pencekresses into traditional games. Traditionally can be modified by the creativity of teachers in designing the game form because it can be adapted to the condition of the students.The traditional game is also a cultural asset that must be developed and preserved so that the character of this nation can be seen.

By looking at the problems that exist then the researchers wanted to examine whether by using traditional games can improve locomotor base motion skills on learning Penjaskesrek in class V SDN Bogak Praya, Central Lombok.

B. LITERATURE REVIEW

Basic motion is a common motion commonly performed by every human being. Every student activity does not escape the movement either consciously or unconsciously. According to Gabbart, LeBlanc, and Lowy (1987) in Sukintaka basically the basic human motion generally consists of three kinds of motion, namely Lokomotor, Non Lokomotor and Manipulation (Sukintaka, 2004: 42). These three basic motions are interrelated in basic human motion patterns involving different body parts such as the legs, arms, arms, torso and head, and include skills such as walking, running, jumping, jumping, flying, gliding, prancing, and climbing. Lokomotor according to Gallahue as stated in Understanding Motor Development book is a basic aspect in learning to move efficiently and effectively (Gallahue, 1998: 222). The locomotor base motion is

often performed by both conscious and unconscious humans. This movement is often encountered when humans are on the move, namely to move the movement of the place. The locomotor skill according to Sukintaka is physical activity by moving the foot of foot from one place to another, or physical activity by leaving its foothold (Sukintaka, 2004: 43). In everyday life humans will not be separated from the activities of motion performed to move places, by doing a movement that moves the place means that humans have done a basic motion skills locomotor. Basic locomotor motion commonly found in elementary school students is walking, running, jumping, jumping, flying, gliding, prancing, and climbing. Running is an accelerated step frequency so that when running there is a tendency for a floating body (A. Widya, 2004: 13).

According to M Djumijar (2004: 13) run is the frequency of steps that are fastened so that the body like float when running. Running is the basic movement to scavenge, a body that moves forward because of the effect of the backward force on the ground. Therefore, running is the basic motion of locomotor and is also the basic motion that humans have in nature. In everyday activities we are often faced with basic motion activity and also run. In contrast to walking, running is a rapid movement of the legs alternately, at a quick moment, both feet leave the earth before one of the legs immediately rests again. Most schoolchildren can run at relatively high speeds and can easily change the direction of the run. Stages of a mature run pattern will show the following essentials: a) The body maintains a slight downward tendency during the stepping pattern, (b) A broad view of the fore, c) Both arms swing at a wide angle and synchronized in contrast to the leg swing, D) The legs that hold contact with the ground are nearly flat and close to the center of the body weight, e) The knees of the foot are slightly bent after they make contact with the soil, f) The alignment of the legs resting on the pelvis, knees, and wrists The leg pushes the body forward and upwards toward the phase of the drift, g) The knees are swung forward forward rapidly in the high knee force, and simultaneously the lower leg bends, bringing the heel close to the butt, h) The harmony of inner body motion Running (Agus Mahendra, 2005: 5).

Penjaskesrek is part of Gymnologie, ie knowledge (wetenschap) about practicing, training, or training; Which consists of three major parts: 1) Physical Education, 2) Sports, 3) Recreation (Sukintaka, 2004: 31). Penjaskesrek provides opportunities for students to be directly involved in various learning experiences through systematic physical activity, play and sports. Briefing of the learning experience is directed to foster, while forming lifestyle healthy and active throughout life. As Suranto said that Penjaskesrek must be done continuously throughout human life with various patterns and also given starting from kindergarten to college (Suranto, 1991: 24). Through physical education students

can increase their motion activities through accepted experience, thereby Penjaskesrek will bring students in fun activities that are creative, innovative, skilled, have physical fitness, healthy living habits and have knowledge and understanding of human movement.

Traditional games or folk games are cultural assets need to be conserved, excavated and grown, because in addition to being a game to fill the spare, it also has the potential to be further developed as a sport that can help improve the quality of the culprit (Achmad Allatief, et al, 2006: 1) . In addition, traditional games also train us to move, using physical and active so that the body becomes healthy. This allows the child to develop their locomotor base motion capabilities. Dani Wardani reveals, the traditional game is a game full of social value and sportsmanship, where indirectly educate and guide players into a superior person (Dani Wardani, 2010: 90). Husna in his book entitled 100+ Traditional Games Indonesia reveals, the traditional game is a game containing educational and social values that involve physical activity, strategy setting, teamwork, and emotional intelligence (Husna, 2009: 230).

C. RESEARCH METHODS

This research was conducted at SDN Bodak, Praya Subdistrict, Central Lombok. Subjects in this study were students of class V semester of the academic year 2016/2017 as many as 39 students. In the case of this study involving all parties from the teacher penjaskesrek and the school. The research method used is action research. Classroom action research is action research conducted by teachers in the classroom (Didik and Wahyu, 2011: 47). The design of Classroom Action Research used in this research is using Kemmis model and Mc Taggart covering four paths including action planning, action implementation, observation, and reflection.

Cycle I research plan planning involves analyzing and formulating problems that occur in class (theory) as well as outside the classroom (practicum field), developing learning scenarios in the form of RPP, media and others, and preparing the tools to be used for documentation. The study was conducted in two cycles. In each cycle researchers do two actions, and each meeting is 2 x 35 minutes. Observation activities are carried out directly to the classroom activity by using an action monitoring instrument. The observation results are recorded in the form of a description on the field note sheet based on observations made by the collaborator directly and also equipped with the help of the camera. Reflection is carried out to analyze the achievement of the process of giving action and to analyze the factors causing the non-achievement of the action, and the progress

that has been achieved by the students. Then discuss how to solve the problems that arise to be solved in the next cycle.

D. RESULTS and DISCUSSION

After doing the learning activities from cycle I to cycle II, the data obtained from the implementation results, data obtained include research data and monitoring data action. Research data in the form of the results obtained from the traditional games performed in each cycle while the monitoring data in the form of observations made by the observer during the learning process.

1. Description of result of research cycle I

Cycle I action is carried out through a series of phases from planning, implementation, observation and reflection. Implementation of the action carried out in 2 meetings where in every meeting 2 x 35 minutes. Observations were made during the learning process, using action monitoring sheets to determine the effectiveness of learning by teachers and students. To find out the improvement of students' locomotor base motion, an assessment was conducted during the learning process using locomotor base locomotion capability instrument.

The data obtained from the locomotor base motion capability at the end of the cycle showed only 68.5% of the students who scored above the KKM were 39 students, while the data obtained from the action monitoring instrument got the percentage score of 63.5%. In other words, the improvement achieved in cycle I has not reached the predetermined target of 85% of the total number of students getting the score above the Minimum Exhaustiveness Criteria (KKM) or getting a minimum score of 9.

Based on observations and discussions conducted by researchers and observers there are some things that are found and must be improved. There are some notes that have been made during the learning process that is, at first the lack of order during group activities, lack of student cooperation in traditional game activities, then when the teacher explains the material there are still students who are busy themselves and do not pay attention, Play by itself. As a result, it has not reached the expected target of success.

To improve locomotor locomotor ability to run in accordance with expectations, it is necessary to make improvements such as teachers provide more guidance when students perform traditional games, before continuing the lesson is a good teacher to condition the students to make learning work well.

2. Description of result of research cycle II

Implementation of cycle II is implemented to meet the target that has not been achieved in cycle I. Just like in cycle I, the implementation of cycle

II includes planning, implementation of action, observation and reflection. Implementation of action in cycle II is conducted in 2 sessions, where every 2 x 35 minute meeting is held on May 8, 2017 and 20 June 2017. Observation is done on every action implementation using action monitoring sheet. While locomotor locomotor base results obtained during the learning process using locomotor base motion capability instrument run.

The result of the second cycle of learning shows that students' enthusiasm increases more during the learning process. In cycle II, the ability of basic motion of child locomotor has increased and has reached the expected target, that is 85% of the number of students get a minimum score of 9. For the observer observation of learning action also increased percentage by 22% to 85.5%, compared to cycle I Which only reached 63.5%. This shows that learning by using traditional games can be said to be effective, because the observation score of the action increased from cycle I to cycle II.

Based on the results that have been obtained in cycle I and cycle II, researchers and collaborators concluded classroom action research conducted on students of class V SDN Bogak Praya, District Central Lombok Praya is enough until the second cycle. Thus can be declared traditional game can be one of the alternative of physical education education, to improve locomotor base motion capability run.

Learning by using traditional games can improve locomotor base locomotion skills. This is because, learning by using traditional games provides an opportunity for students to expend their movement ability to achieve the expected goals. The core activities in the learning process undertaken during cycle I and cycle II are done with traditional games covering aspects of simple assessment, motion activity, fun, social interaction, sportsmanship, and modified rules.

In the first cycle there are some notes made by teachers during the learning process took place, students are not used to using learning with traditional games, some students are still less attention and still less sporty in traditional games, students are also less cooperate in group activities. Improvements made such as: teachers should be more master students, teachers guide students to correct mistakes, as well as more firmly in learning so that students can play with sportsmanship.

In the second cycle of action, the students already look more conducive, because the students are already familiar with the learning process by using traditional games, and the students' attention has started to focus more. In the group the students have been working well together and interacting with each other. Improving the effectiveness and learning outcomes of students in

cycle II indicates that learning by using traditional games can improve the locomotor's basic locomotion ability.

E. CONCLUSION

Classroom action research conducted in class V SDN Bogak Praya Central Lombok is working to improve locomotor base locomotion capability by using traditional games. Based on the discussion of the results of the research described, it can be concluded that learning with traditional games can improve the locomotor base ability to run students because it makes students active and provide opportunities for students to issue their motion skills and students can better understand the material delivered because the traditional game makes students more Active and passionate in the learning process.

F. SUGGESTION

After knowing the importance of using traditional games in the implementation of physical education learning activities (penjaskesrek) can improve the ability of basic motion of students locomotor, the researchers suggest:

1. Traditional games are one of the best forms of learning to apply to physical education subjects (pejaskesrek).
2. To be able to improve locomotor basic movement ability in physical education learning, it is better to apply traditional game so that learning becomes fun.
3. For schools have limited facilities and infrastructure especially those related to physical education should use traditional games, because traditional games can take advantage of what is around the school and whatever the attraction for students.

BIBLIOGRAPHY

Ardiwinata, Achmad Allatief, Suherman, dan Martadinata. 2006. *Kumpulan Permainan Rakyat, Olahraga Tradisional.* Jakarta: Cerdas Jaya.

Agus Mahendra. (2005:5). *Falsafah Pendidikan Jasman*, Jakarta : Direktorat Pendidikan Luar. Biasa.

Allatief, Achmad dkk. (2006). *Model Pelaksanaan BBE Pendidikan Jasmani Sekolah Menengah Pertama.* Jakarta : Depdiknas.

Cholik Mutohir, T. 2002. *Gagasan-gagasan tentang Pendidikan Jasmani dan olahraga*. Unesa University Press:Surabaya.

Companie. Sukintaka. 2004. *Teori Pendidikan Jasmani.* Bandung: Nuansa Cendekia.

Djumair. (2004:13). *Dasar-dasar Atletik*. Depdikbud Universitas Terbuka, Jakarta.

Dokumen Sekolah. 2016/2017. *Kriteria Ketuntasan Minimal*. Nusa Tenggara Barat: SDN Bogak Praya. Asrah. 2010. *100+ Permainan Tradisional Indonesia*.

Yogyakarta: ANDI.

Gabbard C., LeBlanc E., dan Lowy S. 1987. *Physical Education for Children*. Prentice-Hall Inc. New Jersey.

Gallahue L, David. 1998. *Understanding Motor Development*. USA: McGraw-Hill

Husna, A. (2009). 100+ Permainan Tradisional. Yogyakarta: CV Andi Offest.

Husna, R. A. (2006). Psikologi Perkembangan Anak: Mengenal Sifat, Bakat dan Kemampuan Anak. Yogyakarta: CV Andi Offest.

Komaidi, Didik, Wijayanti, Wahyu. 2011. Panduan Lengkap PTK. Jakarta. Sabda Media.

Lutan, Rusli.2005. *Belajar Keterampilan Motorik Pengantar Teori dan Metode. Edisi Revisi*. Dirjen Dikti Depdikbud. Jakarta.

Lutan, Rusli. Dkk. 1997. *Manusia dan Olahraga*. ITB dan FPOK IKIP Bandung. Bandung.

Sukintak. (2004:42-43). *Tujuan Pendidikan Jasman,* Jakarta : Depdikbud.

Suranto, Heru. 1991. *Pengetahuan Umum Pendidikan Jasmani dan kesehatan*. Jakarta: Universitas terbuka.

Widya A, Djumidar Mochamad. 2004. *Gerak-gerak Dasar Atletik dalam Bermain*. Jakarta: Raja Grafindo Persada.

Wardani, Dani. 2010. *33 Permainan Tradisional yang Menarik*. Yogyakarta: Cakrawala.

(http://file.upi.edu/Direktori/FPOK/JUR._PEND._OLAHRAGA/196308241989031AGUS_MAHENDRA/*Modul_Praktek_2_Agus_Mahendra/Modul_1_Lokomotor.p*) (diakses pada tanggal 9 November 2011)

APPLICATION OF TALKING STICK METHOD IN COURSE WRITING SEMESTER IV EDUCATION IN INDONESIA AND SASTRA INDONESIA FKIP UNIVERSITY MUHAMMADIYAH MATARAM

Siti Lamusiah 1), Titin Untari 2), Arpan Islami Bilal 3)
Islami_bilal@yahoo.com
Lecturer of Indonesian Language Education and Indonesian Literature Faculty of Teacher Training and Education Universitas Muhammadiyah Mataram
2017

ABSTRACT

Model learning with Talking Stick method encourages students to dare to express the opinion of Agus Suprijono (2009: 128). Talking Stick method is very appropriately used in the development of learning process PAIKEM. The formulation of the problem is how the application of Lesson Study by using Talking Stick method in writing courses in the fourth semester of Indonesian language education and Indonesian literature FKIP Muhammadiyah University Mataram ?. The purpose of this study is to apply the method of talking stick in writing courses in the fourth semester of Indonesian language education and Indonesian literature FKIP Muhammadiyah University Mataram ?. This research use desciptive qualitative approach. In cycle 1 the results of the observer show, 1) Socialization (165), 2) Plan (200), 3) Do (233), 4) See (235). Then proceed to cycle 2 the results show the following: 1) Socialization (167), 2) Plan (221), 3) Do (320), 4) See (269). While in cycle 3 the result of observer shows as follows: 1) Socialization (188), 2) Plan (220), 3) Do (314), 4) See (267).

Keywords: Implementation, Talking Stick, and Writing.

A. INTRODUCTION

1. Background

The talking stick model is one of the learning models that can be used to improve students' writing skills. The talking stick model is a learning model that is oriented towards the creation of the condition and the active learning atmosphere of the students because of the element of the game in the learning process.

Based on the above explanation, the main reason for choosing the talking stick model because during the learning process takes place after the lecturer presents the lecture material, the student is given some time to study the lecture material that has been given, in order to answer the question asked by the lecturer during the talking stick. Given in talking stick, punishment can be applied, for example students are asked to sing, poetry, or punishments that are positive and foster student's motivation to learn.

Thus, learning with a pure talking stick model is oriented towards the individual activities of the students performed in the form of games.

2. Problem Formulation

Based on the above background then the formulation of the problem in this study is "How is the application of Talking Stick method in writing courses in the fourth semester of Indonesian language education and Indonesian literature FKIP Muhammadiyah University of Mataram ?.

3. Research Objectives

The purpose of this research is "to apply the talking stick method in writing courses in the fourth semester of Indonesian language education and Indonesian literature FKIP Muhammadiyah University of Mataram".

A. RESEARCH METHOD

1. Research Approach

The approach used in this research is qualitative descriptive approach. According to Crosswel (in Wiriaatmadja, 2006: 8) qualitative research is an inquiry process that investigates social and humanitarian issues with different methodological traditions. The subjects in the study are the fourth semester students majoring in Indonesian language education and Indonesian literature, teacher education faculty and education Muhammadiyah University of Mataram.

2. Data Collection Techniques and Instruments

Techniques used to collect data are observation, interviews, field notes, documentation, and tests. Instruments used were observation sheets, field note sheets, documentation, and test results. Instruments used in data collection are questionnaires and LCDs.

3. Data Analysis Technique

Data Analysis Techniques The data analysis used to process this research data is descriptive qualitative data analysis. Expert test data and small group tests from questionnaires were analyzed percentages and described qualitatively. Field test data / user test in the form of lecturing process in development environment is analyzed by qualitative data analysis of flow model (Milles & Huberman, 1992) by applying multipurpose principle. In this case what matters is how an analytical technique can be used to support problem solving (McNiff, 1992). Activity analysis, including: data

reduction, data presentation, and withdrawal of conclusions or verification. Data reduction activities include classification and encoding according to the data type. Presentation of data in the form of description descriptions, tables, diagrams, drawings or other visual forms. The data already presented is verified, interpreted, and summed up. Target data analysis includes the level of observation, level description, and level eksplanatori. At the observation level the data is selected, categorized and coded. At the level of description and data are presented in units of patterns, units of events, units of trends, or units of meaning.

A. RESULT AND DISCUSSION

In the following discussion will be presented a description of data that has been obtained in the study. Description of the data referred to in this study is to provide an overview of the characteristics of the distribution of scores and research subjects for each subject studied. So in this study used the following stages:

1. Cycle 1 (One)

Cycle 1 (one) held on the day, Tuesday, July 10, 2017 from 13:00 until 14.30, the observer and the results can be described as follows.

In cycle 1 consists of several observers, among others: 1) Rahmat Sulhan Hardi, M.A., 2) Dra. Titin Untari, M.Pd., 3) Habiburrahman, M.Pd., 4) Baiq Desi Milandari, M.Pd., 5) Syafrudin Muhdar, M.Pd., 6) Arpan Islami Bilal, M.Pd., 7) Ahyati Kurnia Mala Dewi, M.Pd., 8) Drs. H. Akhmad H. Mus, M.Hum.

Identity:

Name of Lecturer Model: Siti Lamusiah, S.Pd., M.Si.

Course : Writing Skills

Prodi : Indonesian Language and Literature Education

THE EVALUATION ANALYSIS OF LESSON STUDY IMPLEMENTATION FROM OBSERVER

Table: 01

No.	Nama Observer	Siklus 1			
		Sosialisasi	Plan	Do	See
1	Rahmat Sulhan Hardi, M.A.	20	23	30	28
2	Dra. Titin Untari, M.Pd.	20	25	28	30
3	Habiburrahman, M.Pd.	20	24	30	29

4	Baiq Desi Milandari, M.Pd.	22	28	29	30
5	Syafrudin Muhdar, M.Pd.	23	22	30	30
6	Arpan Islami Bilal, M.Pd.	24	26	29	29
7	Ahyati Kurnia Mala Dewi, M.Pd.	15	26	27	29
8	Drs. H. Akhmad H. Mus, M.Hum.	21	26	30	30
Jumlah		**165**	**200**	**233**	**235**

STUDENT ASSESSMENT (DO)

Tabel: 02

No.	Kode Mahasiswa	Siklus 1	
		Kemampuan Mengajar	Kelengkapan Alat Peraga
1	BI. 1	60	20
2	BI. 2	70	23
3	BI. 3	65	20
4	BI. 4	75	21
5	BI. 5	60	21
6	BI. 6	60	22
7	BI. 7	70	22
8	BI. 8	70	23
9	BI. 9	75	22
10	BI. 10	60	21
11	BI. 11	60	22
12	BI. 12	40	22
13	BI. 13	50	22
14	BI. 14	50	23
15	BI. 15	40	21
16	BI. 16	40	21
17	BI. 17	40	21
18	BI. 18	50	20
19	BI. 19	50	21
20	BI. 20	45	22
21	BI. 21	40	22
22	BI. 22	55	22
23	BI. 23	60	23
24	BI. 24	50	23
25	BI. 25	50	23
Jumlah		**1690**	**543**

2. Cycle 2 (Two)

In this 2nd cycle applied talking stick method so that the result of writing activity increase.

Cycle 2 (two) held on Tuesday, July 18, 2017 from 13:00 until 14.30, the observer and the results can be described as follows.

In cycle 2 consists of several observers, among others: 1) Rahmat Sulhan Hardi, M.A., 2) Dra. Titin Untari, M.Pd., 3) Habiburrahman, M.Pd., 4) Baiq Desi Milandari, M.Pd., 5) Syafrudin Muhdar, M.Pd., 6) Arpan Islami Bilal, M.Pd., 7) Ahyati Kurnia Mala Dewi, M.Pd., 8) Drs. H. Akhmad H. Mus, M.Hum.

Identity:

Name of Lecturer Model: Siti Lamusiah, S.Pd., M.Si.

Course: Writing Skills

Prodi: Indonesian Language and Literature Education

THE EVALUATION ANALYSIS OF LESSON STUDY IMPLEMENTATION FROM OBSERVER

Table: 03

No.	Nama Observer	Siklus 2			
		Sosialisasi	Plan	Do	See
1	Rahmat Sulhan Hardi, M.A.	20	27	39	32
2	Dra. Titin Untari, M.Pd.	20	28	41	32
3	Habiburrahman, M.Pd.	20	26	44	33
4	Baiq Desi Milandari, M.Pd.	20	28	40	32
5	Syafrudin Muhdar, M.Pd.	16	28	42	32
6	Arpan Islami Bilal, M.Pd.	25	27	37	34
7	Ahyati Kurnia Mala Dewi, M.Pd.	22	27	38	38
8	Drs. H. Akhmad H. Mus, M.Hum.	24	30	39	36
Jumlah		**167**	**221**	**320**	**269**

STUDENT ASSESSMENT (DO)

Tabel: 04

No.	Kode Mahasiswa	Siklus 2	
		Kemampuan Mengajar	Kelengkapan Alat Peraga
1	BI. 1	68	23
2	BI. 2	65	24
3	BI. 3	62	21

4	BI. 4	68	24
5	BI. 5	60	23
6	BI. 6	62	22
7	BI. 7	75	26
8	BI. 8	73	20
9	BI. 9	73	30
10	BI. 10	71	26
11	BI. 11	70	30
12	BI. 12	72	20
13	BI. 13	83	30
14	BI. 14	78	30
15	BI. 15	56	14
16	BI. 16	81	22
17	BI. 17	77	27
18	BI. 18	63	20
19	BI. 19	60	23
20	BI. 20	62	22
21	BI. 21	71	26
22	BI. 22	73	20
23	BI. 23	60	23
24	BI. 24	62	23
25	BI. 25	60	23
Jumlah		**1705**	**592**

3. Cycle 3 (Three)

Cycle 1 (one) is held on Tuesday, 25 2017 from 13.00 until 14.30, the observer and the result can be described as follows.

In cycle 3 consists of several observers, among others: 1) Rahmat Sulhan Hardi, M.A., 2) Dra. Titin Untari, M.Pd., 3) Habiburrahman, M.Pd., 4) Baiq Desi Milandari, M.Pd., 5) Syafrudin Muhdar, M.Pd., 6) Arpan Islami Bilal, M.Pd., 7) Ahyati Kurnia Mala Dewi, M.Pd., 8) Drs. H. Akhmad H. Mus, M.Hum.

Identity:

Name of Lecturer Model: Siti Lamusiah, S.Pd., M.Si.

Course: Writing Skills

Prodi: Indonesian Language and Literature Education

THE EVALUATION ANALYSIS OF LESSON STUDY IMPLEMENTATION FROM OBSERVER

Tabel: 05

No.	Nama Observer	Siklus 3			
		Sosialisasi	Plan	Do	See
1	Rahmat Sulhan Hardi, M.A.	20	26	39	28
2	Dra. Titin Untari, M.Pd.	21	28	38	32
3	Habiburrahman, M.Pd.	25	28	38	35
4	Baiq Desi Milandari, M.Pd.	25	28	38	32
5	Syafrudin Muhdar, M.Pd.	25	27	40	38
6	Arpan Islami Bilal, M.Pd.	32	28	43	34
7	Ahyati Kurnia Mala Dewi, M.Pd.	20	27	40	36
8	Drs. H. Akhmad H. Mus, M.Hum.	20	28	38	32
Jumlah		**188**	**220**	**314**	**267**

STUDENT ASSESSMENT (DO)

Tabel: 06

No.	Kode Mahasiswa	Siklus 3	
		Kemampuan Mengajar	Kelengkapan Alat Peraga
1	BI. 1	83	29
2	BI. 2	83	30
3	BI. 3	82	29
4	BI. 4	82	29
5	BI. 5	74	25
6	BI. 6	80	26
7	BI. 7	66	26
8	BI. 8	64	20
9	BI. 9	57	20
10	BI. 10	81	24
11	BI. 11	60	22
12	BI. 12	65	21
13	BI. 13	87	28
14	BI. 14	74	26
15	BI. 15	72	28
16	BI. 16	72	25
17	BI. 17	84	25
18	BI. 18	67	23

19	BI. 19	63	22
20	BI. 20	67	24
21	BI. 21	73	23
22	BI. 22	85	28
23	BI. 23	63	23
24	BI. 24	68	21
25	BI. 25	62	19
Jumlah		**1814**	**616**

A. CLOSING

1. Conclusion

The application of lesson study by using talking stick method in writing subject is divided into 3 (three) cycles. The results of these three cycles are as follows:

1. In cycle 1 the observer results show: 1) Socialization (165), 2) Plan (200), 3) Do (233), 4) See (235),
2. Then in cycle 2 the results of the observer show: 1) Socialization (167), 2) Plan (221), 3) Do (320), 4) See (269), and
3. In cycle 3 there is an increase of observer result that is: 1) Socialization (188), 2) Plan (220), 3) Do (314), 4) See (267).

2. Suggestions

With the implementation of this method of talking stick students are expected to be more diligent and prefer to write courses.

BIBLIOGRAPHY

Dardjowidjojo. S. 2000. *ECHA Kisah Pemerolehan Bahasa Anak Indonesia.* Jakarta: Grasindo.

Ellis, R. (1994). *The study of second language acquisition*. Oxford: Oxford University Press.

Lengkanawati, N. S. (1997). *kontribusi strategi belajar bahasa terhadap kemahiran berbahasa* (Contribution of language learning strategies on language proficiency). Unpublished doctoral thesis, IKIP BANDUNG Indonesia.

Mistar, J. (2001a). A profile of english learning strategies by indonesian university students. *Melbourne Papers In Linguistics and Applied Linguistics* (vol. 1, No 1, 2001). Melbourne; Melbourne University Press.

Mistar, J. (2001b). English learning strategies of indonesian students across individual differences. *Asian Journal of English Language Teaching* (Vol. 11, 2001). Hongkong: The Chinese University of Hongkong.

Mistar, J. (2006). The effect of learning strategies on perceived english proficiency. *Jurnal Pendidikan dan Pengajaran.* Vol, 4 No.1, Maret 2006, FKIP Universitas lampung.

O'Malley, J. M., Chamot, A. U., Stewner-Manzanares, G., Küpper, l. & Russo, R. P. (1985). Learning strategies used by beginning and intermediate ESL students. *Language Learning*, 35, 21-46.

Oxford, R. L. (1990). *Language learning strategies: what every teacher should know*. New York: Newbury House Publishers.

Oxford, R. L. (1993). Research on second language learning strategies. *Annual Review of Applied Linguistics, 13*, 175-187.

Oxford, R. L. & Burry-Stock, J. A. (1995). Assessing the use of language learning strategies worldwide with the ESL/EFL version of the strategy inventory for language learning (SILL). *System, 23*, 1-23.

Oxford, R. L. & Ehrman, M. E. (1995). Adults' language learning strategies in an intensive foreign language program in the United States. *System, 23*, 359-386.

Oxford. R., Park-Oh, Y. Ito, S. & Sumrall, M. (1993). Japanese by satellite: effects of motivation, language learning styles and strategies, gender, course level, and previous language learning experience on Japanese language achievement. *Foreign Language Annals*, 26, 359-371.

Susilo, H. 2010. *Lesson Study Berbasis MGMP sebagai Sarana Pengembangan Keprofesionalan Guru*. Malang: Surya Pena Gemilang.

Sutopo dan Ibrohim. 2006. Pengalaman IMSTEP dalam Implementasi *Lesson Study*. *Makalah* Disajikan dalam Pelatihan Pengembangan Kemitraan LPTK-Sekolah dalam Rangka Peningkatan Mutu Pembelajaran MIPA di Yogyakarta, 27-29 Juli 2006.

Werdiningsih, D. 2004. Pemerolehan Bahasa sebagai Strategi Pemertahanan Bahasa Penutur Dwibahasawan Jawa-Indonesia di Perkotaan. *Jurnal Penelitian Pendidikan*, 17(1): 41--47.

Werdiningsih, D. 2005. Pola Pemilihan Bahasa Penutur Anak dalam Komunikasi antaranggota Keluarga Etnik Jawa. *Jurnal Media Penelitian Pendidikan*. 1(2): 54—61.

Werdiningsih, D. 2006. *Dampak Pemilihan Bahasa Masyarakat Tutur Perkotaan terhadap Perubahan Perilaku masyarakat Tutur Perkotaan di Jawa Timur (Riset Pengembangan Teori Pemertahanan dan Pergereran Bahasa di Perkotaan). Jurnal Media Penelitian Sosial*. 1(2): 87—109.

Werdiningsih, D. 2007. *Strategi Pemerolehan Kompetensi Pragmatik Anak Usia Prasekolah.* Disertasi. Tidak Diterbitkan. Program Pascasarjana Universitas Negeri Malang.

Werdiningsih, D. 2007. Konstruksi Kreatif Pemerolehan Kompetensi Pragmatik Anak Usia Prasekolah. *Diksi.* 8(1): 34—40.

Werdiningsih, D. 2008. Alkulturasi Pemerolehan Kompetensi Pragmatik Pembelajar Anak dalam Keluarga Etnik Jawa di Perkotaan. *Diksi.* 9(2): 122—132.

Werdiningsih, D. 2009. Strategi Komunikasi Pembelajar Anak dalam Berinteraksi dengan Berbagai Mitra Tutur dalam Lingkungan Masyarakat Diglosik. *Jurnal Media Penelitian Pendidikan.* 17(1): 67—78.

Werdiningsih, D. 2010. *Model Pengembangan Strategi Belajar Bahasa untuk Meningkatkan Efektivitas Pencapaian Kompetensi Komunikasi Berbahasa Indoneisa Siswa Sekolah Dasar*. Laporan Penelitian Hibah Kompetensi Tahun I, dibeayai DP2M Ditjen Dikti Kemendiknas RI Tahun Anggaran 2010.

The Effectiveness Of Local Folktales In Teaching Reading At Tenth Grade Of Sma Negeri 1 Labuhan Haji In The School Year 2016/2017

Eva Nurmayani
Study Program of Indonesian Language
Hamzanwadi University
Pos-el: rama_restu@ yahoo.com

ABSTRACT

The purposes of his study were to know whether local folktales effective in teaching reading at tent grade of SMAN 1 Labuhan Haji in the school year 2016 /2017. The method used in this research was true-experimental research. The population was the tenth grade students. The number of population was 190 students which were consisted of six classes. In taking the sample, the researcher used random sampling because the populations have same chance to be sample of study. As the result, the researcher tool 31 students as the experimental group and 31 students as the control group. The data collection was done by administering pre–test and post – test to the students, t-test was used to analyze whether the alternative hypothesis is accepted or not.

The statistical analysis had described that mean of the experimental group on pre – test is 12.87 and mean score on post-test is 16.06. Meanwhile, mean score of the control group on pre – test is 13.09 and mean score on post-test is 14. By using t-test at the level of significance (α) 0.05, the researcher got t-test > t-table, that is 6.18 > 2.00, it means that there was a significant difference between the students' reading comprehension before and after students were taught by using local folktales.

Keywords: local folktales and reading comprehension

INTRODUCTION

Background

Language is a communication tools in spoken and written form. Communication is understanding and expressing the information, idea and developing science, technology and culture. The ability to communicate in English is to understand and produce spoken and written text which is realized in the four language skills, such as listening, speaking, reading and writing. These four skills are used in receiving and making expression in the social life. That supported by the discourse. To develop these skills, the students have ability to communicate and produce the discourse in English at a certain literacy level.

The level of literacy includes performative, functional, informational and epistemic. For the Senior High School, pupils are directed on listening, speaking, reading and writing. At functional level, peoples are able to use the language to fulfill the need of daily life such as reading newspaper and literature. The prime aim of the reading literature is to develop appreciation, one of the major problems arising is the

variety of genres with the students are faced. Reading can be enjoyable activity when it is carried out efficiently. Reading is an activity with a purpose. Reading is also an experience: it can enlarge the understanding concepts and extend an individual's experience vicariously. To unite various concept of reading, the writer representing what experts had been defined about this respect. Hamer (1991: 90), reading is an exercise dominated by the eyes and the brain. Then, George Pappies (in L. Setiawan, 2008 :15) also stated that reading is predominately a visual thinking skill utilizing the eyes and higher material process. Based on definitions above, it can be conclude that reading is an interactive and a thinking process of transferring printed letters into meaning in order to communicate certain message between the writer and the reader. In reading actively a reader brings her or his background knowledge, emotion, and experience to construct his or her idea in understanding the meaning of the text.

According to Tarigan (2008:9) the purpose of reading comprehension is getting information which involves content, understanding the meaning of the text. In addition, he also stated that students are able to increase their other language skill by reading such as listening, speaking, and writing skill. Furthermore, reading activity provides the language input, as same as other language skills. This fact shows that teaching reading is important. Furthermore, English instruction as foreign language has brought many students failed commonly, in teaching reading skill especially.

Folktales is a general terms for different varieties of traditional narrative, the telling for stories appear to be cultural universal, common to basic complex societies alike (Danhardt,2003 :1). Even the forms of folktales take are certainly similar from culture to culture; comparative studies of theme and narrative ways have been successful in showing these relationships. Also it is considered to be an oral tale to be told for everybody.

A folktale is the traditional art, literature, knowledge, and practice that is disseminated largely through oral communication and behavioral example. Every groups with a sense of its own identity share, as a central part of that identity folk traditions the things that people traditionally *believe* (family traditions, planting, practices, and other elements of world view), *do* (dance, make music, sew clothing), *know* (consist of acknowledge such as: how to build an irrigation dam, how to nurse an ailment) *make* (architecture, art, craft) and *say* (personal experience stories, riddles, song lyrics). As these examples indicate, in most instances there is no hard – and fast separation of these categories in folklorist work.

According to Thomas (2000;1) the characteristic of folktales are: a) are generally part of the oral tradition of a group, b) are more frequently told than read, c) are passed down from one generation to another, d) take on the characteristic of the time and place in which they are told, e) sometimes take on the personality of the storyteller, f) speak to universal and timeless themes, g) try to make sense of our

existence; help humans cope with the world in which they live, or explain the origin something., h) are often about the common person, i) may contain supernatural elements, j) function to validate certain aspects of culture. A folktale has the words retold, adapted, or compiled appear on the cover on the title page because people didn't know who the original author is.

Based on the result of observation and interviewing of the English teacher at *SMA Negeri 1 Labuhan Haji*, there were many students have negative perception about English and they regarded that the English was difficult lesson. Therefore, many of them got trouble in learning English. For example, in narrative text, many students got difficult to analyze the text. Furthermore, those factors could be identified such as teacher rule, students seriousness level, subject, and the techniques of subject learning and still many more, teachers have important rules, the teacher must be able to manage the process of teaching and learning in the classroom and to develop their strategy and media in teaching and learning process. One of the media that can be used is local folktales; it will make students more interest in reading the text.

In narrative text, the students find difficult word and they are sometimes misunderstanding the character and the plots of the text, especially in foreign folktales, many students do not understand about the story.

The purpose of collaboration between local and foreign folktales is teaching reading for the students are to understand the plot and character of the story. The advantages of local folktales are that the students know much about the cultural background, because that story is very famous for them. So, they can understand about the plot and the character of the story.

Based on the background above, the researcher was interested in examining this problem by taking the effectiveness of local folktales in teaching reading at tenth grade of *SMA Negeri 1 Labuhan Haji in the school year 2016/2017.*

Research Methodology

The method that used in this study was a true – experimental method. It involved the use of two groups that are experimental and control groups (Arikunto, 2006 : 86). In this case, the researcher investigated and analyzed about the ability of students in reading which were taught by local folktales. Meanwhile, the students which were taught by using local folktales was assigned as experimental group and the students were taught by using foreign folktales was assigned as control groups. The design was used in order to be easier to solve the problems, even in testing the hypothesis. According Arikunto, 2006: 130, that population is a group of people as the subject of the research. As the following statement, if one wants to investigate all elements available in the area of the researcher, the research denotes as population research. It is also called population study or census study. Population In this research

was the tenth grade students of *SMAN 1 Labuhan Haji in the school year 2016/2017*. Meanwhile, sample in this research were took two classes from the total of population by using cluster random sampling. This technique was used because the populations were supposed that they were homogeneous. This called random sampling because all population have the same chance as a sample (Arikunto, 2006 :133). Related to the technique in taking sample, the researcher used lottery to decide which classes would be chosen as experimental and control group. As a result, class X-D was chosen as experimental group and class X-E was chosen as control group.

Research instrument in this case the tests used were multiple – choice test, it consisted of 20 items, the score of each number of item discrimination, score 0 (zero) for the wrong answer of each number of items and score 1 for right answer for each item. The researcher did three steps to know the extent of instrument's validity and reliability, they are: Try-out, the validity instrument, and reliability of Instrument. Try - out was multiple – choices test, validity instrument the researcher used content validity and the instrument was consulted to the English teacher and advisors and course books, and the last, reliability of instrument the researcher calculated the test by using the formula K-R.20. Technique of the data collection in this research was the researcher took the data from pre-test and post-test. Pre test was administered on the subject before applying local folktales, meanwhile post-test was administered after applying local folktales in teaching reading. The researcher used three steps as follow: pre-test, treatment, and post-test. Finally, technique of data analysis in the case they are: description data and hypothesis testing. The description of data analysis in this research used descriptive statistic. According Nurkencana and Sumartana, 1996 ; 89), the statistic included: ideal mean score (Mi), and the ideal standard deviation (SDi). For necessity in categorizing data, the formulas used in determining ideal mean score was (Mi) = ½ x (maximum ideal score + minimum ideal score), and ideal standard deviation (SDi) = 1/6 x (maximum ideal score – minimum ideal score). Before testing the hypothesis, the researcher obtained the students score of the experimental group and control group. The score for pre-test and post-test, the first step was the researcher calculated the mean score of experimental and control group, for purpose of testing hypothesis. The purpose of hypothesis testing in this case is to know alternative hypothesis was accepted or not.

Research Result and Discussion

Research and result discussed about description data and hypothesis testing. Based on the data gained for experimental group on pre-test, the lowest score was 8 and the highest score was 16. While in the post-test the lowest score was 13 and the highest score were 19. For the control group in the pre-test obtained the lowest score

was 10 and highest score was 16. While in the post-test gained the lowest and the highest score were 10 and 17.

Then the results of calculation of the data were the mean score of experimental group in pre and post test were 12. 87 and 16.06, while, for control group in pre and post test were 13.09 and 14. To investigate the result of local folktales in comprehending reading text, the researcher used statistics descriptive for the categories in which consist of the Ideal Mean Score (SMi) was 20 and the ideal Minimum Score was 0. So, the Ideal Mean Score (Mi) gained was (M) = ½ x (20 =0) = 10 and the Ideal s standard Deviation (SDi) was (SD) = 1/16 x (20 – 0) = 3.33. the categories gained after calculating into the standard categories were as follows:

Mi = 1 SDi	to	Mi + 3 SDi = high
10 + 1 (3.33)	to	10 + 3 (3.33)
13	+	20
Mi – 1 SDi	to	< Mi + 1 SDI = average
10 – 1 (3.33)	to	<10 + 1 (3.33)
7	to	< 13
MI – 3 SDi	to	<Mi – 1 SDi = low
10 - 3 (3.33)	to	< 10 – 1 (3.33)
0.00	to	< 7

Furthermore, the mean score which was obtained in this investigation for experimental group in pre - test were 12.87 and 16.06, while, the control group in pre and post – test were 13.09 and 14. After consulting with the above standard categories, for experimental pre - test was included average category rank and in post – test was high category rank. Meanwhile, the control group in pre –test was average category and post –test was average category rank.

Hypothesis testing in the case, the t-test was used to know the difference between the two means. This statistical analysis was used to test the hypothesis. The null hypothesis of this study is that the means of both groups were not significantly different.

The obtained t –value was 6.18. Whereas, at the t – table for significant with 60 degree of freedom at 0, 05 level of significant was 2.00. The obtained t – value of 6.18 was higher than 2, 00, hence could be marked significant. So, the null hypothesis was rejected and the alternative hypothesis was accepted as formulated on background in this research. So, local folktales were effective in teaching reading and the treatment group was better than control group.

Discussion

Before, concluding the result of this study, this part discussed about the result of investigation. There was significantly difference achievement of experimental and the control group in comprehending reading text. It could be seen on their mean score

of post – test gained. The mean score of experimental group was better than control one. It clearly indicated that the students of experimental group did the test much better than students of control one, since the materials of the test have been presented to the two groups by the same teacher and in the same length of the time. The instructional activities were only distinguished by the technique applied. For experimental group applied by English and local folktales and the control only used English or foreign folktales. Tentatively, this finding leaded us to say that the treatment given to the experimental group was successful.

The computation of the significantly different of the mean score of the two groups resulted on the post –test: they were 16.06 for experimental group and 14 for control group. The significantly different was also proven by the hypothesis testing result that was 6.18. This figure was then consulted to value of the t-table with degree freedom was 60 at the confidence limit of 0,05 was 2,00. After distinguishing the both t – value, so t- test greater than t-table with indicating were not significantly difference. It means that after the treatment by using local folktales there was a positively significant change in the learning reading text.

Conclusion

Based on the data analysis and the discussion the researcher finally came forward to the conclusion: a) under the application of t – test formula, it was found out that the t – test was 6, 18 and compared with t – table of degree of freedom was 60 at the confidence limited on 0,05 was 2,00. It was show that the correlations of the two mean score were significant. Based on the computation it could be confirmed that null hypothesis (Ho) was clearly rejected, therefore, the alternative hypothesis (Ha) definitely accepted. b) Local folktales in learning reading text give much greater change in students' achievement that without local folktales. In other words, local folktales were significant effective towards students learning reading text.

REFRENCE

Arikuno, Suharimi, 2006. *Prosedur Penelitian Suatu Pendekatan Praktik.* Jakarta: Rhineka Cipta

Danandjaja, James. 2007. *Folklore Indonesia, Ilmu Gosip, Dongeng, dan lain-lain.* Jakarta:IKAPI Kreatama

Danhardt, Oskar. 2003. Folktales definition http://columbia /encyclopedia.folktalesRetrieved on Friday, 10 Augusts 2017, 09.15 am

Harmer, J.1991. *The Practice of English Language Teaching.* London: Longman

Nurkencana, Wayan and Sumartana. 1996. Evaluasi Pendidikan.Surabaya. Usaha Nasional

Sugiyono. 2009. *Statistika Untuk Penelitian.* Bandung : Alfabeta

Tarigan, H.Guntur.2008. *Membaca Sebagai Salah Satu Keterampilan Berbahasa***.**Bandung:
PT.Angkasa
Thomas, William J. 2000. *The Characteristic of Folktales.* http://wikipedia.comRetrieved on
Wednesday, 23 August 2017, 13.20 pm

Learning Trajectory On Thematics Learning Process Of Elementary School Students By Using Marionette Tangram

Eka Zuliana[1] and Henry Suryo Bintoro[2]

[1]Department of Elementary School Teacher Education, Muria Kudus University
[2]Department of Mathematics Education, Muria Kudus University

[1]eka.zuliana@umk.ac.id and [2]henry.suryo@umk.ac.id

Abstract

The purposed of this research is to get the learning trajectory of thematics learning process. The subject that can be include on thematics learning process are mathematics, history, civic and legend of Indonesian story. Marionette Tangram is a device that can help students to construct characteristic of plane, culture and history material, civic and language material that have been integrated into thematics learning process. Marionette Tangram can be used by students to construct the concept, prove and be a tool in making learning trajectory. This research is a design research with pre eliminary design as the first step. Literature review, study of the concepts and appropriate learning media are used to design Marionette Tangram. The result of this research is we can make learning trajectory design on thematics lerning process by using marionette tangram. As the implications, teacher prediction about how to learn and how to teach the concept which called hypothetical learning trajectory is a device and non formal signs for elementary school teachers for conducting thematics learning process to help students construction.

Keywords: Learning Trajectory, Thematics, Marionette Tangram

A. INTRODUCTION

Study of PISA for many years show that Indonesian student literacy on science, reading and mathematics are still in a low material mastery group (www.oecd.org). On the other study from Human Development Index (HDI) show the same condition. Human Development Index (HDI) is one of the indicators the educational participation rate of a community country. In 2011 Indonesia occupies 124th of 187 countries in the world. Indonesia is far from the country's position in Asia such as the Brunei which the ranks to-33, Malaysia ranked 61st, Thailand ranks 103 and the Philippines at No. 112 (Human Development Index, 2011). Government change the curriculum to improve the quality of Indonesian human resources and face the demands of the times so as not to be left behind the other countries. They change curriculum from KTSP into 2013 curriculum.

Elementary school students are children at the age 6 – 12 years old. According to Piaget's model, children from approximately 7 to 11 years old are in the concrete operational period and are acquiring increased physical dexterity (Hansen, et. al, 2015:

268). Children in this stage still struggle to the abstract reasoning. Barrouillet (2015) also mentions that students in the operational concrete phase are more interested in manipulating objects/concrete objects.

Preparing the best way of teaching and learning process which must be convenient with students cognitive level is teacher responsibility. Thinking about what is the right media that must be suitable for elementary school students is a requirement. By manipulating objects, they have indirectly learned something and gained new knowledge about a concept (Zuliana, 2017). The other one learning trajectories must be prepared by following students natural developmental progressions in learning and guiding children through the level of thinking (Sarama & Clements, 2011). Moreover, Simon & Tzur (2004) stated that a hypothethical learning trajectory included "the learning goal, the learning activities, and the thinking and learning in which the students might engage or hypotheses about the process of the students' learning. Confrey et.al (2014) mention that learning trajectories become foundation of a curriculum. A "successful" learning trajectory can be defined as a learning trajectory in which the learner shows the progress in acquiring new knowledge and skills that is expected on the basis of the learner's personal capabilities and the quality of the education provided, based on proper engagement and activity in the learner himself (Steenbeek & van Geert, 2013)

In a condition, Elementary school teacher on UMK MBS forum have some difficulties on compiling appropiate media especially in thematics learning process. Thematics learning process have been applying into Indonesian Curriculum since 2013 for many piloting elementary school. Meanwhile, at the implementation process, there are some problems, Elementary school teachers find the difficulties how to implementing integrated thematics learning process, they still confused how to classified the basic competency into one group of theme and in the learning process, one of theme can not finished on one week (Maisyaroh, et.al, 2014: 215-216).

Thematics was developed based on three philosophical foundation of learning namely: (1) progressivism, (2) constructivism, and (3) humanism that seeing students in their uniqueness, potential, and their motivation belief (Situmeang, 2014:22). One of the philosopy is constructivism, Zuliana (2017) said that manipulating objects or media indirectly make students do the process of constructivism and reinvention of a concept to get new knowledge. Media have been introduced into schools because it is believed that they can have positive effects on teaching and learning process (Reeves, 1998).

The purpose of this research is to get the right media design and the design of thematic learning trajectories on the theme of cultural diversity of the nation.

Zuliana (2017) said that constructivism uses the media and visuals in learning to be one option to provide meaningful learning on mathematics subject for elementary

students. According to Nurseto (2011) the development of media must be embrace VISUALS principle. VISUALS means visible, interesting, simple, useful, accuratte, legitimate and structured.

In this research marionette tangram used to helping students on building thematic concept, in theme cultural diversity of the nation.

Kim & Lee (2017) said that a marionette is a play with the puppet controlled from above using wires by human. One ends of the wires are connected on different joints of the marionette, and the other ends are tied on a control stick. In Myanmar marionette is very famous, moreover there are community who concentrates in maintaining the Myanmar cultural tradition using marionette (Ko, Km, 2016).

Tangram is one the most popular type of puzzle in the world. Tangram is a Chinese puzzle consists of seven pieces of geometry plane (Tian, 2012). Puspasari, et.al (2015) also said that Tangram is a puzzle made up of the seven plane called 'Tans'.

The puppets that used as media in marionette is tangram. There are many puppets like a human, organism, house and so on. The marionette tangram used to building the concept and help the students compose learning trajectories.

B. METHOD

This research is a design research. Prahmana (2017: 13) mentions that design research is an appropriate method of research to develop the solution of a complex problem in educational practice or to develop and validate a theory about learning process, learning environment, and so on. Design research is a research approach where the material is connected with the development of learning theory (Van Eerde, 2013). Furthermore, (Sembiring, Hoogland, & Dolk, 2010) mentioned that design research is a cyclic process from thought experiment to instruction experiment. Stages of design research: (1) pre eliminary design, (2) teaching experiment, and (3) retrospective analysis (Gravemeijer & Cobb, 2006). The discussion in this article is limited to the first phase of pre eliminary design. Widjaja (2008) stated that the purpose of pre-eliminary design is to develop a sequence of learning activities and designing instruments. Pramudiani, et.al (2014) states that in this first phase the process demands are begun by formulating the objectives of learning, combined with the experimental anticipatory thinking activities in which a teacher as a learning designer imagines how the process of teaching and learning activities is conducted in the classroom.

Literature review is conducted to gain relevant knowledge related to the theme of the material in thematic learning as well as the accuracy of instructional design with learning objectives. The accuracy of the concept that became the topic of learning with the purpose of learning is used to design the device and learning media and the design of the learning trajectories passed by the students.

C. FINDINGS AND DISCUSSION

The activities undertaken in the first phase of research design (pre eliminary design) in the framework of concept building result in conjectured local instruction theory consisting of three components: (a) the learning objectives for the students, (b) the planning of the instructional activities and the tools or media used, and (c) an alleged hypothetical learning trajectory (HLT) learning process in which a teacher / learning designer is able to anticipate how students' thinking and understanding can develop as instructional activity is used in the classroom.

Learning Objective

Helping students in constructivism process to build the concept of knowledge about mathematics, history, and story telling that exist in theme cultural diversity of the nation by using Marionette Tangram.

Instructional Activities on Thematic Learning Process using Marionette Tangram

On thematics learning process theme cultural diversity of the nation, there are 3 subjects that have been included, they are: mathematics, social science and Indonesian Language. For mathematics students will be construct the concept of plane characteristic like square, rectangle, triangle, paralellogram, trapezoid, kite, rhombus and circle. At social science students construct the concept of socio culture, religious concept and Bulusan history. And for the last in Indonesian Language subject, students trying to improve their ability on story telling from Bulusan History.

Marionette Tangram

The consideration in designing thematic learning process for students in elementary school is cognitive thinking level. Children at the aged 6-12 years in the operational concrete phase (Piaget, 2000). Nanney (2004) said that the use of appropriate learning approaches and learning strategies for elementary school students in this phase is student centered learning (SCL). With emphasis on constructivism reinvention will occur (Moreno & Waldegg, 1993, Freudenthal 2006) to produce meaningful learning (meaningful learning). Therefore, the design of appropriate learning media with concepts can help elementary students build their own concepts.

Marionette Tangram is a puppet from tangram consists of seven pieces geometrical plane like square, rectangle, rhombus, triangle, kite, trapezoid, parallelogram and circle which controlled from above using wires. Some marionette tangram that have been design are human, turtle, gunungan tradition and trees.

Marionette tangram is designed using principles of making instructional media as mentioned by Nurseto (2011) namely VISUALS: (1) Visible, so easily seen and held, able to attract student interest, (2) Simple (not complicated, (3) Useful to help students construct the concept, (4) Accurate with the concept, (5) Legitimate and (6) well structured.

Figure 1 below presents the sample of Marionette Tangram design (front)

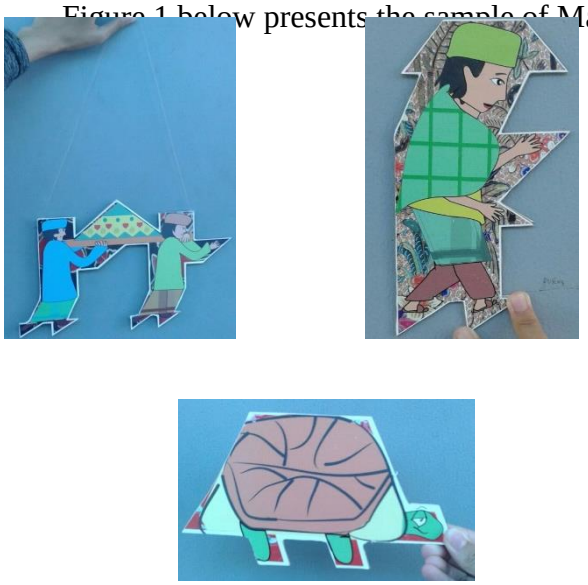


Figure 1. Sample of Marionette Tangram Design (front)

Figure 2 below presents the sample of Marionette Tangram design (back)

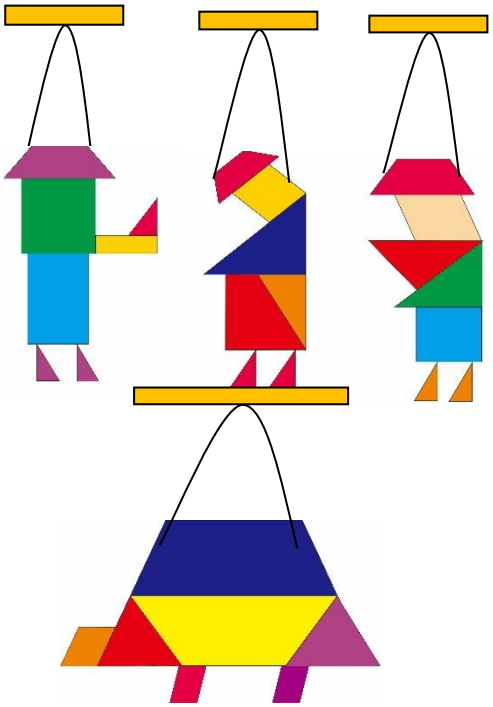


Figure 2. Sample of Marionette Tangram Design (back)

***Learning Design* on theme Cultural Diversity of The Nation by using Marionette Tangram**

The learning design of thematic learning process on the sub theme cultural diversity of the nation is as follows:

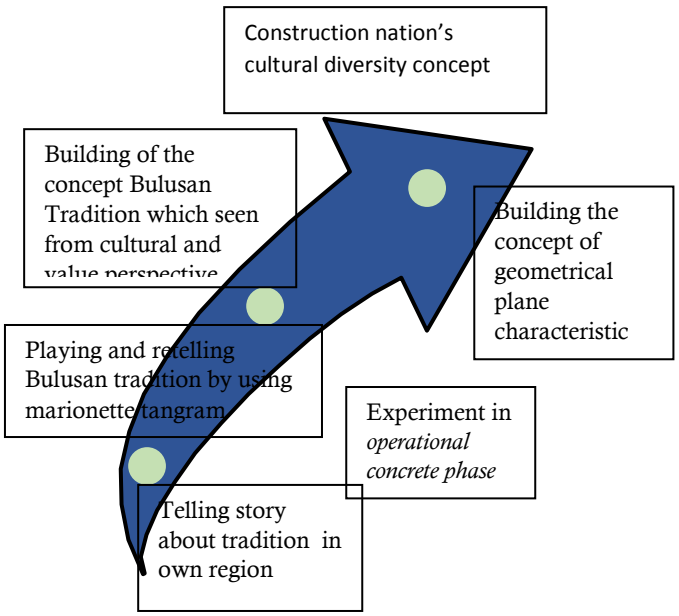
1. Recall of prerequisite materials related to the types and forms of plan, socio-cultural conditions of the surrounding environment and fairy tales
2. The process of building the concept of plane, social culture and history and story telling using Marionette Tangram by students (constructivism using concrete objects that generate reinvention) is done by:

a) Reading the role of marionette tangram
b) Inviting students to tell legendary stories in their respective areas
c) Inviting students to tell the bulusan tradition
d) Inviting students to playing marionette tangram,
e) Using marionette tangram to construct ability of the students to retelling Bulusan history, history of Bulusan and the characteristic of geometrical plane. When students tell the Bulusan story by using marionette tangram. This condition sharpen speaking ability and students story telling.
f) Students get the story content which have many education value based on historical value, religious value and moral value.
g) At the back of marionette tangram, there are tangram which consist of seven shape geometrical plane. The rangram can be used to construct the characteristic of plane.

3. Writing the result into a table construction, it is called table of nation cultural diversity
4. Communicate the concept finding to the other students
5. Conclusion

***Hypothetical Learning Trajectory* (HLT) of Nation Cultural Diversity Theme**

The *Hypothetical Learning Trajectory* (HLT) described into figure 3 below.



D. CONCLUSIONS AND SUGGESTIONS

For the conclusions, marionette tangram can be used for thematic learning process. From this research, it has been produced learning trajectory on nation's cultural diversity theme by using marionette tangram media for elementary school students. The learning trajectory produced in the first phase, namely pre-eliminary design. The hypothetical learning trajectory that will be passed by students on thematics learning process can be used by elementary school teachers as a learning design and signs how to make an appropiate learning in thematic learning process on nation's cultural diversity theme.

E. ACKNOWLEDGEMENT

Kemenristekdikti that have been give a research grant in 2017.

F. REFERENCES

Barrouillet, P. (2015). Theories of cognitive development: From Piaget to today, *Developmental Review*, Vol.38: 1-12.

Confrey, J., Maloney, A. P., & Corley, A. K. (2014). Learning trajectories: a framework for connecting standards with curriculum. *ZDM*, *46*(5), 719-733.

Freudenthal, H. 2006. *Revisiting mathematics education: China lectures* (Vol. 9). Springer Science & Business Media.

Gravemeijer, K. & Cobb, P. 2006. *Design research from a learning design perspective*. In J. Van den Akker, K. Gravemeijer, S. McKenney & N. Nieveen (Eds.), Educational design research. London, England: Routledge

Hansen, A. K., Dwyer, H. A., Hill, C., Iveland, A., Martinez, T., Harlow, D., & Franklin, D. (2015). Interactive design by children: a construct map for programming. In *Proceedings of the 14th International Conference on Interaction Design and Children* (pp. 267-270). ACM.

Kim, Y., & Lee, J. (2017). Marionette show using quadrotors. In *Proceedings of the ACM SIGGRAPH/Eurographics Symposium on Computer Animation* (p. 24). ACM.

Ko, K. M. (2016). Safeguarding the Tradition of Myanmar Marionette and Performing Arts. *Journal of Urban Culture Research*, *13*(1), 88-107.

Maisyaroh, et.al. (2014). Masalah Guru Dalam Implementasi Kurikulum 2013 Dan Kerangka Model Supervisi Pengajaran. *Manajemen Pendidikan, 24(3), 213-220.*

Moreno-Armella, L., & Waldegg, G. (1993). Constructivism and mathematical education. *International Journal of Mathematical Education in Science and Technology*, *24*(5), 653-661.

Nanney, B. (2004). Student-centered learning. *Retrieved November*, *30*, 2012.

Nurseto, T. 2012. Membuat media pembelajaran yang menarik. *Jurnal Ekonomi & Pendidikan*, *8*(1): 19-35.

Piaget, J. (2000). Piaget's theory of cognitive development. *Childhood cognitive development: The essential readings*, 33-47

Prahmana, RCI. 2017. *Design Research (Teori dan Implementasinya: Suatu Pengantar)*. Depok: Rajawali Press.

Pramudiani, P., Zulkardi, Z., Hartono, Y., & Amerom, B. V. 2014. A Concrete Situation For Learning Decimals. *Journal on Mathematics Education*, *2*(2), 215-230.

Puspasari, L., Zulkardi, Z., & Somakim, S. (2015). Desain Pembelajaran Luas Segi Banyak Menggunakan Tangram Berpetak di Kelas IV. *JINoP (Jurnal Inovasi Pembelajaran)*, *1*(2), 150-162.

Reeves, T. C. (1998). The impact of media and technology in schools. *Georhia: The Bertelsmann Foundation*.

Sarama, J., & Clements, D. H. (2011). Learning trajectories: Foundations for effective, research-based education. *Learning over time: learning trajectories in mathematics education. New York: Information Age*.

Sembiring, R., Hoogland, K., & Dolk, M. L. A. M. (Eds.). (2010). *A decade of PMRI in Indonesia*. Bandung, Utrecht: Ten Brink, Meppel.

Simon, M. A., & Tzur, R. (2004). Explicating the role of mathematical tasks in conceptual learning: An elaboration of the hypothetical learning trajectory. *Mathematical thinking and learning*, *6*(2), 91-104.

Situmeang, T. (2014). Peningkatan Kemampuan Membaca Permulaan Secara Tematik Melalui Metode Mueller Di Kelas 1 SD Negeri 060808 Medan. *JURNAL TEMATIK*, *4*(01),19-30.

Steenbeek, H., & van Geert, P. (2013). The emergence of learning-teaching trajectories in education: A complex dynamic systems approach. *Nonlinear dynamics, psychology, and life sciences*, *17*(2), 233-267.

Tian, X.X.. (2012). *The art and mathematics of tangrams*. Bridges Mathematics, Music, Art, Architecture, Culture.

UNDP. (2011). Human Development Report 2011. *New York: UNDP.*

Van Eerde, D. 2013. Design research: Looking into the heart of mathematics education. *Proceeding The First South East Asia Design/Development Research (SEA-DR) International Conference*, Palembang: Sriwijaya University, 1-11.

Widjaja, W. 2008. *Local instruction theory on decimals: The case of Indonesian pre-service teachers* (Doctoral dissertation). Melbourne Graduate School of Education, The University of Melbourne.

www.oecd.org

Zuliana, E. (2017). Penerapan Inquiry Based Learning berbantuan Peraga Manipulatif dalam Meningkatkan Pemahaman Konsep Matematika pada Materi Geometri Mahasiswa PGSD Universitas Muria Kudus. *Lectura: Jurnal Pendidikan*, *8*(1): 35-43.

Zuliana, E. (2017). Desain Siputmatika dan Rancangan Lintasan Belajar Siswa Sekolah Dasar pada Materi Simetri Putar. *Jurnal Refleksi Edukatika,7(2),* 151-158.

THE IMPLEMENTATION OF LESSON STUDY-LEARNING COMMUNITY AT SMA NEGERI I SUMBERPUCUNG FOR BIOLOGY SUBJECT

Eko Susetyarini *[1)], Ainur Rofieq* dan Roimil Latifa*

*Education Biology, The Faculty of Education
Universitas of Muhammadiyah Malang
Jl. Raya Tlogomas 246 Malang

[1)]Email: niniek08@gmail.com

ABSTRACT

This study aimed to describe the application of lesson study-learning community on the Biology Reproduction topic of Biology subject. The research was descriptive. The Lesson Study had been conducted through three stages i.e. plan, do and see. The subjects of the study were the students of class XII and teachers in SMA Negeri I Sumberpucung, the students were divided into 6 groups. Each group was given the task according to the problem, namely (1) How is the physiology process of reproductive organs at puberty men and women? (2) How are the physical characteristics of puberty in men and women? (3) How to handle menstruation in a healthy way? Each group gets the project tasks about the appropriate problems by making the product in the form of media. The teachers applied three steps of lesson study namely: plan, do, and see. In the plan stage, teachers make the both chapter and lesson design, whereas in do stage, teachers implement learning. In the see stage, the teachers implement the reflection together with the model teacher and the observers. The data obtained were analyzed by using descriptive qualitative and quantitative. The results show that teachers and students of 85% like the application of lesson study learning community. Lesson study - learning community on reproduction topic of Biology subject gave experience to the teachers and students in implementing lesson study-learning community and increasing creativity and critical of student.
Keywords: Lesson study-learning community, Biology Subject

A. INTRODUCTION

Teachers in the 21 as regulations, but are required to master some other skills, to name: creative, innovative, critical, collaborative, and communicative aspects as well. The skills of teachers and future teachers determine the quality of instructional activities. This has been in line with Regulation Number 14 Year 2005 concerning teachers and lecturers. Teachers are required to master 4 competencies, including: pedagogical, professional, social and personality competencies. Joyful, innovative and challenging learning environments are representing the model of schools in the 21st century.

Modern schools are established through the basic principles of achieving quality and equality at the same time (Sato, 2014)

The recurrent theme lies in teaching competencies in teaching. Instructional activities are complex and complicated issues. To achieve the goal of quality teaching, teachers should choose appropriate materials and design lesson plans, as well as taking into account students' ways of thinking and reactions to the classroom. If not, mastery of teacher content and pedagogical skills, especially in class design, are at stake, let alone create high-quality and highly innovative learning environments for their students (Masaaki, 2014)

Instructional activity is a possible arena where teachers, students, and the media interact with each other. Through this interaction, students are actively developing their thinking skills and patterns. Interactive, inspiring, joyful, challenging, and motivating learning environments are expected to be evident to facilitate students in achieving specific competencies (Susilo et al., 2009).

As we move into the 21st century, reform in schools and training activities is urgent. School reform establishes vision and philosophy, in the form of a learning community. The missions of the learning community in schools ensure the right of students to study without exception and improve the quality of learning (Sato, 2014). The learning community is there with 3 main activities: collaborative teaching and learning in the classroom, establishing a professional and collegial learning community, and engaging parents and local society (Wahyuningtyas et al., 2015).

Collaborative teaching involves 3 main aspects: 1) authentic learning (in line with the characteristics of particular subjects); 2) reciprocal learning (reciprocal listening); 3) leapfrog moments to learning (challenging and creative learning environment) (Sato, 2014).

Teachers at all schools are required to develop interactive, inspiring, joyful, challenging, and motivational educational activities that encourage students to actively participate in class, as well as spacious rooms to experience, be creative and independent. Students should also be facilitated based on their different interests, talents, psychic development and psychological conditions. High school teachers, as required by educational and professional standards, should design instructional activities that are in line with the characteristics of their students.

The Lesson Study (LS) is the training of professional educators emphasizing collaborative and continuous learning based on collegial, mutually beneficial and mutual learning principles. The study of the lesson constitutes a learning society that consistently and systematically seeks the self-improvement of managerial ability.

Through continuous and collaborative teaching, teachers should plan, implement, observe, and report their own learning (Gutierez, 2015, Hendayana et al., 2010, Syamsuri and Ibrohim, 2010).

The study of the lesson is carried out by implementing the following stages, namely: planning, doing and seeing (reflection). It is important that future teachers are trained to participate in the Lesson Study, since they are the generations prepared for professional and quality education. LS has designed the following purposes: 1) to activate students that can affect the performance of teachers; 2) review teachers; 3) develop students' academic and critical thinking; and 4) increase the care and responsibility of students about their own learning.

Future teachers with a history of instructional activities based on the lesson study are expected to contribute significantly to their professional, pedagogical, social and personality skills. In addition to these competencies, future teachers are empowered to possess creativity, innovation, critical thinking, collaboration and communication skills. This study aims to describe the implementation of teachers of the Community of Learning Biology Lessons in SMA Negeri I Sumberpucung

B. METHOD

This current study was conducted by employing descriptive design. The subjects involved in this study were students in SMAN 1 Sumberpucung. There were in total 36 students and those of whom were in their 12th class when participating in this study. Working in 6 groups, each group was taking turn to be model teachers and observers. Each group was given the task according to the problem, namely (1) How is the physiology process of reproductive organs at puberty men and women? (2) How are the physical characteristics of puberty in men and women? (3) How to handle menstruation in a healthy way? Each group gets the project tasks about the appropriate problems by making the product in the form of media. The teachers applied three steps of lesson study namely: plan, do, and see. In the plan stage, teachers make the both chapter and lesson design, whereas in do stage, teachers implement learning. In the see stage, the teachers implement the reflection together with the model teacher and the observers. The data were collected during the plan, do, and see stages. At the end of the course, the teachers and students were given questionnaires to fill in related to their responses on the plan, do, and see stages. The descriptors of the questionnaire are like and dislike. The data were processed by means of descriptive qualitative and quantitative analyses. Qualitative analysis was conducted on the data about the description of plan, do, and see stages. Quantitative analysis was conducted for the responses of 30 students and 10 teachers, calculating their like and dislike preferences. These sorts of data were then represented in percentages.

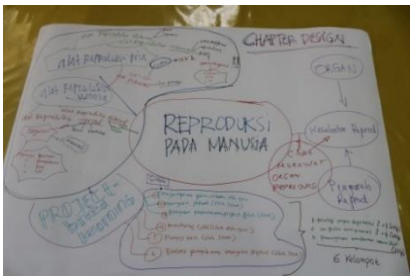
C. FINDINGS and DISCUSSION

1. The Implementation of Lesson study of the Teacher during "Plan" Stage

This section elaborates the process of planning the chapter design, teaching materials, and lesson design or lesson plans. It has been shown that each group was working collaboratively to plan the chapter design. It was aimed at connecting the design to the basic competences required by the syllabus of 2013 Curriculum. Chapter design was made based on the materials for senior high school students. In this stage, all teachers were contributing ideas for better materials to be used in class, to be specific for 'do' stage. This has enabled the teachers to form learning community with the principles of collegial and mutual collaborations. It has been noted that each group was equipped with textbooks for senior high school. Some others were detected to be busy accessing the materials available on the Internet before jotting down some points into a wide blank paper. Chapter design has been practiced together, as shown in Figure 1, 2, and 3.

Figure 1. Plan Stage: Discussing Materials

Figure 2. Plan Stage: Chapter Design



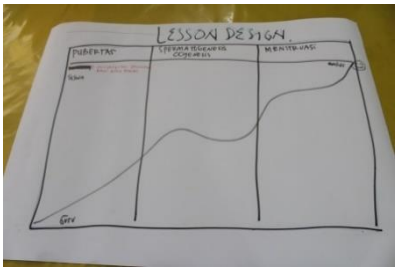


Figure 3. Plan Stage: Chapter Design

Figure 4. Plan Stage: Lesson Design

Figure 1 above shows that the teachers as the model teachers were discussing the materials to be taught. They were preparing various Biology literatures/textbooks for 12th graders. Figure 4 show that the teachers were making lesson design on the wide blank paper. They were discussing and sharing their ideas by implementing collegial principle. They were detected to be enthusiastic during the 'plan' stage, trained to learn from one another, collaborate, and respect the others' arguments. As a result, they were forming the so-called learning community to best prepare their teaching in 'do' stage (as shown in Figure 1,2). One of the sample works on chapter design is presented in Figure 3. It has been derived from group work particularly discussing reproduction.

The chapter design on reproduction to be discussed covered the following topics: the reproduction in man and women.

During Lesson Design, the model teacher was to design the instructional activities. Things to pay closer attention to during Lesson Design were: the model teacher set the columns for pre-, whilst-, and jumping activities; the model teacher was required to design the teacher's and students' class activities; and the model teacher described the wave of classroom condition and the achieved goals of learning. At the end of the teaching session, it was expected that the students fell happy, smile, and enjoy Biology class. The result of the teachers' Lesson Design, particularly on the reproduction materials, is presented in Figure 4. In addition to the above activities, the model teacher along with the other group members arranged the students' seat, teaching media, worksheets, and evaluation.

2. The Implementation of Lesson study of the Prospective Biology Teachers during "Do" Stage

During 'do' stage (teaching implementation), the model teacher checked the students' readiness to start the lesson. The model teacher conducted the instructional activities by practicing the acquired teaching skills. The main duty of the observers was observing what the students learned in class. In this session, the students make learning media, the problems: How the physiology of reproductive organs during puberty of man and women; how are the physical characteristics of puberty man and women; how to handle healthy menstruation. They were discussing outside the classroom what they found in their observation.

The model teacher guided the students to work in groups (Figure 5). The students presented their findings on resulting instructional media product. As for How

the physiology of reproductive organs during puberty of man and women; how are the physical characteristics of puberty man and women; how to handle healthy menstruation .

Figure 6,7 and 8, shows that the media product from students. The observer noted down any media used by the students, including the students' talk and discussion. It was found that one student was misusing the cell-phone for some purposes other than searching for learning materials and additional literatures.

Figure 5. The Students to work in group

Figure 6. Media product from students

Figure 7. Media product from students

Figure 8. Media product from students

3. The Implementation of Lesson study of the Prospective Biology Teachers during "See" Stage

During 'see' stage (reflection), the model teacher expressed how the instructional activities were conducted and running. The model teacher confessed of being nervous for having the first teaching experience. As a consequence, the model teacher found the first teaching a mess. This finding has been supported by the statements of observer 1, 2, and 3. The tendency was that the observers stated their complaints and criticisms towards the model teacher, instead of what were to be learnt

from the activities. Lesson Study, by design, is not intended to criticize a model teacher, but more on observing students' behaviors, eye-contacts, teaching media, classroom interactions, and students' talks.

4. TheTeachers' Responses to the Implementation of Lesson Study at the End of the teaching

At the end of the course, the student and teachers were given questionnaires tapping their responses related to the implementation of Lesson Study covering plan, do, and see stages. The results of the questionnaires have revealed that 30 student and 5 teachers were satisfied with the implementation of Lesson Study-Learning Community particularly in Biology Instructional Activity Management teaching. Most of the eager teachers stated that it is necessary that teachers are to be innovative and creative in designing their instructional activities. Prospective teachers are to actively interact with their peers, professional and senior teachers, and students. Communication is the key.

In contrary to those who were happy with the implementation of Lesson Study, 2 student teachers criticized the complicatedness of Lesson Study. A series of chapter design and lesson design were what sent them into tediousness and boredom. The following bar chart displays the student teachers' responses.

Departing from the findings during plan, do, and see stages, the teachers have been trained to form their own learning community, enabling them to collaboratively design innovative, creative, and joyful instructional activities, as well as peer learning. This is in line with the basic requirement of teachers in the 21st century. It is required that teachers become life-long learners and continuously work and learn with and from their colleagues. In addition, they are demanded to have direct and indirect communication skills, as well as master technology to improve their teaching quality (Hargreaves, 2000; Darling, 2006). Professional teachers are not merely teaching, but learning (Andriani, 2010). Lesson Study is not merely a forum where teachers meet, but it is a teacher professionalism program through collaborative and continuous learning that is collegial and mutual by nature (Riyati, 2007).

Collaborative learning is based on Vygotsky's zone of proximal development theory and Dewey's communication theory. During the discussion session, it is necessary that the student teachers 'learn from one another'. Lesson Study-Learning Community emphasizes on learning from one another (listening to one another), authentic learning (in line with the characteristics of the subjects/courses), learning with jumping activities, and creative and challenging instructional activities (Sato, 2014).

C. CONCLUSION and SUGGESTIONS

The implementation of Lesson Study-Learning Community has equipped the Biology teachers with the necessary skills for better teaching. During the 'plan' stage, they have been trained to make chapter design and lesson design. During the 'do' stage, the teachers as the Biology teachers were trained to learn from one another, to design the instructional activities based on the characteristics of their students and the taught subject, and to create innovative, creative, and joyful instructional activities. All are devoted to result in professional teachers. Schools should implement LSBS to improve the quality of learning.

D. REFERENCES

Andriani, D.E. (2010). Mengembangkan Profesionalitas Guru Abad 21 melalui Program Pembimbingan yang Efektif. *Manajemen Pendidikan*. 2: 78-92.

Aryulina, D. (2010). Penerapan Lesson Study pada Microteaching bagi Calon Guru Biologi. *Forum Kependidikan*. 30(1):14-18.

Darling, Linda ,H. (2006). Contructing 21st Century teacher Education. *Journal of Teacher Education*. 57: 300-314.

Gutierez, B.S. (2015). Collaborative Profesional Learning Through Lesson study: Identifying the Challenges of Inquiry-based Teaching. *Issues in Educational Research*. 25(2):118-134.

Hargreaves, A & Fulan, M. (2000). Mentoriy in The New Millenium. *ProQuest Education.* 39(1):50-56.

Hendayana, S, Suryadi, D, Supriatna, A, Imansyah, H.(201)0. *Lesson Study: Pengembangan Profesi Guru*. Bandung: Rizqi Press.

Masaaki, S. (2014). *Dialog dan Kolaborasi di Sekolah Menengah Pertama Praktek Learning Community*. Pelita. JICA.

Riski, S. (2014). Efek Lesson Study terhadap Peningkatan Kompetensi Pedagogik Calon Guru. *Aksioma.* 3(1):17-27.

Riyati, S. (2007). *Sistem Pembinaan Profesional Guru Pendidikan IPA melalui Lesson Study*. Bandung. UPI.

Sato, M. (2014). *Mereformasi Sekolah. Konsep dan Praktek Komunitas Belajar*. Pelita. JICA

Sa'dijah. (2010). Penerapan lesson Study & Pemberian Pengalaman Langsung di Sekolah pada Mahasiswa Peserta " Teaching Senoir High School Mathematics in Inggris". *Proceding Seminar Lesson Study*: 42-49.

Sato, E & Atendo, M. (2015). Lesson Study for Learning Community (LSLC): Conceptualising Teachers'Practice within A Sosial Juctice Perspective. *Discourse Studies in The Cultural Politic of Education*. 36(6):795-807.

Susilo, H, Chotimah, H, Ridwan J, Jumiati, Yuyun D.S, dan Sunarjo. (2009). *Lesson Study Berbasis Sekolah*. Bayumedia Publishing. Malang

Syamsuri dan Ibrahim. (2010). *Pembelajaran Lesson Study*. UM Press: Malang

Undang-undang.(2015). No 14Tentang Guru dan Dosen.

Wahyuningtyas N, Ratnawati N, Adi R.K. (2015). Membangun Kolegialitas Calon Guru IPS Melalui Lesson Study. *Sejarah dan Budaya*. 9(2):217-222.

Widodo, A, Sumarno, U, Nurjhani, M, Riandi.(2007). Peranan Lesson Study dalam Peningkatan Kemampuan Mengajar Mahasiswa Calon Guru, *Veridika*. 19(1): 15-28.

The Role of Peers in Mathematics Learning Process for Students Who are not Proficient in Malay Language through Lesson Study

Aini Haziah Amirullah
Zanaton H. Iksan
Universiti Kebangsaan Malaysia

Abstract

The purpose of this study was to observe the role of peer in the process of teaching and learning Mathematics among students who are not proficient in Malay language. This study was also carried out to examine the teaching and learning process approach in the classroom in understanding the mathematical concepts and strategies used by Mathematics teachers using Malay language as a medium of instruction among students who are not fluent in Malay Language. A case study were conducted at a Secondary School in Rantau, Negeri Sembilan, Malaysia. The purposed sampling was used to select 20 students in class and another class is picked at random. The Lesson Study approach is used from discussions on the construction of lesson plans until the reflection session is conducted among the committee members. The data were collected through observation during teacher's teaching. Transcripts for teaching were analyzed to obtain data from student conversations in the group. Video footage shows that Indian and Chinese students in this class use peers to understand the concepts taught by teachers. Malay language-speaking peers translate directly using their mother tongue to the instruction given by the teacher. The strategy used by the teacher in this study is to reduce the use of long sentences so that the concept can be clearly stated and introduced some of the terms used before the teaching and learning process. Assessment after this teaching session shows better student performance in the subjects taught. This study is expected to be carried out more thoroughly so that the problem of the students' skills in using Malay language can be overcome and the solution to this problem can be identified.

Keywords: Malay language, peer, lesson study, strategy, approach

Introduction

Efforts have been taken by the Ministry of Education to ensure that pupils in vernacular schools are able to master the Malay language. There are isolated cases indicates that some of the students from these schools cannot read, not fluent and do not understand the text. Chew Fong Peng (2016) said that the cultural, friends and family affects the interest of Chinese students to learn Malay language. However, the problem of

mastering Malay language (Bahasa Melayu) among non-Malay students give the difficulties in learning other disciplines.

Malaysia practices the concept of freedom in speaking other language and religions in its multiracial and multi-religion society. Every nation in Malaysia has its own dialect. This dialect is used as a language for communication among them. Abdul Rasid b Jamian (UPM) explained that Chinese students faced problems in the process of learning Malay language due to the internal factors of the student itself as well as external factors such as environmental influences and less effective teaching methods. Indhumathy a / p Munusamy (2013) says that Indian and Chinese studeznts do not use Malay Language in everyday conversations because their friends will be ridiculed and excluded by their friends. In addition, the home environment and the use of Malay language are not encouraging. The Malay language will only be learned in Bahasa Melayu subjects in the classroom. Abdul Rasid bin Jamian (2011) supports the findings of the study conducted by Indhusamy. Based on a study conducted on Form Two students at several Chinese schools in Negeri Sembilan states that there were no parent and family of Chinese students who use Malay language at home? Malay language is used only in schools and is no longer practicing at home. This makes it difficult for them to master the Malay language.

The teacher's difficulty to conveyed the lesson because their minimum understanding in Malay language using the role of peers among pupils who do not proficient in Malay language as a wise strategy. Mohammad Aziz Shah b Mohamed Arip et al. (2014) said attitude, teaching aids, curriculum, and teacher teaching style, peer group and environment were identified to influence pupils' focus in class while teaching and learning was conducted. Barley (2016) states the language and identity of the child's influence the interaction of the student.

This study was conducted to identify the role of peers, methods, strategies and approaches that attract the pupils interest and to improve students' understanding in mathematical concepts. To which extent a peer can help students understanding in mathematics teaching. This study also wanted to see the interaction between teacher and student in the implementation of student-cantered activities and see how interesting teaching aids could attract students and catalyze the students to participate in teaching and learning sessions.

This study focuses on the role of peers in student learning. This interaction between peers is very important to ensure the delivery of knowledge by the teacher can be understood and thus can produce positive learning outcomes and can build student confidence in the concepts to be communicated. A high-confidence student is unlikely to be influenced by their peers (Gil, Dwivedi & Johnson, 2016). However, the

percentage of students who have high confidence is small. School culture is one of the factors that can affect a student's personality.

According to Noufou, Rezania and Hossain, (2014) the emotions and wants of students to help their peers rely on the climate and culture of a school. Conolly (2017) stated that peer mentors form a leadership that can be modelled in role, time management of confidence, personality and problem solving. This study also shows that peer mentor performance tends to achieve similar performance and experience with peers.

Xiaoyan Xu (2014) supported that the conceptual understanding of pupils mentored by the mentor is much higher than the performance of other classmates. In another study which deals with the youngest daughters who are influenced by social peers to shape their image during the conversation with other friends (Nørgaard, Hansen, & Grunert 2013)

Lesson Study is one of approach could be used in classroom observations because the involvement of other teachers in the teaching process.Teacher can contribute to give ideas and suggestions that will enhance their competence in facing student learning issues in such cases.

A reflection session will be conducted after this teaching session to see if the techniques and approaches discussed could improve the level of understanding of the students. This approach is most appropriate to see the student's responses to teaching and learning based on the strategies, approaches and methods used and the use of teaching aids.

In addition, teachers' approaches, strategies and methods will be analyzed and seen whether they can show behavioural changes to pupils and peer role that always helps these misbelieving learners to understand the concepts that teachers want to convey. The teaching aids that play a role in attracting students' attention to teaching will be seen through the student's responses and actions towards their use. Reflection session after this process will be evident to the success or weakness identified to be analyzed and improved. Kuhn and Davidson (2007) conducts a qualitative research focusing on improving the quality of learning by using technology materials, objects, artefacts and others in teaching and learning sessions.

Many people talk about the quality of teaching today. Abdul Razak Idris and Asmah Salleh (2010) stated that teachers still practice chalk and talk teaching techniques even though the subjects are taught involving three dimensions. This resulted in the increasing number of Chinese and Indian students who did not understand the topics they learn in the teaching session.

Parents and societies will blame the failure of the teacher to convey knowledge to the students who failed in the examination. Not least they will blame policymakers of the Ministry of Education for the failure of the education system as a whole. This study is very important to the student's immunization process as desired in PPPM. The main objective of teaching and learning is to ensure students learn, understand, interested and focus in the classroom.

However, curriculum implementers or teachers need to continue to work on improving their methods, strategies and approaches. The teacher's main goal is to make the student understand, enjoy and to inrease the inner motivation of the students Muhammad Faizal A. Ghani and Julie Williams (2014) say that students are always expecting teachers to be able to influence their learning

The Lesson Study Program which is exposed at school becomes the starting point for the improvement of teachers "The observation that had been carried out by this lesson study will improve teachers' professionalism, improve the teaching of teachers based on student achievement level, fluency of speaking in Malay language and social background of students.

METHODOLOGY

This research is done in a secondary school where 80% of the students are non- Malay The purpose of the research is to explore how a Malay teaches Mathematics in Malay language to students who cannot speak in Malaysia fluently. It is a qualitatives research where data was collected by interviewing and observation The observation was conducted by selecting two different classes: Form 2 and Form 4. There are around 80% non-Malay in Form 2, and 100% non Malay students in Form 4.

This study is conducted using the Lesson Study approach. Lesson study consist of four steps, that are discussing, planning, teaching, and reflection. Members of Mathematics panel collaborate among the commity members. Teaching in a class with selected samples based on specific criteria. Pupils are assigned to a group of four whose one of them acts as a leader who will help other students understand the instruction of the teacher if necessary.

A voluntary teacher may teach students in their own class and other classmates. The observation session by teachers in subject panels, administrators and experts in the subject. After the lesson, the teachers discussed in the reflection session to get classroom analysis.

Independent interviews were done before the survey was conducted. Interviews with teachers were conducted to see the cause of this Malay-language disability problem occurring in the school. Structured interviews are conducted with administrators,

teachers, mathematicians and the students who were involved. A peer who is fluent in Malay will be together during an interview with the pupils.

Since this study is conducted to see peer function then observation to form 4 and form 2 will be selected. The observer will be given a copy of the Daily Teaching Plan for guidance during the teaching session. Observer notes any changes in behaviour that occurs from students during the teaching process.

Video and audio recording for each group activity will be recorded throughout the teaching and learning process. Transcript of student conversation in group and teacher teaching is provided after teaching session for data analysis.

FINDINGS AND DISCUSION

This section discusses the findings taken from observations in two different classes. The focus of this study is to examine the effectiveness of peer role through the interaction of pupils and group conversation activities. The pupils in the form two class that have lower levels of Malay Languange proficiency are placed in a group of of the same race, mixed with Chinese students and mixed with Malay students. While for Form 4 classes, more group activities are emphasized, pupils will be placed in their own race groups. Each group has a student who is fluent in Malay language.

In form two class where multi racial student involvel in classroom activities, shows that communication in Malay Language were actively involved. The students tried to speak in Malay Language. Based on observations, students are more likely to use their native language if they are among their own race despite the efforts to speak Malay Language with their teacher. However, interaction in mixed groups found that students were speaking Malay as a language of communication. There are also some students in this class assisted by peers in their group to answer questions given by teachers.

The pupils in Form Four class were found to be assisted by the head who always told the group members, what the teacher asked for in the activities of the individual. While in group discussions, the language of communication used is in the native language either Tamil or mandarin language. Students' interaction is not very active among Chinese students compared to Indian students. There is also a teacher's instruction that is not directly understood by a Chinese student. At least interactions between peers in the group assisted in the understanding of this students on the topic.

The conversation between students in Tamil Languange in the group were recorded during the group discussion

Teacher : (0, -2)(in Malay Language)
G1 : Zero, zero?(In Tamil Language)

Teacher : (0, -2)(in Malay Language)
B1 : At the line(Tamil Language)
G1 : Where? On the line? On Line?(Tamil Language)
On the line, on the line (Teaching a friend sitting next to her in Tamil Language)

Despite the instruction given by the teacher in Malay, however, the discussion in the group still uses the mother tongue. The difficulty faced by students in understanding the concepts taught by teachers encourages peers to help other pupils even in the mother tongue.

The form two students were more active in their participation than in Form 4 students although with the presence of observers from outside. The interaction of Malay, Chinese and Indian students in this class led the active involvement of the students because the students had more confidence to use the Malay Language because they learn to speak the Mlay Language by hearing and learning the language among the Malay student. There are still many students still rely on their peers to understand the concept of mathematics during learning process.

The Form four students, less interacting between groups in the classroom. This situation may be due to the grouping of pupils. They are group in their own race. They will only communicating among members in the group. The lack of Malay-language proficiency is an encouragement to a less-active classroom environment. The pupils are not convinced of using the Malay language, but the student's response to the questions posed by the teacher is answered together. This situation can increase the confidence of the students to speak in Malay and thus increase the understanding of the mathematical concepts learned.

The attendance of these school children is between 70% - 80% and is considered low compared to other schools. To encourage the students to the lesson, teachers change the teaching strategies by conducting student-centered activities and using colorful materials to attract students' attention. Observation in the classroom shows the students involved avtively in activity, but sometimes they do not do it voluntarily. The teacher will call the name of the student to. This is because of the students' lack of confidence in answering teacher questions, a feeling of inferiority and perhaps this is their first experience being called forward. An Indian student who was called forward to complete the y-axis was uncertain how to complete the axis.

This conversation took place during the lesson.

Teacher : Complete the y axis. Where's the axis y? Haa…complete like this, on the y-

axis. Start from where? Here you go. What is its value? Write bigger. Ha
make dash near here a bit. Okay then? Okay down here? What is missing here
class?

All Students : Negative

Teacher : The negative is in front. Ok, the negative value when under zero value, will be
negative. Above the zero value, it is positive. Did he do it right?

All Students : Right.

Observation shows that these students are guided by teachers individually and asking questions to students in the classroom help the student to answer. This activity is seen as an attraction to pupils as they were given opportunities and assisted by teachers and peers during learning. Each student is given a learning aid during individual activities. Pupils can improve their understanding of the concepts learned and peer-to-peer skills in order to further enhance understanding of the students' mathematical concepts.

Conclusion and Suggestion

The purpose of this study was to look at the role of peers in the Mathematics teaching process involving pupils who did not understand and fluently speaking in Malay language. The tendency of pupils to use the mother tongue as the influence of the student's culture and socio-economic disturbs the smooth teaching of the teacher and the achievement of the students. Azuma, Masumi(2009) incorporate cultural elements sometime hard for non- native speaker to understand a lesson. This problem often occur in areas where demographics are still practiced. Although in urban areas this scenario does not happen significantly. However, such situations are still valid and should not be neglected on the impact to the students and the the Malaysian education system (PPPM) who want to see pupils speaking dual language.

Peer role in the teaching and learning process is very important as they have the closest partner to a student. The most important peer-to-peers in this study are those who have the skills in Malay Language. However, the collaborative concept, communication and interaction in the multi-racial class is the most effective approach. These pupils have curiously, fast-learning and rapidly influenced by their environment.

Additionally, teachers need to constantly change the strategies, approaches and methods appropriate to the way students are thinking today. Kuhn.S, Davidson.J(2007) teachers should improve learning quality using teaching aids wisely .Teaching and

learning strategies and approaches also need to be aligned with the socio-economic background, achievement and culture of the students in the class. Cultural elements are a very important in handling pupils' learning. The approach used should consider these aspects.

The problem of Malay language skills is actually to be seen from the grassroots. Beginning from primary school, the use of Malay language should be emphasized especially in vernacular schools. Who is the teacher ? What is the method used? A study at the bottom of the curriculum should be conducted and sought after the course before the students begin their study in secondary school. If this problem is not resolved from the bottom, it will continue in high school and will disrupt the delivery of knowledge at the higher level.

References

Abdul Razak Idris , Nor Asmah Salleh. 2010. *Pendekatan Pengajaran yang Digunakan oleh Guru Sekolah Menengah di Daerah Johor Bahru dalam Pengajaran dan Pembelajaran Matematik*. Fakulti Pendidikan Universiti Teknologi Malaysia.eprints.utm.my/11474

Azuma, Masumi.2009. Positive and Negative Effects of Mother-tongue Knowledge on the Interpretation of Figurative Expressions. *Papers in linguistic science (2009), 15: 165- 192*

Catherine Lewis & Akihiko Takahashi. 2013. Facilitating Curriculum Reforms through Lesson Study. *www.emeraldinsight.com/2046-8253.htm*

Donald R. Cruickshank, Deborah Bainer Jenkins, and Kim K. Metcalf.2006. *The Act of Teaching* .Boston: Mc. Graw Hill, 2006. p. 279.

Jo Griffiths.2015. Bridging the school placement gap with peer micro-teaching lesson study *International Journal for Lesson and Learning Studies.www.emeraldinsight.com*/ doi/abs/10.1108/IJLLS-11-2015-0035

Gil, L. A., Dwivedi, A. and Johnson, L. W. 2016.*Effect of popularity and peer pressure on attitudes toward luxury among teens*.Young Consumers, Vol. 18 Issue: 1, pp.84-93, https://doi.org/10.1108/YC-10-2016-00639

Maitree Inorasitha and Narumon Changsri. 2013. *Teachers' Beliefs about Teaching Practices in Context of Lesson Study and Open Approach.* World Education and Reaserch Centre.

Malini Witmuishara dan Anuar Ahmad. Pengaruh Etnik Terhadap Kualiti Pengajaran Guru di Bilik Darjah: Satu Kajian Perbandingan Antara Sekolah Rendah Kebangsaan dan Sekolah Rendah Jenis Kebangsaan Tamil. *Journal. www.academia.edu*

Mohammad Aziz Shah Mohamed Arip et al. 2014. *Faktor, kesan dan strategi menangi permasalahan kurang tumpuan pelajar sekolah menengah di dalam kelas: Suatu Kajian Kualitatif.* digilib.unimed.ac.id/4781/1/Fulltext.pdf

Nørgaard, M. K., Hansen, K. N., & Grunert, K. G. 2013. Peer influence on adolescent snacking, *Journal of Social Marketing*, 3 (2):176-194

Muhammad Faizal A. Ghani dan Julie Williams. 2014. Harapan murid bermasalah terhadap pengajaran guru: Satu kajian awal di sebuah di negara maju. *Jurnal Kurikulum & Pengajaran Asia Pasifik* - 2 (1): 26

Xiaoyan Xu, N. D. 2014. Using peer instruction with hints in introductory business statistics, *Journal of International Education in Business*, Vol. 7 Issue: 1, pp.60-71

Nur Elyani Musa, Minarnie Hadzira Mohamad.2014. *Keberkesanan Penggunaan Alat Bahan Bantu Mengajar Dalam Pelaksanaan Kursus Sains Kejuruteraan di Kalangan Pelajar Diploma Kejuruteraan di Politeknik Tuanku Sultanah Bahiyah.* ecrim.ptsb.edu.my/file/ 20141106092545.

Noufou, O., Rezania, D., & Hossain, M. 2014. Measuring and .exploring factors affecting students' willingness to engage in peer mentoring. *International Journal of Mentoring and Coaching in Education*, Vol. 3 Issue: 2, pp.141-157.

Barley, R. 2016. *Language, Identity and Peer Interactions at a Linguistically Diverse School, in Maryanne Theobald (ed.)* Friendship and Peer Culture in Multilingual Settings *(*Sociological Studies of Children and Youth, Volume 21) Emerald Group Publishing Limited, pp.89 – 111

Sang, M.S.2008. *Teori Pembelajaran kognitif, Konstruktiktivid dan Meta kognitif: In Psikologi Pendidikan dan Pedagogi Murid dan Alam Belajar.*Ipoh, Perak.Cipta Printing & Publishing(M) Sdn Bhd

Connolly, S. 2017. The impact of peer mentoring on the mentors, *Journal of Applied Research in Higher Education.* 9 (2):255-266.

Kuhn, S. & Davidson, J. 2007. "*Thinking with things, teaching with things - Enhancing student learning in qualitative research through reflective use of tools and materials*", Qualitative Research Journal, Vol. 7 Issue: 2, pp.63-75

Tang Keow Ngang dan Lim Chap Sam. 2015. *Principle Support in Lesson Study*. World Education and Reaserch Centre.

Tatang Suratno. 2012. *Lesson Study in Indonesia: an Indonesia University of Education Experience.*. International Journal for Lesson and Learning Studies

Tay Meng Guat.2017. *Minat Pelajar Bukan Penutur Natif Terhadap Pembelajaran Bahasa Melayu.* Jabatan Pengajian Melayu gracetay59@yahoo.com Wong Shia Ho Jabatan PIPK wsh@ipbl.edu.my

The Teachers' Response toward the Pre-Service Students Activities

Sri Damayanti
Cokroaminoto Palopo University, Indonesia
yanthie_uncok@ymail.com

Irwan
SMA Negeri 6 Palopo, Indonesia
iwaalfarabi@gmail.com

Abstract

This paper aimed the description of Magang III activities at Faculty of Teacher Training and Education of University of Cokroaminoto Palopo. The researcher used descriptive research design. The research question of this paper is what is the teachers' perception toward Magang III in building learning community ?. The researcher used purposive sampling in choosing the sample. There are six teachers as the sample of this research. These six teachers comes from different schools such as SMP Negeri 1 Palopo, SMP Negeri 2 Palopo, SMP Cokroaminoto Palopo, and SMA Negeri 6 Palopo. This paper gives us idea that teachers gives positive responses toward Magang III Activities as an effort to build learning community.

Keyword(s): description, pre-service students' activity, Magang III.

A. Introduction

University of Cokroaminoto Palopo is one of University who participate actively in conducting Lesson Study weather in internal or external campus. This campus already received grant from government since 2013 until 2015. In 2013, Faculty of Teacher Training and Education implemented lesson study in 4 study program such as PPKn, Math Education, Indonesia Language Education, and English Education. After That, in 2014 the lesson study activity was expended to faculty of science. Then, in 2015 the lesson studied expended to schools. There were two pilot schools which implemented Lesson Study.

STOLS Program stands for Short Term of Lesson Study which is held in Japan. University of Cokroaminoto Palopo participate actively in sending their lecturer to Japan to teach about the best practices of Lesson Study in Japan. The Government and JICA collaborated in funding, so two lecturers had been already sent to Japan. One of the best practices in implementing Lesson Study in Japan is Lesson Study for Learning Community. The Lesson Study for Learning Community (LSLC) is one of efforts in building colleguality in schools between teacher to teachers, between students and teacher.

JICA supported the participants in learning LSLC in order to facilitate Indonesia people to enrich their knowledge about how to build learning community as atmosphere in education. After learning more about LSLC, the participants must have plan to implement the practice of LSLC in their campus, outside campus (schools), and in some subjects. So, the researcher tried to implement LSLC to the teachers by implement it in Magang based Lesson Study. She believes that this decision will influence the teachers to collaborate with the lecturers and the students, so indirectly the teachers will learn about Lesson Study. She hopes that the teacher will be inspired by the process of pre-service activities in Magang based Lesson Study.

Magang is one of subjects in Faculty of Teacher Training and Education (FKIP). The student who programs this subject is called Pre-service students. These Pre-service students should learn how to design their lesson plan, choosing the approriate media in teaching, and practicing how to give instruction in classroom as a teacher.

In Palopo, schools are devided into two categories. Those are public shools and Private schools. Those schools are used by the pre-service students to practice their knowledge to conduct the interaction of teacher and students in classroom. So, the researcher chose four schools as partner schools in implementing Magang based Lesson Study. Those schools are SMP Negeri 1 Palopo, SMP Negeri 2 Palopo, SMP Cokroaminoto Palopo, and SMA Negeri 6 Palopo. These schools are located near one another. So, researcher and her team will be easy to control the proccess of Magang based Lesson Study.

SMP Cokroaminoto Palopo is established by the Perguruan Tinggi Cokroaminoto Foundation. Since 2015, this school became the pilot school of Lesson Study. The teachers and students are familiar with the process of lesson study. That is why this school is chosen as one of schools as the place to implement Magang based Lesson Study. Other schools, SMP Negeri 1 Palopo, SMP Negeri 2 Palopo, and SMA Negeri 6 Palopo are public schools which never conducted Lesson Study before.

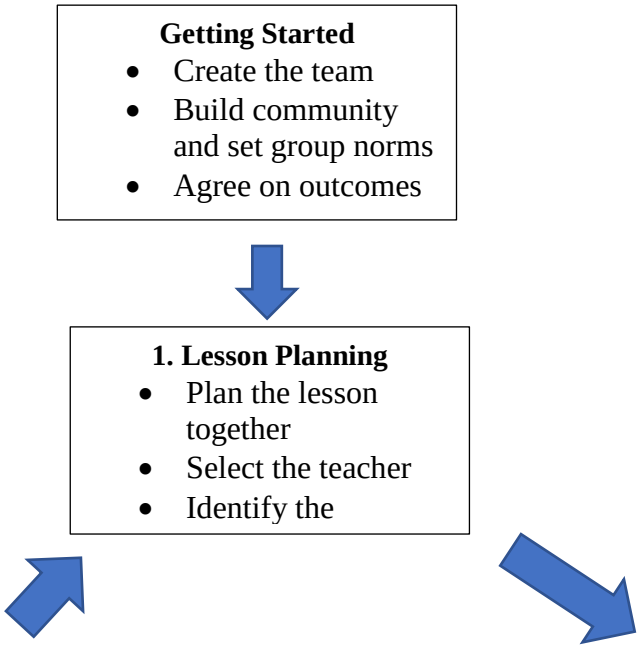
B. Magang Based Lesson Study at Cokroaminoto Palopo University

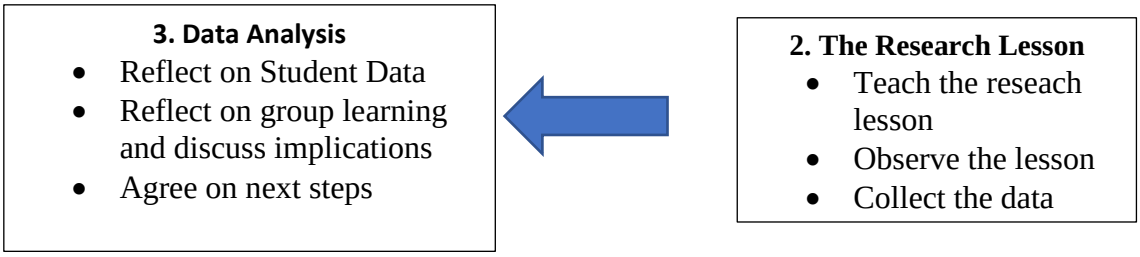
Pete Dudley (2011) said Lesson study helps experienced as well as inexperienced teacher to learn. Because, through the process of joint planning, joint observation, joint analysis we have to imagine learning togerther, we get to see aspects of pupil learning through the eyes of others as well as our own and we compare actual learning observed in the research. Lesson with the learning we imagined when we planned it. This forces us to become conscious of things we would normally not be conscious of either because we would filter it out or because it would be dealt with through our tacit knowledge system. Many people who have used Lesson Study have said that focusing on and thus becoming more awere of the learning needs and behaviours of individuals case pupils somehow makes them more aware of the individuality of all their pupils. So instead of teaching to a “middle” with groups of high and lower achieving pupils on either side, Lesson Study helps teachers to be more aware of the

needs of individuals in their subsequent teaching but seemingly without being overwhelmed by the experience. The ideas above supports us that Lesson Study is not only needed by the teachers but also needed by the students who will be a teacher someday, or in this case the pre-service students.

In the process of Lesson Study, Lewis (2002) describes that the main idea of Lesson Study is that a group of teachers, with support from an expert, develop a teaching plan for one lesson. The structure of the lesson, the role of the teacher and pupils learning are in focus. The lesson study process cn be described as a cycle, a process where the group of teacheers repeatedly goes through the phases, discussion, goal-setting and planning, research lesson. Then the participants explore the content, both what it means to acquire understanding of the it and how it can be approacher in teaching. The participants are in control and make decisions about the process. The participants often deepen their knowledge of the content and possible teaching approaches. They communicate, do research, work together, make decisions, plan teaching, and experience the advantages of participating in a learning community. The research lesson is taught by one of the participants and the other participants are present and take notes. After the lesson, the experience is discussed and an expert joins the group discussions. On that basis the lesson plan is revised and the lesson taught again for a similar group. The cycle can be repeated several times. The idea from Lewis; 2002 gives us overview of the basic step of Lesson Study, that is PLAN – DO – SEE. In case of Magang based Lesson Study, the group of pre-service students collaborated with the teachers, students, and the alumni of STOLS will build the learning community. The lecturer will control the readiness of their students through their participations in giving positive contribution in proses of Planning, opening class, and reflecting. Also, the policy maker in Cokroaminoto Palopo will get the data in evaluating the curriculum in campus.

Developmental Studies Career describes the plan in conducting lesson study





Adapted from Developmental Studies Career Lesson Study

The figure above gives us the guidance in doing Magang based Lesson Study. The researcher have done the procedure of Lesson Study in Magang based lesson study as follow:

1. Getting Started

a. Socalized Magang based Lesson Study in Magang Team and the 4 schools.
b. Set the team of:
- SMP Negeri 1 Palopo, consists of Student as Teacher model and Observers.
- SMP Negeri 2 Palopo, consists of Student as Teacher model and Observers.
- SMP Cokroaminoto Palopo, consists of Student as Teacher model and Observers.
- SMA Negeri 6 Palopo, consists of Student as Teacher model and Observers.

c. Build the community between one another by doing meeting several times.
1. Lesson Planning
a. Plan the lesson together, here the team planning the lesson to be taught to the students.
b. Select the teacher, not all of the pre-service students will be teacher model.
c. Identify the classroom, it is very important in designing grouping. So, the pre-service students should do observation in school.
2. The Research Lesson
a. Teach the research lesson, the lecturer taught the find as many as reference about the lesson so those can be suggestion for the pre-service students in designing the classroom or their lesson plan.
b. Observe the lesson, here the lecturers and the teacher observe the lesson would be taught together with the pre-service students.
c. Collect the data, here the data were collected by monitoring the process of pre-service prepare their teaching plan, open class, and reflection. Interview and questionnaire were the instruments in getting the data.
3. Data Analysis;
a. Reflect on group learning and their implication, here the data from the teachers were tabulating and categories of the teachers' answers.

b. Agree on next steps, here if the data is not enough, just go to the next step as well as the first step.

C.The Teachers' Response toward the Pre-Service Students Activities

Here is the description of six teachers' response toward the preservice students activitie.

a. What do you think about Magang Based Lesson Study ?

100% participants gave positive response toward their opinion about Magang based Lesson Study which have already done in their schools. Their answers are varies in two point of views. The first point of view is taken from the benefit for the pre-service students' ability. We can see the statement:

> "Lesson Study is good to be applied because the students who will teach in classroom will have good planning (Lesson plan)"

Second point of view is taken from the benefit for the learning community. We can see the statement:

> "Magang based Lesson study will build the learning community between teacher, students, and lecturer"

2. **Is there significant difference of Magang and Magang Based Lesson Study?**

67% participants gave 67% positive response toward their opinion about the difference of the previous Magang and Magang based Lesson Study.

33% participants gave negative response because according to them, the result of the students' ability was not increase.

3. **Do you think, Magang Based Lesson Study gave positive contribution in your school?**

100% of participants gave positive response. Some of them found the positive thing in tehir students, some found in their teachers attitude, and some found it is positive for the pre-service students only.

4. **What are your expectations toward the application of Magang based Lesson Study at your school?**

This questions fasilitate the researcher to know or to get the suggestion from the teachers to enhance the quality of Magang Based Lesson Study. The Interviewee suggested to prepare the pre-service students' ability in handling classroom before teaching; others suggested to facilitate the media in teaching, and the orher suggested to reschedule the time for Magang based Lesson Study, they suggested to conduct Magang based Lesson study at the even semester.

5. **Is Magang based Lesson study still needed in your school?**

100% of the participants gave positive response. It means they still want the pre-service students conduct Magang based Lesson Study.

D. The concept of Learning in LSLC

1. Planning

In Planning session, the preservice students collaborated with lecturers and teacher planned their preparation in teaching. They prepared:

a. Lesson Plan

In preparing lesson plan, the pr

b. Media to support their teaching

c. Grouping

Planning is very important in preparing our class. Masaki Sato (2012) says : "Pembelajaran kolaboratif (Collaborative Learning) bukan ditujukan untuk melakukan kegiatan dengan menentukan peranan setiap anggota, melakukan permainan, mengikuti instruksi seorang siswa yang bersuara besar, atau menyatukan beraneka pandangan anggota ke dalam suatu pendapat. Kegiatan semacam ini merupakan pembelajaran kooperatif (Cooperative Learning). Namun pembelajaran kolaboratif merupakan kegiatan untuk menunjang pembelajaran individu, yaitu melalui komunikasi dengan pihak lain, siswa dapat memiliki pengalaman untuk mengerti dari yang tidak mengerti, atau mengetahui dari yang tidak tahu dan tidak sadar. Karena itu, kegiatan inidiharapkan akan menumbuhkembangkan setiap siswa secara individu. Dengan demikian, setelah kegiatan kelompok, pada saat kegiatan pleno, siswa harus dapat mengucapkan "menurut saya.....", bukan "menurut kelompok kami....."

So, it means as a teacher we have to realize that the students need to be cared. In preparing the Lesson sheet (Lembar Kerja siswa) the team prepare not only one sheet for one group, but also all the members of a group were given the lesson sheet (Lembar Kerja Siswa).The team did that because they realized that everyone in the classroom were learn together.

According to Masaaki Sato (2012) " Jumlah anggota yang yang ideal untuk kelancaran komunikasi verbal antar siswa adalah 3 atau 4 orang, terdiri dari dua jenis kelamin dan tidak diatur menurut kompetensi akademisnya. Tujuannya adalah untuk sedapat mungkin memanfaatkan karakter masing-masing dan jenis kelamin"

In grouping, the team of Magang based Lesson Study planned to design the members of each group.

2. Open Class

In Opening class, the team found some unpredictable thins in the classroom. Those are about the media that they have prepared before, the students' groups, the way of the pre-service sudents' teach their students in the classroom. After getting some information from the pre-service students, it is found that the pre-service students were nervous because of the observers' attendant in the classroom, they felf worry in doing mistakes.

3. Reflection

According Masaaki Sato (2012: 91) :"Forum refleksi pada prinsipnya adalah penyampaian berbagai pandangan oleh para peserta (pengamat open class). Akan tetapi jika peserta forum hanya menyampaikan kesan, tanggapan, dan cara mengajar siswa saja, maka tidak akan terjadi perubahan pada guru untuk menjadi ahli pembelajaran. Artinya, keberhasilan forum refleksi tergantung pada bagaimana para peserta mengamati kegiatan pembelajaran (Open Class).

That is why, the team of Magang Based Lesson Study invited some lecturers to observe the students' activities in classroom. The pricipals also observed the way of their students learn in class. After that, they discuss about what the students have learned and how they learned. Also, they discuss about why some of the students did not learn something new in that lesson. This reflection session was very important for the pre-service students in order to increase the may thay teach in class.

Learning Vs Conventional Learning

Massaki Sato (2012: 21) describes "Pembelajaran adalah ketika masing-masing siswa bertemmu dan berdialog dengan materi pelajaran (tugas), dan meski masih kurang yakin, tetapi ia mulai memahami substansinya dengan caranya sendiri (dialog dengan objek). Kemudian, berdasarkan pemahaman tersebut melalui dialog dengan pihak lain menggunakan bahasa atau benda, ia membangun atau memperbaiki hubungan dengan pihak lain. Atau melalui dengan kolaborasi (dialog dengan pihak lain) yang merupakan kegiatan eksplorasi bersama-sama, setiap siswa membangun kembali pemahamannya secara pasti (dialog dengan diri sendiri). Pada prinsipnya, pembelajaran adalah kegiatan untuk mencari solusi. Sebaliknya, belajar cara konvensional (benkyo) hanya dijalankan dengan menggunakan buku pelajaran, guru bertanya dan siswa menjawab. Dalam cara konvensional itu, kegiatan utama siswa adalah hanya mendengarkan baik-baik sambil duduk manis di bangku. Dalam cara belajar konvensional hanya terjadi dialog yang monolog antara guru dan siswa, dan akan dianggap baik apabila siswa dapat mencapai pemahaman dengan upaya sendiri tanpa bantuan dari pihak manapun."

It can be concluded in learning process, teacher should build the students'critical thingking. In order to build the critical thinking, the teacher shoul prepare good media

or prepare the pre-questions before beginning the lesson. According to the pre-service students' experience, since they asked questions to the students they hoped the students should answer the questions as fast as possible. According to them, the question without answers from the students means failed learning. So, the pre-service students still focus on the result of teaching and learning at that time. They did not realize about the process of dialog in learning process.

According Manabu Sato (2014:35) Ada dua sisi pada pengembangan guru, yaitu pengembangan sebagai seorang ahli (craftmanship) dan pengembangan sebagai seorang profesional (professional development). Dalam pengembangan kedua hal ini, penting untuk membentuk komunitas belajar guru (professional learning comunity) dalam lingkup sekolah. Pengembangna sebagai seorang ahli merupakan penguasaan "teknik" dan "gaya" dan metodenya terletak pada "imitasi". Sebaliknya, pengembangan sebagai seorang profesional terletak pada "kombinasi antara teori dan praktek", dan metodenya adalah "metode kasus (case method)" (Studi kasus = lesson study)

In line with ideas above, it can be concluded that Magang based Lesson study can be used by the teachers as a media to build their professionalism and collegiality. Although the teachers were not the teacher-model at that time, but at least they gave contribution in designing plan, and also gave their ideas in reflection with leacturers, pre-service students, and the principals. That is why, based on the result of interviewing some teachers at four schools at Palopo, the teachers gave positive response toward the pre-service activities, in this case the pre-service implemented Magang based Lesson Study in their schools about four months. They hope, Cokroaminoto Palopo University still Implement Magang based Lesson Study in Their schools.

C. References

Dudley, P. (2011). Lesson Study: A Handbook. www. Lesson Study.co.uk. retrieved Sept 2017.

Lewis, C. C. (2002). Lesson Study: A Handbook of Teacher-Led Instructional Change Philadelephia, PA: RBS Reasearch for Better Schools, Inc.

Manabu Sato (2014) Mereformasi Sekolah: Konsep dan Praktek Komunitas Belajar, PELITA

Sato Masaaki (2012) Dialog dan Kolaborasi di Sekolah Menengah Pertama; Praktek "Learning Community", PELITA

Appendix 1. Instrument Interview

1. Bagaimana tanggapan Bapak/Ibu terhadap pelaksanaan Magang berbasis Lesson Study?
2. Adakah perbedaan yang Bapak/Ibu rasakan terhadap pelaksanaan Magang sebelumnya dengan Magang berbasis Lesson Study?
3. Adakah manfaat lesson study yang telah dilaksanakan di sekolah bapak/ibu? Jika ya, apa saja?
4. Berilah saran dan Masukan untuk pelaksanaan Lesson Study berikutnya!
5. Masih bersediakah Bapak/Ibu untuk menerima mahasiswa kami untuk melaksanakan magang berbasis lesson study?

Appendix 2. Pictures of Magang Based Lesson Study

1. Planning

Lecturers and pre-service students collaborated in planning the media in teaching Narrative text.

2. Open Class

Lecturers, teachers, and pre-service students as observers in practicing Magang based Lesson Study

3. Reflection

Reflection Session in Magang based Lesson Study

Lesson Study As Media For SMP Teacher To Increase The Pattern Of Mind And Quality Of Learning Mathematics In SMP Negeri 14 Banjarmasin

Hidayah Ansori[1], Agni Danaryanti[2], Elli Kusumawati[2]
Mathematics Education Department, FKIP UniversitasLambungMangkurat
Jl. Brigjen H. HasanBasry Banjarmasin
*e-mail :*ellikusumawati@unlam.ac.id

Abstract

Improving the quality of learning directly will affect the quality of students. Therefore, the guidance of teachers' mindset becomes the main target in order to produce a qualified learning quality.Although some teachers of SMPN 14 have used varied methods and media, but in the learning process has not been oriented on how students learn, let alone reflect on the evaluation and reconstruction of subjects after the learning takes place.

There is also lack of collaboration between teachers in designing students in teaching teams, lack of learning communities between teachers, between students, and among students-teachers. This fact further narrows the teacher's insight, because the teacher does not experience the learning directly from the learning done by others.Therefore it is necessary to find an effective way or pattern as a medium to develop effective learning innovation in order to improve the quality of learning and professionalism of teachers. One concept that will be developed to improve the quality of learning and professionalism of teachers is the lesson study.The method used is descriptive qualitative. This research is designed with the approach of mentoring Lesson Study. In this case, mentoring includes: mentoring to develop the lesson design and the tools (design lesson).Furthermore, the core assistance of Lesson Study as a medium to foster and develop teachers' mindset in improving the quality of learning is reflection, which reflects the design results in pembalajaran.Subjek research summed two mathematics teachers with the number of cycles as much as 3 times. Research instruments in this research are observation sheet, group work sheet and interview guide.

The results showed that lesson study can improve the quality of mathematics learning and teacher mindset in SMP Negeri 14 Banjarmasin related to composing learning tools and skills to manage the class.

Keywords: Lesson Study, mindset, quality of learning

Introduction

Efforts to improve the quality of education in schools including in junior high schools are conducted by the government through various means. One way to do this is through coaching in several piloting schools. In this case facilitated by the Education Office of South Kalimantan Province. However, not all junior high school gets the target of coaching, such as SMPN 14. This will affect the formation of teacher mindset in building student learning community. The building of student learning communities in learning, directly impact on

improving the quality of learning and out put students. Therefore, the development of teacher mindset in develop student learning community become the main target to improve the quality of learning. In this regard, the observation shows that the piloting school did not induce its experience to other schools, including SMPN 14.On the other hand, although some teachers of SMPN 14 have used varied methods and media, but in the learning process has not been oriented on how students learn, let alone reflect on the evaluation and reconstruction of subjects after the learning takes place. There is also lack of collaboration between teachers in designing students in teaching teams, lack of learning communities between teachers, between students, and among students-teachers. This fact further narrows the teacher's insight, because the teacher does not experience the learning directly from the learning done by others.

Therefore it is necessary to find an effective way or pattern as a medium to develop effective learning innovation in order to improve the quality of learning and professionalism of teachers. One of the concepts to be developed is the lesson study. Lesson Study is a model of coaching educators by reviewing learning, conducted collaboratively and continuously based on the principles of kolegalitas and mutual learning, to build a learning community.This activity aims to foster and teacher mindset in developing ideas to build student learning community, because the final goal of Lesson Study is to build Learning comunity. In this case the learning community of students and learning communities between teachers.

Lesson Study comes from Japan (from: jugyokenkyu) which is a systematic process used by Japanese teachers to test the effectiveness of its teaching in order to improve learning outcomes (Garfield, 2006). The systematic process in question is the collaborative work of teachers to develop plans and learning tools, to observe, reflect and revise the learning plan in a cyclical and continuous way.The goal of this research is to develop teacher's mindset in improving the quality

of learning and out put of students.

This research approach using qualitative descriptive approach with the subject of research amounted to two mathematics teachers at SMPN 14 Banjarmasin. This mentoring includes three stages in accordance with the stages in the Lesson Study, starting from the assistance in developing learning tools (Plan), assistance in the implementation of learning (Do) and mentoring in Reflection (Se). Technique of collecting data in this research through observation and interview. Observation used in this research is observation with direct observation. This activity is done during the open class (OC) conducted by the model teacher, as well as reflection activities. While the interviews conducted in this study are guided free interviews. In this case the interview is done to the teacher and other teacher model as an observer. Interview conducted simultaneously with observation observation reflection activity.Analysis of the research results covering 6 times of planning activities (6), 6 learning activities (Do), and 6 times of reflection (See) activity on learning outcomes are as follows.

Description Results of planning activities (Plan)

Implementation of planning activities undertaken are 6 materials, namely: the circumference and the area of rhombus; circumference and area of kite; perimeter and trapezoid area; surface area of cubes and cuboids; cube and cuboid volumes; surface area of the prism. Everything is distributed in three plans, each plan discusses two learning materials

(Do).The draft RPP and learning tools required initially were made by a teacher, then discussed together in the FGD forum, and the results were:

Table 1 Results of plan activities 1

Plan Material	**Plan Activity**	**observer**
1. Circumference and area of rhombus 2. the volume of cubes and cuboids	1. Designing learning ideas, namely: ▪ Contextual apperception material ideas, according to the rhombus, cube and cuboid builds ▪ Contextual motivational material ideas ▪ Cognitive conflict ideas to develop student learning Media for motivation ▪ Media for apersepsi ▪ Media for core activities 2. Predicting student learning reactions 3. Preparing RPP	6 people

Table 2 Results of Plan Activity 2

Materi *Plan*	**Kegiatan *Plan***	**Jumlah observer**
1. the circumference and area of the kite 2. the volume of cubes and cuboids	1. Designing learning ideas, namely: • Contextual apperception material ideas, in accordance with the problems of kite-building, cube and cuboid • Contextual motivational material ideas • Cognitive conflict ideas to develop student learning communities	6 orang

	2. Designing learning media related to the building of kites, cubes and cuboids • Media for motivation • Media for apersepsi • Media for core activities 3. Predicting student learning reactions 4. Preparing the RPP	

The results of the discussion on the activity plan 2, showing the increased creativity and ability of teachers in designing the necessary learning tools. In this case the main problem in the effort to build a student learning community, stick to the idea of determining the right media and material for apperception.

Table 3 Results of Plan Activity 3

Materi *Plan*	**Kegiatan *Plan***	**Jumlah observer**
1. the circumference and area of trapezoid 2. surface area of the prism	1. Designing learning ideas, namely: • Contextual apperception material ideas, in accordance with the problems of trapezoid and prism builds • Contextual motivational material ideas • Cognitive conflict ideas to develop student learning communities 2. Designing learning media, linked to trapezium and prism builds • Media for motivation • Media for apersepsi • Media for core activities 3. Predicting student learning reactions 4. Preparing the RPP	6 people

Learning from plan 1 and plan 2, teachers begin to be creative in designing learning tools. However, the main problem remains with determining and developing communicative media, let alone based on wetlands. In this case the teacher is less able to utilize school environment and student environment as media.

Furthermore, the results achieved in the assistance plan through Lesson Study are as follows.

Table 4 Results Achieved Through Media Mentoring Plan

Plan	Material	Result
1 **2** **3**	1. Circumference and width of rhombus 2. the volume of cubes and cuboids 3. the circumference and area of the kite the volume of cubes and cuboids roving and trapezoid area **surface area of the prism**	1. Obtained design results related to learning ideas include • Contextual apperception materials • Contextual motivational material • Cognitive conflict ideas for building student learning communities 2. Obtained design results related to learning media include • Media for motivation • Media for apersepsi • Media for core activities 3. Obtained an understanding of mathematics teachers in designing • The idea of learning mathematics • media learning math • Cognitive conflict ideas for building student learning communities 4. Discovered teachers' difficulties in designing • The idea of learning mathematics • Media learning math • Cognitive conflict ideas for building student learning communities 5. Terjadi collaboration between teachers associated with insights / ideas in developing learning activities based on student learning problems in building student learning communities 6. In the second and third plan, there is an increased understanding and creativity of teachers in designing various elements to build student learning communities. • Ideas of creative and contextual math learning • Contextual learning media

1. Description of the results of activities Do (implementation of learning)

In accordance with the material planned in the plan, the implementation of learning in this study carried out as much as 6 times. In this case it is held for three weeks and every week

is held twice Do. Furthermore, the reflection is done after the completion of two lessons (Do)

Figure 1 Implementation of do teacher model in class VII C SMPN 14 Banjarmasin

In general, the problems that occur in Do and Do are repeated again on Do or Do activities, although there has been an increase but not significant. Potential students for creativity have been formed, but teachers are less utilizing the potential that already exists.

Furthermore, in the sixth week carried out the activities Do5, Do6 and See as follow-up of the plan in the fifth week.

Figure 2 Implementation of model teacher do in class VIII H SMPN 14 Banjarmasin

From the observations during the learning activities (Do), in general there has been an increase from the first Do. In this case the creativity and ability of teachers in utilizing the media to build student learning communities during the learning process, still need to be sharpened and developed. This is reasonable because there is no perfect learning, there is always a gap to be fixed. Problems, teachers should have the opportunity and commitment to learn from peer learning. Thus all students will get the right to learn during the learning process takes place.

Research Results In Learning Activities (Do)

Table 5 Results Achieved through Media Assistance Do

Do	Material	Result
1 **2** **3** **4** **5** **6**	1. 1. Circumference and width of rhombus 2. the volume of cubes and cuboids 3. circumference and area of the kite 4. 4. the volume of cubes and cuboids 5. Circumference and trapezoid area **6. surface area of the prism**	1. Identified teacher weaknesses in: • Apperception and motivation activities, related to student learning communities. • Motivate students to dare to play an active role in expressing opinions in the learning process related efforts to build student learning communities • Determining the material apersepsi and how to perform apersepsi 2. Physical activity and students' minds have not been involved 3. Less able to utilize the selected media as a learning resource for students 4. Less able to utilize and empower the ability of students as a source of learning for other students in learning 5. Presentation of results of group discussions have not been utilized as a medium to build student learning communities 6. Teachers are less able to mediate classroom conditions that are interactive but not participatory, to be interactive and participatory

Analysis and Discussion

a. Activity Introduction

The core of preliminary activities is apperception and motivation. The main objective of this activity is to prepare students both physically and mentally to make learning more meaningful. The uniqueness of each teacher associated with the strategy in providing apperception and motivation that is contextual with the media is also contextual, allowing students to understand each concept. This is because students are given the opportunity to engage both physically and mentally (mind). On the one hand students get the learning experience according to what they experience. This condition requires teachers to be creative and innovative in developing student learning communication.

The success of teachers in preliminary activities including apperception and motivation are very influential on the success of student learning. The problem is how the ability of teachers in melalukan apersepsi and motivation. The core of apersepsi is the required prerequisite ability of students related to the target of learning, while the core of motivation is the effort made by the teacher to focus students attention so that students are interested to learn. Therefore motivation can be given through apperception. In this regard the use of media is very effectively used in developing motivation through apperception activities.

Associated with the results of research indicating that teachers have used the media when apersepsi but not empowered when entering the core activities, impact on the situation of the class that is not explorative. the inability of teachers in empowering the selected media in addition to simply showing, supported by the fact that teachers have not been able to utilize supporting media, the environment as a very relistic media as a source of learning. Though the environment is an inspirational medium to develop student learning communities. The environment in this case includes the classroom environment, classroom situation and the student's human resources.

The inability of teachers in utilizing student human resources as a source of learning for other students, making learning seem just informative, not explorative and Leader. This condition makes the students passive and not interactive so that learning becomes less meaningful. Nevertheless the teacher has tried to build student learning community through props chosen as media, but not yet optimized as learning resource. As a result the condition of students who have been interactive can not develop to be proactive and participative.

This lack of optimization is due to teachers simply demonstrating not involving student human resources. Therefore, to build and develop the learning community students need the creativity of teachers in exploiting various kinds and forms of realistic and contextual media, such as classroom environment, classroom situation and human resources owned students.

Core activities

The uniqueness of every teacher in building a student learning community is an art that is owned by the teacher. Ability to optimize the uniqueness needs to be developed so that learning is more meaningful.

a) Some real obstacles that occur related to the effort that must be done by teachers in building student learning community is.
b) The inability of teachers to utilize and empower the media used in apperception when entering on core activities is the initial problem facing teachers.
c) Teachers are less able to utilize the ability and disability of students in arguing as a source of learningGuru kurang mampu memanfaatkan SDM yang dimiliki siswa sebagai media belajar ketika diskusi kelompok.
d) Disadvantaged teachers utilize the results of group discussions as a medium of learning resources for other groups.
e) Teachers are less able to utilize class discussions as a medium to build student learning communities.Guru tidak memanfaatkan siswa yang aktif sebagai media belajar
f) Teachers do not empower students who are not active through active students
g) Teachers do not take advantage of students' learning environment as a contextual and realistic medium as a learning resource
h) In the core activities of the teacher's inability to empower props as a chosen media, supported by the fact that the teacher has not been able to utilize supporting media, that is environment as a real media as learning resource.

Lack of teachers in utilizing student human resources makes the students passive and not interactive so that learning becomes less meaningful. Nevertheless the teacher has tried to build student learning community through props chosen as media, but not yet optimized as learning resource. As a result the condition of students who have been interactive not develop to be proactive and participative

This lack of optimization is due to teachers simply demonstrating not involving student human resources. Therefore, to build and develop the learning community students need the creativity of teachers in exploiting various kinds and forms of realistic and contextual media, such as classroom environment, classroom situation and human resources owned students.

Closing Activity

At the end of the activity the teacher does not self-reflect on the students' abilities related to what students have successfully learned. Though the teacher should do self-reflection as feedback. In this case, self-reflection can be done in the form of evaluation process and conclusion related to mastery of concepts expected to be mastered by students.

Various ways and strategies can be done by teachers in self-reflexology. An effective way that teachers can use is to utilize the student's human resources, because the student's human resource target is to reinforce concepts and to correct misconceptions that may occur to students during the learning process. In relation effective strategy teachers used for learning become more meaningful, done explorativeand participative. so students are more proactive. This condition allows students to wake up learning communities.

Based on the analysis of the results of the research, it can be concluded that the ability of teachers in building student learning communities by utilizing wetland based themes through Lesson Study as a medium for teachers in SMPN 14, are as follows:

1. In preliminary activities, teachers do not use apperception and motivation as inspirational media to build student learning community. Nevertheless, the teacher has tried to facilitate students to interact through visual aids as media, but not yet able to make participative students.
2. In the core activities, teachers are less innovative and creative in utilizing and empowering various kinds and forms of media as a learning resource for students. Nevertheless, the teacher has been able to choose the appropriate teaching aids as a learning media for students and attempt to build student learning community through the selected props, but has not been able to utilize the media as a medium to develop student learning community.
3. The main problem of teachers related to the effort to build a student learning community is.
    a. a. Teachers are less able to utilize the environment as a contextual and realistic media that is very inspirational to develop student learning community.
    b. Teachers are less able to utilize existing human resources and owned students as inspirational media to develop student learning community.
    c. Teachers are less able to take advantage of student learning problems as a medium of cognitive conflict in an effort to build student learning communities. Teachers are less able to utilize the presentation of group discussion results as a medium to build student learning communities
    d. At closing activity there is no effort made by teacher to build student learning community, because teacher do not do self reflection related to ability which successfully mastered by student. Though self-reflection is an inspirational medium that teachers can use to build student learning communities on closing activities. In

this case the teacher only strengthening in the form of assigning tasks including PR for the next meeting.

References

Lewis, Catherine C. 2002. *Lessson Study: A Handbook of Teacher-Led Instructional Change*. Philadelphia, PA: Research for Better Schools, Inc.

Pierce, R., dan Stacey, k. 2011. *Lesson Study for Professional Development and Research.*Journal of Science and Mathematics Education in Southeast Asia 2011 Volume 34 .

Susilo, H. 2009. *Combining Lesson Study (LS) and Classroom Action Research (CAR) for teacher Professional Development.CoSMEd 2009 Proceedings*

"4c's Characters" On The Implementation Of Learning " Basic Concept Of Assessment"Through Lesson Study

Eny Winaryati, Andari Puji Astuti
Chemical education, FMIPA, Muhammadiyah University Semarang (UNIMUS)
Email: enywinaryati@unimus.ac.id, andaripujiastuti@gmail.com

Abstract

Among the characteristics of the 21st century generation are multitasking, multimedia, and online info searching. Multitasking is the real performance of an individual who handles more than one task at the same time. Multimedia is a media that combines the two elements or more integrated. Social media (social networking) is an online media where its users can easily participate. The characteristics of the 21st century above requires some skills (skills) that must be owned by the students. Students must have digital skills, Agile thinking abilities, interpersonal and communication skills, global skills. The characteristics and demands of the 21st century above, resulted in four 21st century learning characters: (1). Critical Thinking and Problem Solving; (2) Creativity and Innovation; (3) Communication; (4) Collaboration. The four characters in the above can be achieved through lesson study activities. The four characters are analyzed at each stage of the lesson study, on the "basic concept of assessment" material in the Learning Evaluation course. The analysis results obtained data that: the four characters of the 21st century, there is at every stage of lesson study, both on the plan, do and see.
Keywords: Character 4C, the basic concept of the assessment, lesson study

A. INTRODUCTION

Among the characteristics of the 21st century generation are multitasking, multimedia, and online info searching. Multitasking is an information technology term that refers to a method where many jobs are also known as processes that are processed using the same CPU resources. Multitasking for humans is a real performance by an individual who handles more than one task at the same time unit.

Multimedia is media that combines the two elements or more media which consists of text, graphs, pictures, photos, audio and integrated animation. Social Media (*social networking*) is an online media where its users can easily participate, share and create content including blogs, social network or social networking, wikis, forum and virtual world. *Search Engine Optimization* (SEO Chairman) is a technique that is used in the world of blogs to get a good position in the *search engine search page*. The most popular search engine or that a number of *Google*.

The characteristics of Cirri 21 century above requires some skills (*skill)* that must be owned by the student. Students must have a *digital skills* (know and control the digital world), *Agile thinking ability* (able to think a lot of the scenario), *interpersonal and communication skills* (expertise communicate so brave buffalo opinion), *global skills* (skills include foreign language ability, can be united with the stranger that different culture, and have sensitivity cultural value).

The explanation above requires a change in the learning approach. Teaching and learning activities directed to optimize the condition of the children and the

environment. Social behavior of students who are accustomed to working independently directed at learning that reflects the communication and collaboration. The environment was created with styling elements that can change the behavior of the students. The progress of information technology used optimally for the development of creativity and innovation students. The demands of the period more competitive supports learning terimplementasinya critical thinking and the readiness of the complete various forms of problems through communication and collaboration.

The characteristics and the demands of the 21st century above, resulted in four 21st century learning characters: (1). Critical Thinking and Problem Solving; (2) Creativity and Innovation; (3) Communication; (4) Collaboration, (Vanroekel, D. 2008). The four characters above can be achieved through lesson study activities. The four characters were analyzed at each stage of the lesson study. Activities are carried out on learning the basic concepts of assessment materials in the course of the Evaluation courses. Lesson Study is a professional practice where teachers collaborate to plan, observe, and improve a lesson, (Northwest Regional Educational Laboratory, 2004). The four characters implemented at each stage of Plan-Do-Check-Act (PDCA) are see, hear and analyzed. The purpose of this research is the analysis of 4C character at each stage of lesson study, on the implementation of learning basic concept of assessment for Learning Evaluation Course.

B. RESEARCH METHOD.

This research was conducted on 5th semester students, S1 Chemistry Education, Faculty of Mathematics and Natural Sciences, University of Muhammadiyah Semarang (UNIMUS). Data were obtained through document analysis, observation, portfolio, field notes, video, and student work. Data were analyzed qualitatively through analytical descriptive approach. The data obtained as an attempt to describe and interpret the object of what is, and and reflects the reality that there is a. The material that is learned on the Basic Concept of Assessment on the Learning Evaluation course, which is done by the model lecturer and several lecturers as the observer.

Data obtained in the process plan, do and see from the lesson study stage, were analyzed. The results of the analysis associated with the four characters learning 21 century. The value of the character that is expected to appear or occur both on the students or lecturers. The lesson study phase is analyzed only until the third stage, because the fourth stage of the Act, has not been done by the researcher.

C. THE DISCUSSION.

The characteristics and the demands of the 21st century above, resulted in four 21st century learning characters: (1). Critical Thinking and Problem Solving; (2) Creativity and Innovation; (3) Communication; (4) Collaboration. One by one will be analyzed whether the four characters above implemented in each stage of lesson study. The four characters above is the answer to the demands of the situation of the 21st century. Teachers are required to implementing it in learning, with hope can occur increasing the quality of learning.

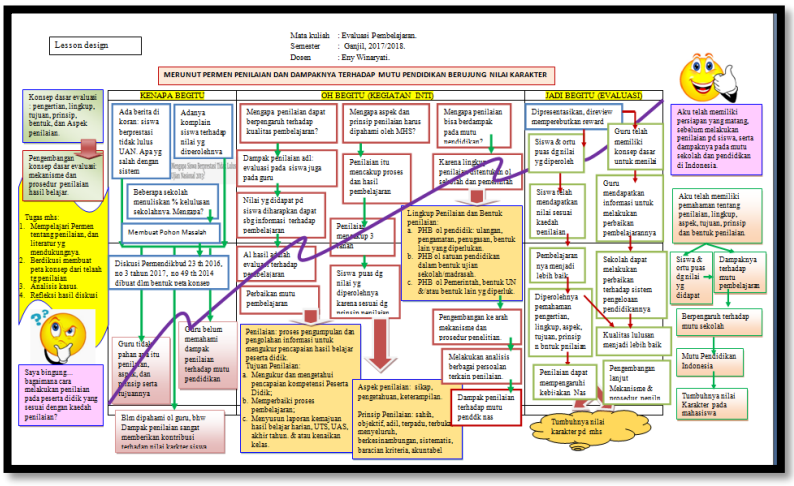
Implementation of Learning "Basic Concept of Assessment" through Lesson Study.

Implementation done by lecturers on learning evaluation course, for basic concept of the assessment. One of lecturer as a model lecturer, while other lecturers act as observers, and dosn outside the team. All the lecturers are involved at all stages of the lesson study. Stages of lesson study conducted are:

1. Plan (compile chapter design and lesson design).

In the planning phase, the lecturers who joined in *lessons Study collaborate to arrange* The planning started with begins with activities to analyze the needs and problems encountered in learning, such as about: basic competence, how to learn, methods or media used, how to overcome the lack of existing facilities and infrastructure, identify the gap between the reality of learning ability and the understanding of the students with the hope that the lecturer to the ability of students, and so on. The purpose is to know the real conditions that will be used for the benefit of learning and then search for the solution. This activity produced chapter design and lesson design of the material the basic concept of the assessment of the learning evaluation course, S1 Chemistry Education, Unimus.

The purpose of the lesson design of the basic concept of the assessment is that students can find solutions related to the problem of assessment comprehensively. Students will have the ability to above, when they have complete understanding as a result of discussion related to permendikbud no 3 year 2017, no 23 year 2016, and no49 year 2014. Goal from this discussion, will be obtained image of the impact of assessments in the classroom against the demands of the assessment by the government. Some of the issues related to the discussion discussed were: the existence of outstanding students who did not pass UAN, several schools competed to write on their graduation percentage banner to the public, the students complain about the value they got. The products of this activity was chapter design and lessons design materials the basic concept of the assessment of the Learning Evaluation courses.



2. Do (carry out learning, and other lecturers observe).

At this stage, there are two main activities, namely: (1) learning activities conducted by one of the model lecturers, and (2) the activities observation or observation activities conducted by team from S1 of Chemistry Education plus lecturer

outside planning team with the hope of providing inputs for improved learning, and outside advisers. Model lecturers conduct learning fairly. Observers observe student behavior in the learning process, through the activities to see and hear that acquired in various ways, as noted, mount the photos, record through the video camera for the purpose of the documentation as material for further analysis. The Observer collects data on the behavior identified, whether there is a gap between planning expectations and the realities of implementation. For example about the comments or discussions of students concerned, the construction process of understanding students through student learning activities, communication emerging either among students, students-environment, students-teachers, etc.

Students have initial knowledge with the task given by lecturers, so that students read permendikbud no 3 of 2017, no 23 of 2016, no 53 of 2015, and no 49 in 2014. In the learning process, lecturers assign tasks to the group of students to memnyusun map the concept based on the permendikbud he has read, and presented it.

The lecturer gives the task of the group in the form of settlement of the issues of the assessment. Goal from this stage is the students have an understanding of understanding, scope, aspects, objectives, principles and forms of assessment. The jumping of this learning is the assessment mechanism and procedure. The task of sticking paper on the root of the problem (issues to be addressed), the cause of the problem (the trunk), the solution to be taken (lushness of twigs and leaves), goals (decisions, suggestions, policies, etc) illustrated as the fruit of the tree.

One of the student activities is: Student issues that complain with the value obtained. The reason is because lecturers do not apply the principles of assessment such as: valid, objective, fair, integrated open, comprehensive, sustainable development, systematically, baracian criteria, Accountable is accompanied by an explanation. The solution is a lecturer receive input and give the explanation of the process it produces a value. Our goal produced is necessary to the existence of the guidelines drawn up by the prodi that underlies the principle of assessment. Students present the results of the analysis through the tree of success.

Jumping (jump to critical tinking and problem resoursces' and creativity and innovation), is a lecturer gave the task of the development of the basic concept of the evaluation related to the mechanism and procedures assessment of learning results. Form of jumping is a task that should be completed the student based on the knowledge base of the assessment that has been possesses.

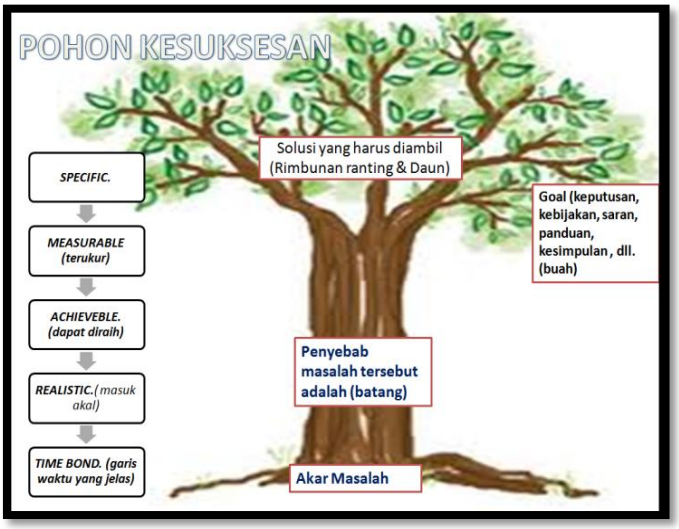
3. Check (do reflection).

At this stage the whole team met to do the reflection in the form of discussion. This stage is a very important step as an effort to improve the learning process. The success of this stage depends on the sharpness of the observer's analysis. The discussion begins with the delivery of the impression, difficulties and obstacles of the model lecturer who have practiced the lesson.

All observers submitted their responses or suggestions wisely toward the learning process that had been implemented by the model lecturers, supported by the evidence obtained from the observations. The various discussions developed in the discussion can be used as feedback for all participants to improve or improve the learning process. All participants are expected to have a record of the discussions that took place in the discussion.

Analysis of the data obtained during the learning process: how the reaction of students during the lesson, view where the students less understand the concept, why; the possibility of what strategies so that the students can understand; how much time spent by lecturers or students to complete, what the solution to the learning was donations smoothly.

At this stage the findings of the need to tilt the power when the students to find the cause and the solution. Two groups of 4 (four) groups need tilt the power from the lecturers so that the discussion be focused. The initial understanding about permendikbud be the key to solve the problems given lecturers. The existence of the transfer of knowledge from the students who have mastered the material to the less. The atmosphere of the discussion becomes more live when all students involved



4. Follow-up stage (Act).

A number of new knowledge or important decisions to improve and increase the learning process. From the results of reflection obtained a number of new knowledge or important decisions to improve and increase the learning process. Various) and input presented at the time of the discussion in the stages of reflection (check), as inputs for the improvement of learning toward better. In addition to the impact on the improvement of the lecturer of a model, also affect managerial as defining the policy. From the results of reflection, sometimes produced the decision to demand the role of managerial leadership..

4C Character at Lesson Study Stage

The four 21st century learning characters are: (1). Critical Thinking and Problem Solving; (2) Creativity and Innovation; (3) Communication; (4) Collaboration. The four characters are expected to be achieved through lesson study activities. The four characters were analyzed at each stage of the lesson study. In this research only 3 (three) stage lessons study: *Plan-Do-Check. The purpose of this research is the analysis of the characters 4C on each of the* three phases of lesson

study on the implementation of learning the basic concept of assessment for Evaluation Learning courses.

Lesson Study is a collaborative process in which a group of lecturers identifies instructional problems, plans a lesson, teaches lessons (one member teaches lessons while others observe), evaluates and revises lessons, teaches revised lessons, again evaluates lessons, and share the results with other lecturers. This research only reached the third stage. Analysis is done on the process of planning, observing, and analyzing. The following will be discussed gradually based on the field analysis that occurred.

1. ***Critical thinking and problem resoursces'***

   This character is more toward the characters students who seek to provide a coherent logic in understand and make choices that complicated, understand the interconnection between the system.

   a) Plan.

   Planning the demands of field goal and jumps in lessons design. The Goals is: in long-term value characters like students if applying properly assessment. Jumping is expected to appear is the development of the mechanisms and procedures assessment. The question that must be there is: "What must be owned by the student" not "what must be a lecturer teaching".

   b) Do.

   The problem in this research are resoursces' students were asked to solve problems given lecturer, through the tree of success must be completed. Jumping which must be completed students is the task of the mechanisms and procedures assessment. Students will search for other supporting literature to solve problems related to the tasks that require the mastery of the mechanisms and procedures assessment. The formative test done a lecturer at when students mengerajakan group tasks. The formative Penialian more directed to test critical thinking and the problem of student resoursces'.

   c) See.

   When on discussion diary of a question of its achievements from the field goal and jumping. The form of the task given is a lecturer divided learning Psychomotor taxonomy literature, cognitively intact, and Affective which contains the understanding level, ilusrasi verb, and example. Students asked to create their own example dihubunngkan with chemical materials that have been determined.

2. ***Creativity and innovation.***

   This character led to the formation of student characters in order to have the ability to develop and implement, and convey the ideas of baru to another, being open and responsive to a new perspective is different. On the level of the lessons study, character is present on:

   a. Plan

   It produces chapter design and lessons design can not be removed from the skill and pour the linked art mastering about assessment, and transfer permendikbud about ratings into chapter design and lessons design.

b. Do

In this stage of lecturers using concept mapping methods and troubleshooting (problem resoursces') using the "tree success" to measure student understanding related to permendikbud he mastered and solve the problems assigned.

c. See.

The entire team plus lecturers outside the teams to provide feedback includes strategies and how associated with the gap between the planned the implementation. There is one group that miss conception when charging each item tree problem. This is because the early understanding about permendikbud that less complete, visible from the map the concept that the Anti-monopoly. The proposed strategy is the existence of small formative at will and is the group discussions to draw up a map of concepts.

3. *Communication*

Image of characters is communication students and teachers are required to understand, manage and create effective communication in various forms and contents orally, writing and multimedia. At each stage lessons study this can be borne as follows:

a. Plan

The entire team of lecturers were given the opportunity to use its ability to express the idea of a.i. especially during the discussion draft chapter design and lessons design. Academic communication built in between those who practice the lessons Study. The academic transfer from senior with junior, and between members of the team.

b. Do.

The success of group discussion activity on students required the ability to communication between students, students of lecturers and students of the environment. Diary are also required to have the skills of change from verbal communication to written communication. The ability to catch every behavior that appears on the students when in the process of learning, to enshrined in a video based learning media, lesson materials, or as a video learning. Diary must have the skill to catch a signal behavior to note the field. Writing skills are very pending for the diary of a. The Existence of ethics for the diary not to assess and oriented on dosennya, but which was seen and heard is the behavior of students during the lesson. This gives the impression that the stage do in lessons study advancing the value of togetherness, responsibility, concern, empathy, sympathy, etc.

c. See

The reflection of the open the opportunity for the lecturer to accept criticism and suggestions from other lecturers who became the observer. At the same time, observer can give constructive criticism and suggestions that naturally will create the academic atmosphere in the team. The reflection of life whereas all members have a discussion forum for one purpose the improvement of the

quality of learning. The decision of the ideas and suggestions from this discussion should be compiled into a report written.

4. *Collaboration*

The Collaboration provides an overview of where students demonstrate their ability in teamwork and leadership, adapt in roles and responsibilities, work productively with others, place empathy in place, respect for different perspectives. The lessonstudy stage is illustrated in:

a. Plan

Lesson Study builds academic communication and control. The product generated in the plan phase, the better when all team members have the same responsibility that leads to the quality of learning. In the United States, after lesson study, 65% of high school teachers expressed that collaborative opportunities have a major impact on their ability, and effectively address the learning needs of individual students. Whereas previous data only 22% of teachers who delivered about the benefits of collaboration, (MetLife 2009)

b. Do

Observer will observe depending on the interest and focus to be observed, according to their abilities and interests. Observer will be better if coming from a diverse background. This diversity will have a more detailed and detailed interest and focus. Each observer will have a wealth of observations and data results that give each other reinforcement and experience.

> "Through the process of improving lessons and sharing with colleagues the knowledge they acquire, something remarkable happens to teachers: they begin viewing themselves as true professionals. They see themselves as contributing to the knowledge base that defines the profession. Stuffler & Hiebert, 1999, pp. 126-127

c. See

This activity at this stage is permitted to engage an outside advisor (knowledgeable other).The point is that collaboration between multiple parties very important.In this reflection activity there should be facilitators, minutes and advisors All the reflection participants sit together and discuss The facilitator needs to select some topics that will be the focus of discussion, then open discussion for all participants All members have the opportunity to express their views on the learning process of the students, the difficulties it faces, the decisions taken that deviate from the planning, and other important issues to be discussed.Advisors are tasked with summarizing the results of the discussion and providing helpful suggestions on what can be learned. illustrates that the product is prepared, not out of the collaboration of all participants premises n different roles and capacities.

D. THE CONCLUSION AND SUGGESTIONS

1. Conclusion

a. The four characters in the twentieth century 21 called with character 4C, consisting of: *(1). Critical thinking and problem resourses'; (2) Creativity*

and innovation; (3) Communication; (4) Collaboratio. The four characters 4C above there at every stage of the lessons study, both on the stage plan, do and see.

b. That Learning through lesson study can answer the needs and the demands of the characteristics and problems of the twentieth century 21.

2. Suggestions

Implementation of lessons activities study on all courses.

REFERENCE.

Armstrong, A., (2011). *Lessons study puts a collaborative lesn on student learning*. Summer 2011.vol 14 no 4.

Lonn, S., (2006).,*Charcteristics of communities of practice in a high school of economics lessons study group.*Woshington,D.C,: American Educational Research Association.

Permendikbud RI No. 53 2015, about the assessment of the results of the study by educators and education units in primary and secondary education.

Permendikbud RI No. 23 2016, about education Penilan Standards

RI Permendikbud number 3 2017, about the assessment of the results of the study by the government and the assessment of the results of the study by the education units.

Permendikbud RI No. 49 The year 2014, about national standards of Higher Education

Stigler, J., & Hiebert, J., (1999). *The teaching gap*. New York: The Free Press.

Vanroekel, D. (2008). *An educator's Guide ti the 'four Cs*". Woshington.D.C: National Education Association (NEA).

Application Of Learning Innovation Through Innovative Learning For Sharing Student Character In Learning Science Social Knowledge (IPS) Basic School

Muhammad Sururuddin
Produce Elementary School Teacher Education Hamzanwadi University
email: surur_life@yahoo.co.id

Abstract

The change of mind required from the learning process is from the role of the teacher as a transmitter to the facilitator, counselor and consultant, the role of the teacher as a source of knowledge into a comrade study, the learning directed by the curriculum being directed by the students themselves, the study is scheduled to be strictly open, flexible as necessary, theory-based learning toward the world and concrete action and reflection, competitive toward the collaborative, the focus of the class towards the focus of society, learning to follow the norms into creative diversity, normative learning outcomes toward comprehensive performance measurement. So the goal to be achieved in this research is to know with the application of innovative learning can form the character and personality of students in Social Science (IPS) in elementary school. This research was conducted collaboratively between principals, teachers and researchers. preliminary planning activities started from conducting preliminary studies. In this activity also discusses how to perform the action learning and how to make observations. This research type is Action Research Class. Classroom Action Research (PTK) is a research conducted by teachers/researchers in the classroom, with the aim to improve teacher performance so that student learning outcomes become increasing. Result of research of applying of learning innovation can form character student in class V in elementary school, seen from result of observation cycle I, the student activity category is quite active, but increase in cycle II with activity category is active, while result of test at cycle I, the average score of students was 63.14 and experienced an increase in cycle II of 66.41.

Keywords: Learning Innovation, Student Character

A. INTRODUCTION

The development of science and technology today is progressing very rapidly. With this development, then to face it need to develop the quality of learning, one of them is to shift the paradigm of learning centered on the teacher toward learning centered on students with the aim of shifting learning from the pattern of learning memorization to the learning patterns that are able to grow the ability to think critically, logically and attitude independent of students (Baskoro, 2006: 1). The change of learning paradigm mentioned above is an absolute necessity, because with the development of science and technology that increasingly rapidly will become an impossibility if the teacher becomes the only source that must convey all information or learning concept to the students, therefore a teacher should be able to equip students who are skilled in finding their own facts and concepts of learning (Baskoro, 2006: 1).

In order to improve the quality of education, many efforts have been made by the government in Indonesia. One of the efforts that can be felt nationally is curriculum change. From 1980 to 2000, Indonesia has at least three times changed the curriculum. However, it should be admitted that the results of education in Indonesia is still far from expectations. Graduate school in Indonesia is still very low level of competition and its relevance. In recent years the quality of education is increasingly being questioned, namely the problem of educational success itself.

The success of an education is more focused on the quality of human resources, and the success of an education is also marked by the achievement of student learning obtained from the understanding of learning in the process of teaching and learning activities (Muliyadi, 1998: 1).

The low level of competition and the relevance of the graduates can be used an alternative reflection that the level of competition and the relevance of learning is also worth thinking about. Competence of learners as a learning product is very determine the level of life later after they live in the real world. That is, the competence is very important for everyone in the face of rapid technological developments. Especially in the face of the information age, and the free trade in the knowledge age that is marked by a shift in the role of manufacturing to the knowledge-based service sector, that competence is one of the most decisive factors in human life. That is, when life has changed into more advanced and complex, the problem of life that many colored by real world phenomena attempted can be explained scientifically. Based on the ownership of the scientific competence, the learners are expected to be able to solve and overcome the problems faced life in a way better, faster, adaptive, flexible, and versatile.

Some emphasis on mind change is needed: from the role of the teacher as a transmitter to the facilitator, counselor and consultant, the role of the teacher as a source of knowledge becomes a friend of learning, the learning is directed by the curriculum to be directed by the students themselves, the study is scheduled to be strictly open, flexible as necessary, theory-based learning toward the world and concrete action and reflection, competitive toward the collaborative, the focus of the class towards the focus of society, learning to follow the norms into creative diversity, normative learning outcomes toward comprehensive performance measurement. Observations in the elementary schools of the sub districts of labuhan haji revealed that teachers appear to have not empowered initial knowledge as a first step in designing learning. The reason teachers are, it is very difficult to explore the initial knowledge of students. Teachers tend to design and implement learning with a linear teaching pattern.

In general, early knowledge directly and indirectly influences the learning process. Directly, early knowledge can simplify the learning process and lead to better learning outcomes. Indirectly, initial knowledge can optimize the clarity of subject matter and improve the efficiency of time spent learning and learning. In addition, preliminary knowledge affects the students' feelings in assessing the information presented in the learning resources and in the classroom. Much of the early scientific knowledge is highly resistant to change. The early knowledge change to scientific conception occurs in very limited quantities, or few new conceptions are formed and integrated by the students into the knowledge they already possess.

In teacher learning is relatively difficult to accommodate the initial knowledge of students. Therefore, the issue of early scientific knowledge that is deeply entrenched in the minds of students should continue to be thought for teachers, educational decision-makers, in order to realize meaningful learning. Two factors are essential in meaningful learning, ie design orientation and learning evaluation. Learning should try to explore learning difficulties of early knowledge-based students with design-oriented learning of real-world phenomena. Learning should be pursued to empower preliminary knowledge and comprehensive evaluation, individual project-based work, collaborative problem solving, and cooperative work in small groups. These efforts are an integral part of the constructivist approach.

Objectives to be achieved in this research are: to know with the application of innovative learning can shape the character of students in IPS learning in elementary school district labuhan haji. Learning innovation arises from the paradigm shift of learning. The paradigm shift of learning starts from the reflection of the existence of the old paradigm that undergoes anomaly to a new paradigm that is hypothesized to be able to solve the problem. Learning paradigm that is the result of new ideas is (1) the role of teacher more as facilitator, counselor, consultant, and comrade study, (2) flexible schedule, open as needed, (3) self-directed learning, (4) problem-based, (6) creation and investigation, (7) collaboration, (8) community focus, (9) computer as a tool, (10) dynamic media presentations, (11) a comprehensive performance assessment. Learning paradigm is believed to be able to facilitate students to develop life skills and ready to plunge in the community (Ibrahim 2006: 19).

As teachers should be able to apply teaching methods that are appropriate to the state of their students, it is very important for an educator to know the characteristics of his students. In addition to the characteristics that need to be considered the needs of learners. The characteristics and needs of learners are discussed as follows: The first characteristics of elementary school children are happy to play. This characteristic requires elementary school teachers to carry out educational activities that charge more games for lower classes. Elementary school teachers should design instructional models that allow for an element of play in them (Suharjo 2006: 35).

Primary school-aged children are characterized by three great outward impulses: (1) the child's confidence to get out of the house and into the peer group (2) the child's confidence enters the game world and activities that require physical skills, and (3) the mental confidence to enter the world concepts, logic, and ligica and symbolic and adult communication. Thus understanding of the characteristics of learners and developmental tasks of primary school children can be a starting point for determining educational goals in primary schools, and to determine the right time in providing education in accordance with the needs of the child's own development (Kurniawan 2009: 1).

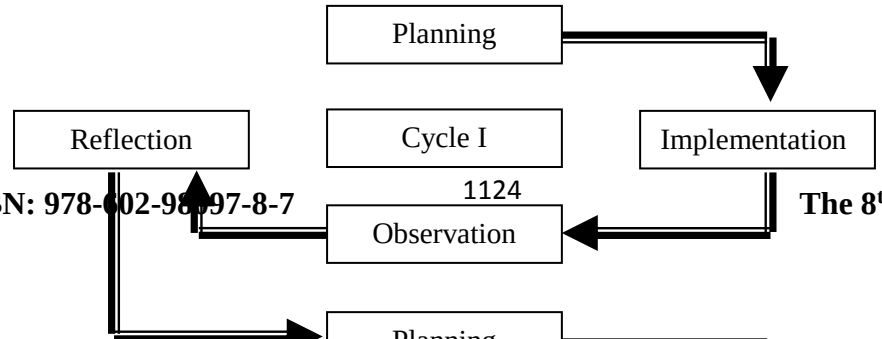
B. RESEARCH METHODS

1. Type of Research

This research type is Action Research Class. Classroom Action Research (PTK) is a research conducted by teachers / researchers in the classroom, with the aim to improve teacher performance so that student learning outcomes become increasing (Sutrisno, 2004: 14). This classroom research method emphasizes a truly study of the class's natural situation.

Classroom action research is a problem-solving activity that starts from (a) planning (planning); (b) implementation (action); (c) data collection (observasing); (d) analyze data / information to decide the extent or weakness of the action (reflecting). PTK is characterized by continuous improvement so that the satisfaction of the researcher becomes a benchmark for the success (cessation) of those cycles.

These steps can be illustrated by the following scheme:



(Suharsimi Arikunto, Suhardjono 2007 : 16)

2. Research Instruments

a. Observation sheet

The observation sheet is a tool for keeping track of observations. The things that will be included on the observation sheet are students' behavior and teacher behavior.

b. Test

In the PTK, achievement tests or student abilities are performed at the end of the learning after viewing the student's character. In this study, the test instrument used is a description sheet.

3. Data Analysis

Research data can be obtained through classroom observation sheet, documentation, and test results, in the form of qualitative and quantitative data. Qualitative data were analyzed by flow model analysis. This technique consists of three simultaneous plots consisting of data reduction, data presentation, and conclusion or verification. Quantitative research data is analyzed in descriptions by presentation of tables and percentages.

Data in percentage form is described and drawn conclusions about each component and indicator based on specified criteria. Criteria determination refers to the formula developed by Saifuddin Azwar (2005: 163). There are two types of data obtained in this study. Both data are data of observation result and test result.

The observational data were analyzed descriptively at the end of each cycle to know the activities of teachers and students during the learning. The results of the analysis are used to plan the learning in the next cycle.

a. Student Learning Activity Data

Data of observation result of student learning activity analyzed by step langlah:

1) Determine the scores obtained by using Likert sekalan that is by giving sekor 5 for the highest value and 1 for the lowest
2) Scores depend on many students, with due regard to the rules:
   a) Score 5 = very active, if> 80% of students do descriptor
   b) Score 4 = active, if 61% -80% does the decryption
   c) Score 3 = enough, if 41% -60% of students do descriptor
   d) Score 2 = less, if <21-40% of students do descriptors
   e) Score 1 = inactive, if <21% of students do descriptors

Based on the format of student activity observation sheet in the learning process of student activity observation in the learning process consisting of 6 items with 5 descriptors, then the score range from 6-30. Thus, the

determination of student activity criteria in the learning process with benchmark score as follows
The score range for each category is calculated as the formula in table 1 of the following student activity criteria guidelines:

Table 1
Guidelines on Student Activity Criteria

No	Score student activity	Category
1	Greater than 25	Very active
2	19 to 24	Active
3	13 to 18	Fairly active
4	7 to 12	Less active
5	1 to 6	Not active

b. Master Activity Data

Research on teacher activity is done directly. During the learning process. The indicators for teacher activities taken as relevant research reference are as follows:

1. Readiness in learning
2. Teacher activity during learning takes place
3. Active in guiding students
4. Able to create a conducive classroom atmosphere for students in learning
5. Guiding students in discussions
6. Together with students in making conclusions

Data on teacher activity results in the analysis with the following steps:
1) Determine the scores obtained by using Likert scale with the provisions:
score 5 = very active
score 4 = active
score 3 = quite active
score 2 = less active
score 1 = inactive
2) Each item is scored from 1-5 so the maximum score is 6 x 5 = 30 and the minimum score is 6 x 1 = 6. Based on the observation sheet format of teacher activity in the learning process consisting of 6 items, then stretch the score from 6 to 30. Modify from Depdiknas (2008:12), the determination of activity criteria in the learning process with the benchmark score of teacher activity criteria guidelines can be seen in table 2 as follows:

Table 2
Master Criteria Activity Guidelines

No	Score of teacher activity	Category
1	Greater than 25	Very active
2	19 to 24	Active
3	13 to 18	Fairly active
4	7 to 12	Less active
5	1 to 6	Not active

To analyze the data obtained from the test, passed the stages as follows.

a. Tabulating the students' ability into the V student grade table of elementary school in Labuhan Haji sub-district, East Lombok.

b. Looking for students' average ability

Formula:

$$\overline{X} = \frac{\sum fx}{N}$$

Information $\overline{X}$ = average grade of student

$\sum X$ = total score of all students

N = number of students (Suharsimi, 1999: 264)

c. Determining the mastery of individual learning

Individual learning completeness is calculated by the formula:

$$KI = \frac{x}{SMi} \times 100\%$$

Information KI = individual completeness

x = achieved score

SMi = Maximum score is ideal

d. Determining classical masteryFormula:

$$KK = \frac{M}{SMi} x100\%$$

Information KK = klaiskal mastery

M = means (average value)

SMi = minimum score is ideal

C. RESULTS AND DISCUSSION

1. Research Results

This class action research is carried out in 2 cycles. Each cycle consists of 2 meetings where each meeting lasts for 2 x 35 minutes. The subjects of the research are the students of grade V of elementary school with the number of students 17 people. This research was conducted by applying innovation learning on the subject of Indonesian independence proclamation and Indonesian national movement. In this study, student achievement data obtained from the evaluation conducted at each end of the cycle, teacher activity data to see the character students during the learning process in the classroom obtained from the observation sheet. The results of each cycle are as follows:

a. Cycle I

The stages performed in this cycle are as follows:

1) Planning Stage

The activities undertaken in the planning stage are:

(a) Develop a cycle plan of learning I

(b) Prepare group work sheets and exercise cycle 1 questions

(c) Preparing observation sheet of student activity (character) cycle I

(d) Prepare the observation sheets for teacher cycle activity I

(e) Preparation of the cycle I evaluation in the form of multiple choice test and essay.

(f) Before the teaching and learning process begins, students are divided into small groups of 4.

2) Implementation phase of action

Activities undertaken at the stage of implementation of this action is to carry out teaching and learning activities in the classroom by applying the lesson plans that have been prepared based on the learning plan by applying innovation learning.

a) The First Meeting

(1) Introduction

At the beginning of this meeting the teacher performs activities by conveying the objectives of learning, motivating students and giving apersepsi, delivering students so that they can construct concepts related to the character students everyday. But at this first meeting the students enter the class is not on time that is late 20 minutes from the hour of entry.

(2) Core Activities

The teacher divides the students into 4 groups of 4 and 5 people. Furthermore, teachers carry out learning activities and provide material to be discussed but before discussing the teacher explains the way to be done by students in the learning process.

The teacher guides the students in follow-up discussions and provides questions that provoke students' understanding of the subject matter. At this stage students are less active in group discussions. The assignment is not evenly distributed during group discussions because it is dominated by smart students and because only they do the tasks assigned by the teacher.

The teacher asks several groups to present the results of their group discussions and other groups as a buffer. However, at this stage the group of presentations is still shy to explain the results of the group discussion, besides the enthusiasm of students is very less in asking and giving responses related to the material being presented.

Teachers share practice questions as a measure of students' understanding of the material being taught. Because of insufficient time the teacher did not ask the students to write their answers on the board.

(3) Closing

In the last activity of the next activity, the teacher reflects on the learning that is carried out. However, the teacher has not guided the students to conclude the lesson because the time available is less.

In the first cycle of cooperation among group members is very less, this is because students feel unsuited to members of the group and only smart students who are active in the discussion activities. In addition, the allocation of time given is not maximally utilized so that some groups can not complete the task given on time. After doing the exercise questions, students are asked to forward writing the answers to the front of the class but, students who are active only students who are smart who want to advance to do the exercises. This is because some students feel unconfident to go ahead and write down the answers in front of the class.

b) Observation and Evaluation Stage

(1) Observation Stage

(a) Master's observations

Based on the observation of the researcher and the results of the observation sheet of teacher activity, there are still shortcomings in the implementation of the learning cycle I, among others:

(1) The teacher explains the material so that the students do not wonder anymore during the discussion but the students rarely pay attention to the explanation given by the teacher because there are still many who play.
(2) Teachers did not go to all groups to guide them during group discussions.
(3) Teachers have not provided equal guidance during learning and discussion, either to groups or individuals.
(4) The division of time allocations for activities in group discussions should be taken into account again.
(5) Submission of material or important concepts on the blackboard is unstructured and disorganized.
(6) Teachers less activate the question and answer between students

(b) Student Observation

Character and personality of students during the learning can be known from the observation sheet filled by the observer, the data obtained as follows.

Table 3:
Summary of Observation Results Student Activity Cycle I

No	Indicator	Score	
		Pert. I	Pert. II
1.	Readiness of students receive lessons	2,00	2,00
2.	Interaction of students with students	2,00	3,00
3.	Interaction of students with teachers	3,00	3,00
4.	Student activity in discussion activities with the application of innovative learning	3,00	3,00
5	Group collaboration in discussion	4,00	4,00
6.	Student participation in concluding learning outcomes	2,00	2,00
Activity score per meeting		16,00	17,00
Category		**quite active**	

From table 3, it can be seen that the average score of characters students on the first cycle of meeting to 1 of 216.00 and at the second meeting is 17.00 with enough active category. Based on researcher observation and observation result of student learning activity, there are still some deficiencies.

The shortcomings, namely:

(1) Student activity in the learning process is still low due to lack of cooperation among group members.

(2) Some groups can not complete their tasks according to the time specified.
(3) Lack of cooperation among group members and still play a smart student role.
(4) The student's interaction with the teacher is still very low seen from the reluctance of the students to ask, respond and answer the teacher's questions,
(5) Students have not been able to respond or refute the results of other group discussions during group presentations.
(6) At the end of the lesson, students are still less actively responding in concluding the material they have learned.

(c) Evaluation Phase

Evaluation was conducted at the third meeting. The teacher gives evaluation questions in the form of essay of 10 questions with a time allocation of 2 x 35 minutes. The results of the evaluation cycle I, can be seen in the following table.

Table 4:
Learning Evaluation Results Cycle I

Number of students taking the test	17
The highest score	72,5
The lowest value	52,5
Average value	63,14
Number of completed students	11
Number of students who are not complete	6
%Completeness	64%

(d) Reflection Stage

Based on student observation result, teacher observation result and student evaluation cycle I, there are some deficiencies that will be fixed in cycle II. After analyzing the deficiencies, the improvements made in cycle II are:

(1) The teacher provides guidance to each group that still looks confused in completing and completing the task.
(2) Teachers provide guidance to students who are still confused in doing the exercises given.
(3) The teacher asks the smart students to help their passive friends and the less intelligent students so as not to be embarrassed to ask for help from their smarter friends and to clarify their respective tasks in group discussions.
(4) Enabling questioning, suggesting to all students to speak up by pointing some students to respond to teacher statements or answering teacher questions.
(5) Asking representatives of each group to mention or read, then compare the results of their discussions with the results of the discussion of the group of presentations.

(6) Ask students to learn and respond as the presentation takes place.

(7) The results of the discussion and exercise of the questions presented to the front of the class are the result of the less active group and the outcomes of the students who pay less attention to the group discussion time of each group. If there is an error in the structure of the answer writing, the teacher will correct and provide the correct example.

(8) Enabling students to conclude material that has been discussed by appointing several students to convey their conclusions and asking other students to comment on them.

b. Cycle II

Learning activities in cycle II are held in two meetings, where each meeting lasts for 2 x 45 minutes The stages of this cycle are as follows:

a) Planning Stage The activities undertaken in the planning stage are:

1) Develop learning cycle II scenario
2) Prepare the material and the exercise questions cycle II
3) Prepare activity observation sheet (character student cycle II)
4) Preparing observation sheet of teacher activity cycle II
5) Developing lattice about evaluation cycle II
6) Preparation of evaluation cycle II in the form of multiple choice test and essay which amounted to 15 questions
7) Before the learning process begins, students are divided into several new small groups

b) Implementation Phase of Action

Activities undertaken at the stage of implementation of this action is to carry out teaching and learning activities in the classroom by applying the lesson plans that have been prepared based on learning scenarios and by applying innovation learning.

1) First Meeting

(a). Introduction

At this meeting some students did not bring the completeness of learning as the teacher had requested at the end of cycle I evaluation, consequently at the time of the group discussion students to and fro to borrow to other groups. At the beginning of this meeting the teacher conducted activities by conveying the learning objectives of the proclamation of independence, motivating students, and giving apperception by question and answer.

(b) Core Activities

In the core activities the teacher divides the students into 4 new groups with 4 and 5 members. In the activity, the teacher distributes the task to the students to be discussed, As in the previous meeting the teacher explains the material to be studied. The teacher asks the students to pay attention to teacher explanations and conduct group discussions. In the next activity the teacher guides the students in follow-up discussions. Teacher gives guidance to all groups so that no group asks anymore. However, at the time of the student discussion activities are still noisy this is because some groups do not bring the completeness of learning that is requested by teachers so it is very disturbing other groups who are

discussing with members of his group. As a result the allocation of time given is not utilized optimally. In selanjuynya activities the teacher asked some groups to present the results of group discussion with other groups as a buffer. The group that came forward to present the results of the discussion there were two groups namely group 3 representing the group seeking the understanding of the proclamation of independence. In the next activity the teacher distributes exercise questions as a measure of students' understanding of the material being taught and asks several students to write their answers on the board. However, advanced ones are still dominated by smart students.

(c) Closing

In the final activity the teacher explains the questions given when giving apersepsi about proclamation of independence.

c) Observation and Evaluation Stage

1) Observation Stage

(a) Master's observations

Based on the observations of the researcher and the results of the observation sheet of teacher activity, there are still shortcomings in the implementation of learning cycle II, among others:

(1) The allocation of time for activities in group discussions should be taken into account.

(2) Teachers less activate the question and answer between students

(3) Lack of mastery of the class this resulted in students still noisy with members of the group and some students are still affected by the situation outside the classroom.

(4) More motivating students in concluding lessons

(b) Student Observation

Student activity during the learning can be known from the observation sheet filled by the observer, obtained the data as follows

Table 5:
Summary of Observation Results Student Activities Cycle II

No	Indicator	Score	
		Pert. I	Pert. II
1.	Readiness of students receive lessons	3,00	4,00
2.	Enthusiasm of students in following learning	3,00	4,00
3.	Interaction of students with teachers	4,00	4,00
4.	Student activity in discussion activity with applying of learning innovation	3,00	3,00
5	Group collaboration in discussion	4,00	4,00
6.	Student participation in concluding learning outcomes	4,00	4,00
Activity score per meeting		21,00	23,00
Category		**Active**	

From the table above, it can be seen that the average score of student activity in cycle II is meeting to 1 of 21.00 and at the second meeting is 23.00 with active category. Based on researcher observation and observation result of learning activity (character) of student, there are still some deficiencies.

The shortcomings, namely:

(1) Students are still doing other work during the discussion
(2) Some groups do not carry learning tools as required by teachers at the end of cycle I
(3) Students are still embarrassed to think or speak either in group discussion forums or class discussions
(4) Smart students still dominate
(5) Students are still affected by situations outside the noisy classroom
(6) There is still a lack of students who want to improve the conclusion of his friend who has not been right.

(c) Evaluation Phase

Evaluation was conducted at the third meeting. The teacher gives evaluation questions in the form of essay of 3 questions with a time allocation of 2 x 35 minutes. Summary of evaluation results of cycle II, can be seen in the following table.

Table 6:
Summary of Evaluation Results Cycle II

Number of students taking the test	17
The highest score	82
The lowest value	52,5
Average value	66,41
Number of completed students	14
Number of students who are not complete	3
%Completeness	82%

2. Discussion

This classroom action research was conducted with the aim of improving the learning achievement of grade V elementary school students on the subject of Indonesian independence proclamation and Indonesian national movement by using innovation learning. This study consists of 2 cycles where each cycle consists of 2 meetings. Based on the summary of evaluation results and observation of student activity in each cycle, it is known that the activity and student achievement have increased. Based on a summary of observations and student achievement we can see that the increase in the average score of student learning activity occurs in each cycle. This is in line with the increase in student achievement class V in each cycle. In cycle I, followed by 17 students with an average grade of students reached 63.14. This already meets the success indicator of research because. However, the average score of student learning activity at the first meeting is 16.00 and the second meeting is 17.00 with the active enough category it has not met the success indicator in this research. The results of the research in the first cycle has not reached the indicator, this is because students who are not ready to receive lessons with the application of learning innovation, the enthusiasm of students in receiving lessons, the time

given by the teacher is not utilized as well as possible by each group, the group is still low this is because the less able students still rely on the smart students to do the task. The student has not shown the courage to ask if there is material that has not been understood and responds to the work of his friend, this is due to the lack of teacher approach with the students so that students feel reluctant to ask questions. Activity in presenting the results of the discussion is still low because students are still shy to argue. Students are not yet active to do the exercises and explain the results, this is because students feel not confident in writing and explain the answer in front of the class, other than that the teacher also less motivate the students to go forward doing the exercises. Activity of students in concluding the learning outcomes is still lacking and students are less trying to correct the conclusions of his friends are less precise.

Implementation of learning cycle II is done by making improvements to the shortcomings in the cycle I, more maximize the cooperation of the group by giving an appeal to students to always work in tasks, guiding students in group discussions, appealed to students who are less so as not embarrassed to ask less matter understood, appoint students to do the exercises in front so that students will be ready if suddenly will be asked to write the results, students also began to dare to express his opinion, although still less than expected by researchers, and guide students in making material conclusions. The results of learning cycle II is better when compared with the results of learning cycle I. In cycle II, the score of student learning activities obtained at the first meeting is 21.00 and the second meeting is 23 with active category, while the average value of learning outcomes the obtained students is 66,41 with the number of students who take the test of 17 students. Activity of students during teaching and learning process help in achieving student achievement. This is in accordance with the statement Sujana (2002: 72) One of the characteristics of successful teaching can be seen from the activities of students in learning. The higher the activity of students in learning the higher the chance of teaching success. This means that the activity of the teaching teacher should stimulate the student activity to perform various learning activities. Activities in question is an activity that leads to the learning process such as asking, opinion, discussing teaching materials, and doing tasks. In teaching and learning process by applying learning innovation, the teacher gives opportunity to the students to construct their own understanding in learning so that students can think critically and creatively. In addition, in the next activity, in the visual stage students are given the opportunity to construct learning with the help of visual aids in the form of images of freedom fighters so that students can think concretely about the subject of the Proclamation of Indonesian independence and the national movement of Indonesia. At the auditory stage students are given the opportunity to hear and speak directly in group discussions and class discussions. Students may ask, argue, and advise their friends during the discussion. At the kinesthetic stage students are directly involved in the use of visual aids, so that with the three stages students can discover for themselves the concepts of proclamation of independence and struggle against invaders, giving students the opportunity to acquire

knowledge/ experience of finding, identifying and solving problems so that students not just memorize the material that has been obtained. From the results obtained in this study from cyclical I to cycle II, both in terms of learning activities and learning evaluation results show that the application of learning innovation is able to shape the character students on the subject matter Proclamation of Indonesian independence and the national movement of Indonesia in grade V primary school.

D. CONCLUSION

From the results of research that has been done, it can be concluded that:

1. The application of learning innovation can shape the character students on the subject of the Proclamation of Indonesian independence and the Indonesian national movement in class V in primary school. In cycle I, the activity category of students is quite active, but there is an increase in cycle II with activity category is active.
2. The application of learning innovation can shape the character students on the subject of the proclamation of Indonesian independence and the national movement of Indonesia in grade V primary school. In cycle I, the average value of students is 63.14 and an increase in cycle II is 66.41.

BIBLIOGRAPHY

Atkinson, Rita L. (1996). *Pengantar Psikologi Jilid-2*, Terjemahan oleh Taufiq. Jakarta:Erlangga.

Baskoro Herry, (2003). *Dasar-Dasar Didaktik dan Penerapannya Dalam Pembelajaran.*Jakarta: PT. Asekolah dasari Mahasatya.

Depdiknas, Dirjen. (2008). *Manajemen Pendidikan Dasar dan Menengah Direktorat Pembinaan TK dan Sekolah Dasar*, Pedoman penyuunan KTSP Sekolah Dasar.Jakarta : Badan Standar Nsional Pendidikan.

Ischak, dkk, (2005). *Pendikan IPS Sekolah Dasar*. Jakarta Universitas Terbuka.

Muslimin Ibrahim, (2007). *Penerapan Inovasi Pembelajaran melalui pembelajaran Inovatif.* Jakarta;Fasilitator.

Muliyadi Ismail, (1998). *Dasar-Dasar Proses Belajar Mengajar*. Bandung : PT Sinar Baru Algesindo

Nursidik Kurniawan, (2009). *Karakter Sekolah Dasar*. Jakarta.

Obin Taryana dan Daddy Rinaldi, (2010). *Kurikulum Pembentukan Karakter Siswa di Sekolah Dasar Bina Talenta.* Jakarta Rineka Putra.

Saifudin Azwar. (2005). *Tes Prestasi: Fungsi dan Pengembangan Pegukuran Prestasi Belajar*. Yogyakarta : Pustaka Pelajar.

Suharsimi Arikunto. (2006). Prosedur Penelitian Suatu Pendekatan Praktek. Jakarta: PT. Rineka Cipta.

Suharjo. (2006). Mengenal Pendidikan Sekolah Dasar. Jakarta : Departmen Pendidikan Nasional.

Sutrisno Hadi. (2004). Metodologi Research Jilid 3. Yogyakarta: Andi Offset.

ENHANCEMENT OF LEARNING OUTCOME AND STUDENT'S RESPONSE ON BIOLOGY CLASS THROUGHIMPLEMENTATION OF STAD MODEL IN SMP NEGERI I SUKOREJO-PASURUAN

YusSetriarini
setriariniyus@yahoo.com

ABSTRACT

In learning process determine the model of learning becomes very important in a process of management of teaching and learning activities in the classroom. There are several problems that teachers often encounter, among others: 1) difficulty in choosing the appropriate method with the material, 2) difficulty in choosing, determining and compiling problems according to the criteria 3) difficulty dividing the group due to lack of class heterogeneity. The difficulties encountered resulted in the learning outcomes obtained by learners to be less than optimal and not in accordance with the expected.The purpose of this paper is to describe the learning outcomes and responses of students in grade VIII-G biochemistry through the implementation of STAD model in SMP Negeri 1 Sukorejo. The research approach used in this research is qualitative approach. Researchers in the implementation is assisted by some friends in Lesson study activities that act as an observer. The data used is the recap of quiz value, Daily Deuteronomy, learning observation sheet.

From the observation result, it is known that the percentage of learning activity in cycle 1 is not all done. This can be seen from the acquisition score of learning implementation is at 89% percentage. There are still some criteria of the STAD syntax that have not been implemented by the teacher. In cycle II the percentage of learning activity has increased, it is seen an increase of 5.5% so that the percentage to 94.5%. Recap learning result obtained quiz value in the final cycle of 77% of the initial value of only 45.5%. In the first cycle of learners who complete in learning the initial concept is 57.5% and 42.5% of students remedial, in cycle II learners are thorough in learning the second concept is 80% and 20% remedial. The average value of cognitive test results in cycle I is 77, in the second cycle is 79. While the results of the response of learners of 4.26 included in the category strongly agree if the learning is implemented with STAD model.

The suggestions include: 1) STAD learning model proved to improve learning outcomes and learners' responses, it is expected that teachers use the learning model in the learning process in the classroom; 2) For teachers interested in using the STAD learning model should consider such things as: teacher readiness, the time available to construct STAD model learning tools; 3) For other researchers interested in using STAD learning model can be further developed on other materials in the field of biological studies.

Keywords: Learning Outcomes, Responses, STAD

I. INTRODUCTION

Biology is one of the branches of naTural science that discuss about organism and the environment. Therefore, biology is a science that directly related to the life of the learners. Biology subject intends to make the learners or here the students understand the concepts of biology and its interconnection and able to use the scientific method to solve the problems, so it could make the students more aware of His greatness and power.

Teachers should be able and have the ability to conduct an effective and efficient learning process, in order to make the students understand the concept. Teachers must have and be able to apply basic teaching skills, have the ability to determine and apply appropriate teaching methods. In addition, teachers are required to have the ability to involve studentsto participate during the learning activities. Teachers also should have the ability to create an atmosphere that supports the achievement of learning objectives. Thus, the teacher will be able to bring the students successfully in achieving learning objectives.

In accordance to the direction of government policy on the National Curriculum 2004 with a competence-based approach, the learning system must lead to competence-based learning. Competence-based learning could bedefined as a learning system that the learning outcomes are the basic competencies which have to be mastered by the students. The referred learning outcomes are competencies in terms of cognitive aspect, which includes the level of knowledge, understanding, application, analysis, synthesis and assessment; affective competence that includes giving response, assessment, appreciation and internalization; and psychomotoric competence includes early, semi-routine and routine movement skills (Bloom, in Mardapi, 2003). In order to improve the effectiveness of biology subject learning, there should be a learning approach that adapted to the ability of students and the learning process to build the aspects of cognitive, psychomotoric and affective of students, in which this can be done through learning with STAD model group approach.

Group learning is very effective learning strategy in biology subject. Some researchers like Johnson and Johnson (2989) and Slavin (1995) found that learning group was an effective strategy in learning process and widely used by natural science teachers in United States. Group learning emphasizes on the importance of verbal communication among students in small groups.

In that learning model, students are given opportunities to speak about their observation, ideas, and theories in orderto understand Biology. In addition, this learning model is able to generate a solid ambience for the students toward one another to achieve the learning objectives.

Group learning is a learning model that the students are working together to attain particular objective in the form of competence or to finish a task. Various of group learning model have been developed, field-tested, and evaluated. In several models, students are finishing a task together, while in other model, group members work individually in particular aspect of the task and submit the result when they are done.

The main components in group learning model can be explained as follows: First, the learning encourage students to work together to understand a competence, to finish tasks, to solve problems, to review a quiz, carry out laboratory activities, and to fill worksheet. Second, the arrangement process of making heterogenous small groups for students could encourage students to help each other, distribute the tasks well, and support their friends in learning. Third, there is a positive interdependence among the member group. Fourth, developing students' responsibility to learn and cooperate. Last but not least, the occurrence of group processing in learning.

The curriculum in education system supposed to be dynamic, so that it will be able to follow changes and cope the challenges.The alteration of curriculum is important since Indonesian students are still low in terms of the ability to solve questions related to logical reasoning. It is also found that there are several weaknesses of the previous curriculum (KTSP 2006), such as the content and message are still too much, it has not fully developed the competence (mostly dominated by knowledge aspect), and did not aware of both local and global changes (Mulyasa, 2013).

Competencies needed in the future include the ability to communicate, the ability to think clearly and critically, the ability to consider the moral aspect of a problem, the ability to be a responsible citizen, the ability to try to understand and tolerant of different views, have a broad interest in life, have a job readiness, have appropriate intelligence talents and interests and are responsible for the environment. The development of the National Curriculum is expected to be able to generate productive, creative, innovative, and effective

Indonesian people through strengthening attitudes, skills and integrated knowledge (Chotimah, 2014).

Learning method is influential to students' learning activities which also will bring effects to students' learning outcome. Hence, a pleasant learning atmosphere is able to support the students in achieving learning objectives. One of the learning methods that can support students learning activities is cooperative learning method.

According to Slavin (2008), cooperative learning is a learning in which the students learn together, share their ideas, and responsible to their learning outcome, both individually or in group.

Based on the aforementioned definitions, it can be concluded that cooperative learning is a learning model that utilize small groups in which the students are cooperating to maximize their learning. They are urged to be responsible on each individual and group success. In this model, teachers act as the facilitator and are not the only source of information for the students.

Learning in small groups assist students in undertanding the knowledge, generate debates, and teaching each other (Wilson, *et al,* 1996). In other words, learning process that conducted in small groups could encourage students to work together in understanding materials being learned. In that model, happened an assisting process among group members in order for them to master the materials. In other words, they are more pleased to learn in groups rather than individually, since they got emotional and intellectual encouragement that enable them to pass knowledge and skill level (Silberman, 1996).

Student Teams Achievement Division (STAD) is one of the methods or approaches in simple and good cooperative learning for teachers who just start using cooperative approach in the classroom. STAD is also an effective cooperative learning method. STAD type cooperative learning consists of five main components, namely class presentation, group learning, quiz, development score and group awards. In addition, STAD also consists of a regular cycle of teaching activities.

Thinking is a process, including manipulating knowledge in the cognitive system (Solso, 2005). Ennis (1985) stated that critical thinking is a logical and reflective thinking that focused on decisions about what to

accomplish or what someone should do. The differences lie in the emphases adjusted to the field of study being researched.

The ability to think does not developed by itself that in line with someone's age. This thinking ability will develop well if it is deliberately developed. Well-planned and conducted learning activities to develop thinking skills are very important factors. The use of appropriate approaches, strategies, methods, and instructional techniques that are intended to foster thinking ability of learners are actions that can exercise students' thinking skills. The results of Corebimaresearch (2002), for example, applied the "Thinking Empowerment Through Question (*Pemberdayaan Berpikir Melalui Pertanyaan*)" or Trautman, et al. (2000) who chose to use inquiry approach, both of which show that it could improve the thinking ability of students.

II. RESEARCH METHOD

This research is a class-action research (*Penelitian Tindakan Kelas*). Based on the classification of this research, it is designed to use a cycle model, that conducted in two cycles. Each cycle consists of 4 phases, namely Planning, Acting, Observing, and Reflecting.

The subject of this research was VIII-G students in SMPN 1 Sukorejo in 2016/2017 academic year which numbered 40 students in total.

Qualitative approach was utilized in this research. The researcher was assisted by several fellow teachers in Lesson Study activity who acted as the observers to obtain accurate data in the learning process.

The collected data was quiz result, daily exam result, questionnaire result, field-note and observation result that have been simplified and abstracted. These were done to gain distinct information and data that enable the researcher to generate a conclussion.

III. FINDINGS AND DISCUSSION

From reflection activity, researcher got lots of suggestion, such as: students were not accustomed to have a discussion with friends. This can be seen from how active the students in working individually in group rather than maximizing the role of the group to solve the problems given by teacher in a worksheet; the model teacher did not give enough opportunity to students to

develop their thinking skill, since questions in the worksheet were still categorized in C2-C3 and did not develop the thinking skill yet; and teacher has not taught the students how to think, that is to use the known facts and concepts to generate new ideas.

Based on the recapitulation of quiz score in the early and in the end of learning, it was shown that the students have learned about the concept delivered by teacher.

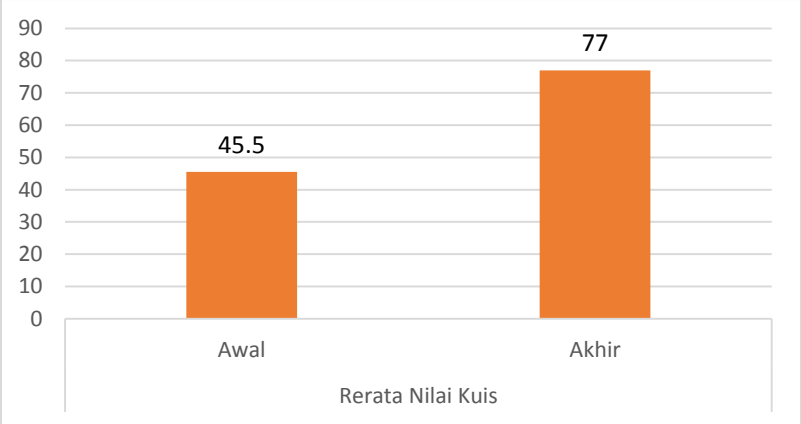
Picture 1. Teacher observed group discussion

This can be seen from the previous quiz score recapitulation and after the learning took place, there was a good increasing of result. In the first phase, quiz score before the learning was conducted, the average score was 45.5% and after following the learning model, there was an increasing of 31.5% which makes the final average score as 77%.

Picture 2. Students discussed in a group

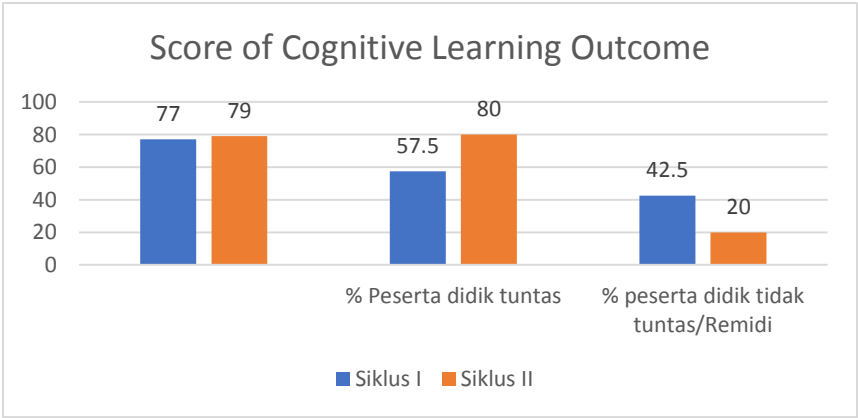
Picture 3 and 4. Observer conducted observation on students

Detail of quiz score can be seen in the graph below:



Graph 1

As for the score of learning outcome, it was obtained through the learning process that include the daily exam score. In the first cycle, students who passed mastering the initial knowledge was 57,5% and 42,5% of students should have repeated the learning process. While, in the second cycle, the percentage of students who passed and those who did not pass was 80% : 20%. Average score of cognitive test in first cycle was 77, whereas in the second cycle was 79. The detail of score can be seen in table below:



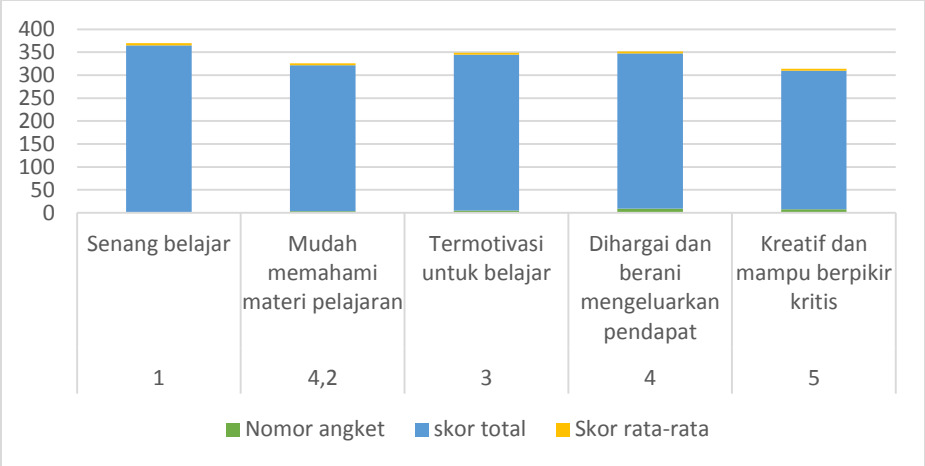
Graph 2

From the questionnaire result given to the students after the learning process, it was classically obtained the average score of 4,26 which categorized "very agree". This has the meaning that the students have positive response towards the use of STAD model in the learning process. The questionnaire result in detail can be seen in table 1 and graph 3.

No	Measured variable	Questionnaire number	Total score	Average score
1	Love to learn	1.2	365	4,68
2	Easy in understanding the material	3,5	318	4,07
3	Motivated to learn	4,5	340	4,35

4	Appreciated and able to state opinion	9,10	338	4,33
5	Creative and able to think critically	7,8	302	3,87
Total score				**4,26**

Table 1



Graph 3

IV. CONCLUSSION AND SUGGESTIONS

Following a change does not always impact to a more negative effect than its positive effect. Change is a transformation of the present condition into the expected condition of affairs in the future, certainly a better condition. Character-based and competence-based curriculum changes are expected to solve the problems that encounter today's education, especially in entering a globalization era that is full of challenges, so it needs to be implemented thoroughly. Do not wait for others to change, start from ourselves, do the implementation with various learning models from any activity, such as training, courses, lesson study activities, either school-based or MGMP-based lesson study, from these activities we can learn to become a more professional teacher.

V. REFERENCES

Chotimah, Husnul. 2014. AutokritikImplementasiKurikulum 13.Makalahdipresentasikanpada Seminar Nasional di FKIP Universitas Nusantara PGRI Kediri, 29 Maret 2014.

Corebima, A.D. 2002. *Pemberdayaan Berpikir Melalui Pertanyaan (PBMP) sebagai Alat Pembelajaran IPA-Biologi Konstruktivistik untuk*

Meningkatkan Penalaran Peserta didik SLTP di Jawa Timur. Laporan Riset Unggulan Terpadu VIII Bidang Dinamika Sosial, Ekonomi dan Budaya. Malang: Lemlit Universitas Negeri Malang.

Mulyasa, E. 2013. *KurikulumBerbasisKompetensi*. Bandung: PT RemajaRosdakarya Offset.

Slavin, E, Robert. 2008. *Cooperative Learning Teori, RisetdanPraktik*. Bandung : Nusa Media

Silberman, M.L. 1996. Active Learning.*101 Cara BelajarPesertadidikAktif*. Bandung: Nusamedia.

Solso, R. L. M., M. Kimberly, Maclin, Otto H. 2005. *Cognitive Psychology*. Boston: Pearson Education, Inc.

IMPLEMENTATION OF LESSON STUDY ON TEMATICS LEARNING BASED LOCAL WISDOM OF PATICULTURE

Ika Oktavianti, Yuni Ratnasari
Primary School Teacher Department
Muria Kudus University

Abstract

This study was based on the lack of teacher understanding about lesson study cause less of collaboration among teachers in developing an innovative thematic learning. In addition, the implementation of thematic learning did not introduce local wisdom of Pati culture. Therefore, the research conducted in Elementary School in Pati Regency was aimed to develop of thematic learning design based on local wisdom of Pati culture and to review the implementation of lesson study on thematic learning based local wisdom of Pati culture. The results showed that the thematic learning design based on local wisdom of Pati culture was developed by using game media. Implementation of lesson study on thematic learning based local wisdom of Pati culturecould improve the quality of thematic learning.

***Keywords**: lesson study, thematic learning, local wisdom of Pati culture*

INTRODUCTION

Law No. 14 on Teachers and Lecturers and Government Regulation Number 19 Year 2005 requires educators to always improve the quality of learning. One effort can be made to improve the quality of learning through lesson study. According to Suzuki (2017: 8) lesson study is the processes undertaken to improve the ability of teachers for children to get learning quality.

In Indonesia, the lesson study was introduced in 2006 through the cooperation of the Government of Indonesia and Japan International Coorporation Agency (JICA) in the Strengthening In-Service Teacher Training in Mathematics and Science (SISTTEMS) program. Through this program, the dissemination of lesson study is growing more rapidly in Indonesia, although it has not been yet comprehensive throughout the regions in Indonesia, for example in Pati Regency.

Lesson study for teachers in Pati, especially primary school teachers, is not well known. The term lesson study itself is still unfamiliar in elementary school teachers. When the researcher explains the lesson study and its levels, the teacher assumes that the lesson study is the same as the classroom action research. Although the levels are almost identical with plan, do, see in the lesson study and plan, implementation, observation, and reflection on the second classroom action research remains different. Lesson study is a philosophy whereas classroom action research is a research method. Based on the condition of the teacher's lack of understanding about this lesson study,

this research is directed to socialize and give experience to the teacher about lesson study.

The need for elementary school teachers to recognize and apply lesson study in order to improve the quality of thematic learning, as explained by Rusman (2010: 294) that one of the benefits of lesson study is the increased of quality of learning plans including its components such as teaching materials, teaching materials (hands on) and learning strategies.

The observation results of initial research, in the implementation of thematic learning both in Curriculum 2006 and Curriculum 2013, teachers experience constraints in the planning, implementation, up to the evaluation level. Innovation of learning is also still not implemented with the reasons for the socialization of thematic lessons which are still minimal and infrastructure facilities that have not been adequate.

Teachers are the main facilitators in learning, therefore teachers need to innovate on thematic learning that not only emphasizes knowledge and skills but also attitudes based on the character of local cultural wisdom.

Based on this background, this research focuses on the implementation of lesson study on thematic learning based on local wisdom of Pati culture.

METHOD

This research was descriptive qualitative research. Bungin (2008: 93) describes that descriptive qualitative research is a study that records all phenomena seen and heard and read (via interview or not, field notes, photos, video tapes, personal documents or memos, official documents or not, etc.), and researchers must compare, combine, abstract, and draw conclusions.

This research was conducted at SD Sukoharjo 01 MargorejoPati and SD Widorokandang 01 Pati with research subjects of teachers and students especially class IV in both research locations.

Data analysis techniques used interactive analysis techniques consisting of three flow of activities carried out in the same time that is data reduction, data presentation and verification.

RESEARCH RESULT AND DISCUSSION

The research conducted based on the lesson study level that is plan (compile learning design), do (implement open class), and see (consist of reflection and redesigning activities).

Before implementing the plan, the implementation of the research began with the socialization of lesson study. The background of this lesson study was socialized because the teachers in the primary school partner had not understood the lesson study that appeared from the teacher's view of the lesson study with the classroom action research was considered the same because it had the same levels. The result of this socializationwas that the teachers in elementary school partners had understood the lesson study, how it was implemented, and able to distinguish the lesson study with the research of class action, and the end of this socialization was the formation of lesson study group.

The plan phase began with discussions with teachers in primary schools research partners about the needs of students and issues related to integrated thematic learning and learning based on the wisdom of Pati culture. The results of the discussion showed that integrated thematic learning based on wisdom of Pati culture was still minimally implemented due to the limitations of the literature about Pati culture.

Still at the level of the plan, next activities createdlearning (learning design), made the goal of integrated thematic learning, created learning stories about what will be discussed between students and teachers, and expected success from the learning that had been designed. The result was learning design as follows.

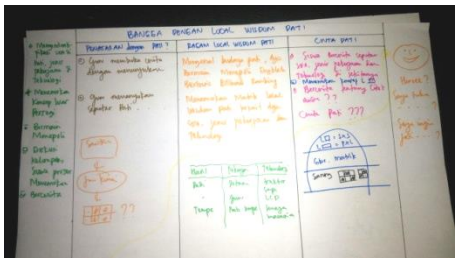


Figure 1. Learning thematic teaching design based on Pati Culture Wisdom

Learning design showed that the goal of integrated thematic learning based on wisdom of Pati culture was the students were proud of the wisdom of Pati culture. The determination of the goal was based on the core competencies and basic competencies of the fourth grade of elementary school that was 3.4 describes various forms of ethnic, social, and cultural diversity in Indonesia which was bound by unity and unity

(Pancasila and Citizenship Education), 3.1 examined the main ideas and supporting ideas obtained of oral, written, or visual texts (Bahasa Indonesia), 3.9 described and determined the circumference and area of the square, rectangular, and triangular (3.3) areas, 3.8 understood the importance of equilibrium and conservation of natural resources in the environment (Natural Science), and 3.3 identified economic activities in improving the life of the community in the occupational, social, and cultural field in the neighborhood up to the province (Social Sciences).

Implementation of thematic learning based on the wisdom of Pati culture, at the level of designing the learning design inserted PAKEM concept, which will be applied using media and games that was is MonekBillking Wisdom of PatiCulture.

MonekBillking was a collaboration of Monopoly and Engklek game with Billboard Rank. In the implementation of monopoly game media was made as a game box of the crank. Billboard Rankof PatiWisdom was a strategy to stimulate reflection and discussion about the values, ideas and choices that existed in the community, especially the cultural wisdom of Pati district, namely gandul rice, sotokemiri, petisrunting, superior market, brass production, batik bakaran industry, TPI and ketoprakJuwana (Oktavianti and Ratnasari, 2017: 5).

The concept of PAKEM implemented through MonekBillkingwas in line with the demands of Law No. 20 on Section 40 of the National Education System which states that "teachers and education personnel are obliged to create meaningful, fun, creative, informal and dialogical education". In addition Government Regulation Number 19 paragraph (1) states that the learning process in the education unit is held interactively, inspiration, fun, challenging, motivating students to participate actively, giving enough space for initiative, creativity and independence according to talents, interests and physical development as well as student psychology.

Based on this matter, MonekBillking requirement with the demand of learning is regulated in Law Number 20 article 40 and Government Regulation Number 19 paragraph (1).

The do level of this research was carried out at different times in the two elementary schools of research. This levelwas carried out at SD Sukoharjo 01 and SD Widorokandang 01 Pati. This activity started from the initial activities, core activities, and the end of learning activities.

Initial learning activity began with praying and continued with the teacher giving a question as apperception to the students about the typical food, Pati traditional

clothing, Pati traditional house, and Pati typical products. This activity received a positive response because all students in both partner schools could answer teacher apperception questions. This showed the students have known Pati culture.

Entering the core activities at the beginning, teachers formed groups. Group formation in the two partner schools was different because the student's characteristic also differed in both, especially with respect to the number of students and gender.

The learning activities continued with the teacher distributing proprietary cards to each group with different colors in each group, distributing memory matrices, whiteboards, erasers and markers in each group.

In the memory matrix division activities, whiteboard and markers some students were still confused about the usefulness expressed with the questions asked to the teacher. The confusion was answered after the teacher gave an explanation of the usefulness of matrices, whiteboard paper, erasers and markers in each group.

The explanation given by the teacher got the idea as response but in the form of the sentence asked by one of the train students (SD Sukoharjo 01) "can fill the matrix in whiteboard?". The teacher responded to the question by asking questions about why KA asked the question. The reason given was quite simple, because students wanted to try new things in doing the task of using different media. The other students responded to the idea of a train so that an agreement between the students and the teacher in filling the memory matrix on the whiteboard was provided.

The next learning activity was playing MonekBillkingas Wisdom of Pati Culture. The implementation of the game was carried out under different conditions, ie the teacher directed the students of SD Widorokandang 01 to play MonekBillkingas Wisdom of Pati Culture in the school field, while the students of SD Sukoharjo 01 played it in class. Although the learning locations were different, this id not change the students' enthusiasm when learning thematic learning using the MonekBillkingas Wisdom of Pati Culture.

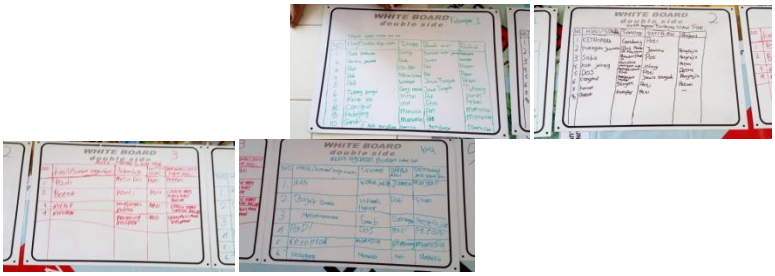
Figure 2. Implementation of Thematic Learning Using MonekBillkingPati Culture Wisdom

After installing the MonekBillking Board of Pati Culture Wisdom, the students begin to play the monopoly game of the crank which began with the students throwing the dice first and then the students jumped with one foot (jerk) toward the plot according to the number when rolling the dice. After the students arrived at the designated plot, the next task was to read the cultural cards according to the occupied cultural plot, while the other members listened to the cultural cards read and continued by noting the things listed in accordance with the matrix of the memory given earlier. The activity continued with students from other group members playing the monopoly of the crank. This activity showed active learning that was learning colored by various learning activities with teacher as facilitator.

In the activities of playing MonekBillkingby students, there were several different group members occupying the same plot so that the group that owned the cultural plot was entitled to punish as agreed by the group members. Punishment that gave groups that had a cultural plot against another cultural plot was singing or imitating the style. This showed one of the character of creative learning that was giving freedom to students to develop new idea or knowledge (Indrawati and Setiawan, 2009: 14).

The game stoped when all the cultural plots were all owned. Groups with ownership of the Cultural Card were the winners in this game. The teacher asked the students to sit on the monopoly board of the crank and together with the students do a reflection of the game MonekBillking of Pati Culture Wisdom.

Implementing activities to fill the memory matrix, each group member looked compact to do the tasks together. Division of tasks among members of a structured group although sometimes accompanied by some members' disagreements in filling the memory matrix. But with the discussion together to make some group members to make agreement about the concepts of Pati culture that must be filled in the memory matrix. The results of the charging task could be seen in the following figure.



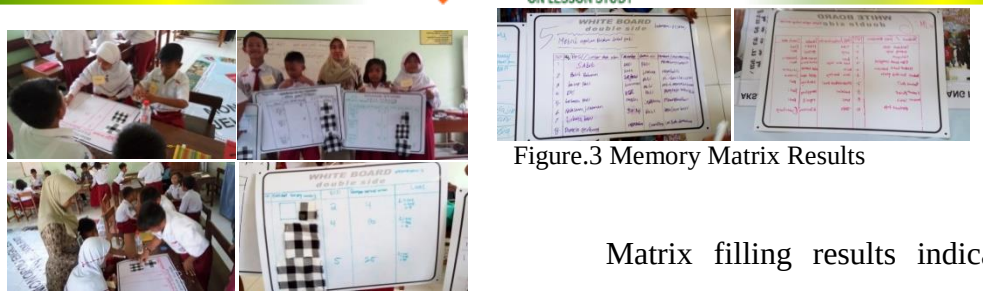


Figure.3 Memory Matrix Results

Matrix filling results indicated that each group succeeded in discovering the concept of economic activities and natural resources from Pati's cultural wisdom.

After filling in the memory matrix, the teacher gave an evaluation of questions. In the process, each group was given a billboard ranking to explore and discover the concept of learning contained in the material of Pati cultural wisdom that was the religious activities of the tomb of MbahSaridin as seen in the following figure. The concept unearthed from the tomb of MbahSaridinwas the type of work and clothing caretaker of the grave was a sarong for the concept of waking up space, as shown below.

Figure 4. Result of Billboard Rangking Pati Culture Wisdom

The results of billboards rank showed students could understand the wrong concepts of the circumference and the area of space that was rectangular, rectangular, and triangular from one of the cultural wisdom of Pati that was religious tourism Tomb of MbahSaridin.

The stage of see was a reflection of the lesson. Researchers and teachers together reflected the learning activities that had been done. The result of the reflection showed that the students were able to explore the thematic concepts from the study of the wisdom of Pati culture. These results indicated that effective learning was implemented. According to Indrawati and Setiawan (2009: 15), effective learning is a learning that create what should be mastered students after the learning process takes place. In this study the students master concept of type of work, natural resources, as well as circumference and area of square, rectangle and triangle.

The results of reflection also showed the goal learning of integrated thematic design design using MonekBillkingas Wisdom of Pati Culture showed that students were proud of the wisdom of Pati culture achieve success, shown through the impression sheet and learning messages that had been filled with students who show that students were proud to be people Pati and students loved on Pati products. Some students even aspired to become entrepreneurs of soy sauce with the reason of

deliciousness of Pati soy sauce and wanted to keep preserving soy sauce Pati, a fisherman with the simple reason that wanted to eat fish every day, and became batik entrepreneurs because like to wear batik. Those were the simple reasons that students gave as a proud expression of Pati culture.

The impression given about thematic learning using MonekBillking showed that students were able to accept learning and understand the concept of teaching thematic lessons, and wish each day to learn while playing. This indicated integrated thematic learning using MonekBillkingPati Culture Wisdom successfully implemented and had achieved learning goals.

The results of reflection indicated that at the time of implementation of integrated thematic learning by using MonekBillking Wisdom of Pati Culture there were still some observer that guided students who did not understand what was delivered by teacher or answer questions intended for teacher. In the lesson study observer activities should not interfere in the learning activities because the observer's task only observed and collected learning process information undertaken by teachers, observing student learning activities during learning activities, learning from ongoing learning, and evaluating teacher models that appear

CONCLUSION

Thematic learning based on Pati cultural wisdom that was implemented by using MonekBillking made students enthusiastic in following the learning and students could understand the concept of learning that was matched through the material of local cultural wisdom. Goal of learning designwas achieved that students were proud of the wisdom of Pati culture.

These results indicated that to achieve teacher learning success should be able to create learning activities that were able to motivate students. Fun learning applications could reduce the pressure of learning so that students could explore the ability, interest in learning, and also encourage the potential and talent of students. In addition, the use of learning media with the concept of play could develop an understanding of learning concepts and critical thinking skills of students.

BIBLIOGRAPHY

Bungin, B. (2008). *Metodologi Penelitian Kualitatif.* Jakarta: Raja Grafindo Persada

Indrawarti dan Wanwan S. (2009). *Pembelajaran Aktif, Kreatif, Efektif dan Menyenangkan*. Jakarta: Pusat Pengembangan dan Pemberdayaan Pendidik dan Tenaga Kependidikan Ilmu Pengetahuan Alam

Oktavianti, I. Yuni R. (2017). *Peningkatan Multiple Intellegences Siswa Pada pembelajaran Tematik Melalui Lesson Study Berbantu Monek Billking Kearifan Budaya Pati.* Laporan Kemajuan Penelitian Dosen Pemula Ristekdikti 2017.

Rusman. (2010). *Model-Model Pemebelajaran Mengembangkan Profesionalisme Guru*. Bandung: Raja Grafindo Persada

Suzuki, R. (2017). *Mari Membuat Learning Community: Reformasi Pendidikan Kota Malang*. Malang: PT. Bennese Indosesia

Undang-Undang Republik Indonesia Nomor 20 Pasal 40 Ayat (2) Tahun 2003 tentang Sistem Pendidikan Nasional

Undang-Undang Republik Indonesia Nomor 14 tahun 2005 Tentang Sistem Pendidikan Nasional

Peraturan Pemerintah Republik Indonesia Nomor 19 Tahun 2005 Tentang Standar Pendidikan Nasional

Imansyah, H.**(**TT**).** *Konsep dan Prinsip-Prinsip Lesson Study.* FPMIPA UPI

LESSON STUDY OF BRAVE AND CONFIDENT ATTITUDE TRANSFORMATION OF STUDENT IN EXPRESSING OPINION THROUGH COLABORATIVE LEARNING IN BIOLOGY LECTURING IN UMSURABAYA

By:
Wiwi Wikanta, Peni Suharti, Lina Listiana, and Ruspeni Daesusi
Biology Education Department
Faculty of Teacher Training and Education UMSurabaya
e-Mail: wikanta@fkip.um-surabaya.ac.id

Abstract
This research purpose was to analyze brave and confident attitude transformation of students in expressing opinion through collaborative learning in biology lectures in UMSurabaya. This research was classroom action research which combined it with practice cycle model of *lesson study*. The subject of this research was biology students from various classes in Biology Education Department, Faculty of Teacher Training and Education UMSurabaya. The data were processed in descriptive method by calculating the percentage of student's brave and confident attitude transformation in expressing their opinion for 2 (two) lecturing cycles at organic chemistry, biochemistry, and plant physiology. The result of this research showed that student's brave and confident attitude transformation in expressing opinion in each cycle was: (1) 1st cycle of Organic Chemistry lecturing, brave attitude was 34,21% and Confident attitude was 28,95%; 2nd cycle showed the brave attitude was 68,42% and confident attitude was 65,79%, (2) 1st cycle of Biochemistry lecturing, brave attitude was 50,00%, and confident attitude was 40,00%; 2nd cycle showed the brave attitude was 75,00% and confident attitude 75,00%. And (3) 1st cycle of plant physiology lecture, for brave attitude was 30,00%; 2nd cycle showed the brave attitude was 85,00% and confident attitude was 85,00%. The conclusion of this research was there was brave and confident attitude transformation of students in expressing opinion through collaborative learning in biology lectures in UMSurabaya from low category and high category.

Key Words: lesson study, attitude, brave, confident, collaborative learning, biology.

In learning process,
researchers frequently find silent atmosphere in the class, no students' voice is heard to question each other and actively exchange opinion. Even when sometimes the teacher asks question to the student, there is not so many response in return. It is like class is a scary place. This kind of atmosphere also happened in the class where researchers conduct learning process. The students are lack of initiative, courage, and confident in expressing their opinion. Brave and confident attitude on student can be seen from their facial expression showing their fear, hesitation, and difficulty on expressing opinion, therefore the learning process runs in monotonous way. This kind of atmosphere is also found in lecturing process conducted by the lecturers in Biology Education Department environment. Setiowati (2016) also found that 50% of students have low confident percentage.

Brave and confident attitude are two important attitudes for every human being. Brave and confident attitude are attitudes that determine someone's future, even for the society and country. A country's development is not determined by its physical perfection but the level of its bravery (Qoimi, 2003). Thus, schools or campuses must have an effort to create the improvement of student's brave and confident

attitude.

Many lecturers had already worked on this matter on how to lift up classroom atmosphere and created brave and confident attitude by using various learning models, methods, and tools. One of them is by using collaborative learning model. But, the changes are not as the expected.

Collaborative learning is a process to construct knowledge by interacting with the others. Based on Smith and Mcgregor (1992), collaborative learning is terminology that covers an education approach involved cooperation between students, or between students and teachers. There are 4 important principals in collaborative learning approach (Tan, 20014), those are: (1) collaborative learning increases an active involvement with dialogue process; (2) collaborative learning is based on constructional-social theory in knowledge creation; (3) there is real movement in locus authority from traditional teacher to dynamic learning community and social structure of international class replaced by negotiation relation or negotiation between students, teachers or other facilitator; (4) collaborative learning helps the culture development of study to an open critical atmosphere.

Grouping learning process conducted by the lecturers in the class this whole time, is not paying attention on the effectiveness requirement of grouping learning. Those are; (1) the amount of the group's member; and (2) the sit's design in a group; and (3) learning materials that being used in each group. An effective group learning process is small group learning. Tan (2004) said that small group learning gives a chance for student to actively take a role in interacting inside inquiry learning and group.

The sit's design for student during learning process determines activity and learning result. Wasnock (2010) stated that teachers always use sit's design on the best atmosphere types for the sustainability of student activity. Callahan (2004) had proven that, "the students in the straight row computer lab classroom were off-task more often, had fewer student-to-teacher interactions, helped other students more often, and were distracted more often than the students in the pod arrangement. The frequency of student-to-student and student-to-teacher interactions indicated that the pod arrangement supported more collaboration than the straight row classroom". Nurmala (2014) also proven that, "students in experimental group (u-shape seating arrangement) got a good mean score (76.8) while students in control group (Traditional seating arrangement) got an average score (73.3)".

In designing collaborative learning, Kitada (2016) stated that a good lesson design for collaborative learning process have to has these requirement, those are: (1) designing a comfortable group for each members; (2) designing a focus for study collaboratively; (3) design spiral learning type.

In designing focus for study, teachers or lecturers must be creative in providing different materials. Sato (2013) stated that in every learning activity which is collaborative

learning must have two activities; they are "sharing learning (in the same level of lesson book)" and "jumping learning (in a higher level than lesson book).

All this time, the unsuccessful way from lecturers on changing or increasing student learning result is caused by the lack of cooperation between lecturers in each learning process' steps, started from the planning step, implementation step, until scoring step. The individuality and sustainable way of the lecturers work need to be changed to collaborative or community model of work. Lesson study is a construction model on teacher as a profession which is being implements in Japan this whole time. Lesson study (LS) is a construction model on teacher as a profession or education which implements frequently. Lewis in Syamsuri and Ibrohim (2011) he stated that, "lesson study is a cycle in which teachers work together to consider their long-term goals for students, bring those goals to life in actual "research lesson", and collaboratively observe, discuss, and refine the lesson".

Not only directed to increase the quality of the course, Lesson study practice is also expected to be able to change the culture of teachers or lecturers work in conducting the main task of daily learning process. Lesson study is one of forms of Learning Community (LC) concept practice. This is in line with the development of school management new concept that is to make school as learning community. This research is proposed to analyze the changing of student's brave and confident attitude in expressing opinion through collaborative learning in Biology learning in UMSurabaya.

RESEARCH METHOD

This research is classroom action class conducted in each lecturer's learning class. This research was implemented in two learning cycles during the even semester in 2016/2017 academic year. The planning, activity (do), and reflection (see) were implemented in every cycle. The subjects of this research are divided into 2 groups of students in lecturing session, they are: (1) chemistry organic study and (2) biochemistry study. The data were collected by using observation method of student's brave and confident attitude. Then, it is analyzed descriptively by counting the percentage of student's brave and confident attitude changes in every study.

RESULTS AND DISCUSSION

Lesson Study for Learning Community (LSLC) team of Biology Education Department, Faculty of Teacher Training and Education UMSurabaya consists of: (1) the chief of department; (2) department's secretary; and (3) lecturers. Lecturers that involved in LSLC are 6 persons. LSLC process has step of planning, activity (do), and reflection (see) the result from each step are explained on the following paragraph.

Planning:

On this planning step started with lecturers meeting together with educational stuffs to build commitment together in increasing quality of profession and study by LSLC practice. The meeting result then being processed as LS *do* schedule in even semester of 2016/2017. The lecturer's willingness to be the lecturer model in each course will be collected to every lecturer from each course, so the implementation of open lesson will not be limited on once or twice meeting.

In planning step, each lecturer makes a lesson plan per-semester, lesson plan per-each meeting, teaching material and scoring instrument based on the course that the lecturer handles. Before being used in learning process, the lesson plan and the other tools will be discussed in a meeting first, to get another suggestion from other lecturer. Then, lecturer model can start the learning process that they had been prepared.

Activity (do)

The *do* of learning process that being observed consist of 3 courses or study, they are: (1) Organic Chemistry study, (2) Biochemistry study, and (3) Plant Physiology study. Brave and confident attitude data of student can be collected by the result from: (1) observation from the observatory lecturer, and (2) video and photo documentary.

Reflection (see)

The result of observation by the researcher and video/photo are used for material in reflection. These are some notes of reflection results as follows:

1. In general, all students have been involved in the learning process, although still found 1 (one) or 2 (two) students who are still not involved.
2. Students actively learn, interact between students, students with learning resources (MFI, books), students with lecturers.
3. Students who have not been involved have constraints on low academic ability.
4. In the process of learning, there was a dialogue and exchange opinion (sharing) with group members.
5. Students are given plenty of time to interact with group members and inter-group members.
6. Initiative, confident, and brave have already begun to be entrenched.

Transformation of Brave and Confident Attitude

Brave and Confident Attitudes data of students in 2 (two) learning cycles in each course are presented in Table 1

Table 1.Transformation of Brave Attitudes and Student Confidence in 3 Courses Lecture

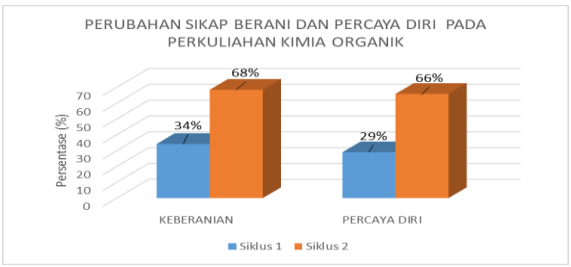
NO	NAME OF COURSES	BRAVE				CONFIDENT			
		1st Cycle	%	2nd Cycle	%	1st Cycle	%	2nd Cycle	%
1	Organic Chemistry	13	34,21	26	68.42	13	34,21	25	65,79
2	Biochemistry	10	50.00	15	75.00	10	50.00	15	75.00
3	Plants' physiology	7	35,00	17	85,00	7	35,00	17	85,00

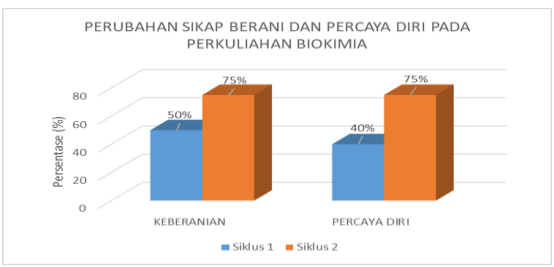
Based on the data in Table 1

above, brave and confidence attitudes show the transformation in all course lectures. Students' brave and confident attitudes in 1st cycle are still in the average category, whereas in 2nd cycle the students' brave and confident attitudes are categorized as very high (Triningtyas). Where, attitude transformation from 1st cycle to 2nd cycle are: (1) on the organic chemistry lecture, brave attitude of students improved by 34.21% and confident attitude improved by 36.84%; (2) in the biochemistry lecture the student's brave attitude improved by 25.00% and the confident attitude improved by 35.00%; And (3) on lecture plants' physiology of brave attitude of student experiencing change of 50.00% and attitude of confidence changed by 55.00%.

Transformation of brave and confident attitudes of students in expressing opinions in all lectures is shown in Figure

1.





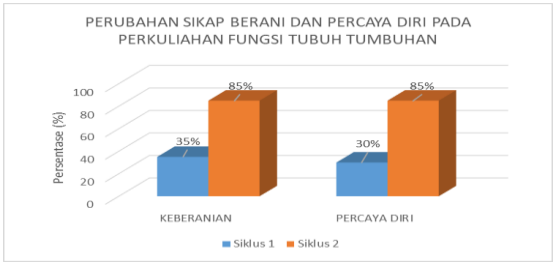


Figure 1. Graphic Transformation of Brave Attitudes and Student Confidence in 3 Courses Lecture

The transformation of attitude

shown by the students during 2 (two) cycles could not be separated from the change of lecture method and student seating arrangement or design which enables interaction between students to students, students to media, and students to lecture more higher. In line with Tan's (2004) opinion that collaborative learning will meet several principles in learning, which are: (1) collaborative learning increase an active involvement with dialogue process; (2) collaborative learning is based on constructional-social theory in knowledge creation; (3) there is real movement in locus authority from traditional teacher to dynamic learning community and social structure of international class replaced with negotiation relation or negotiation between students, teachers or other facilitator; (4) collaborative learning helps the culture development of study to an open critical atmosphere.

According to Qaimi (2003) cultivate brave attitude can be done by preparing environmental conditions. The arrangement of student seats during learning determines the effectiveness of the learning process. Callahan (2004) suggests that the frequency of student-to-student and student-to-teacher interactions indicated that the pod arrangement supported more collaboration than the straight row classroom." The influence of seating arrangement on students' learning outcomes was also proved by Nurmala (2014), where the students arranged in U-shaped seats arrangement during the lecture got higher score than the students in the straight row classroom.

The others person’s role which can cultivate brave attitude, includes: parents, peers, and adults (Qaimi, 2003). The role of the lecturer during the planning and implementation process is very important. Learning process which is well-prepared, accurately designed, and implemented based on the lesson plan that has been prepared will provide a better result. Kitada (2016) argues that the lesson design is good if it has three elements, which are: (1) a comfortable group design for all members; (2) the design of the foundation for collaborative learning; and (3) the design of the spiral learning type.

Collaborative principles are also required in the lecturers' community. Lecturers should continually improve their professional skills by having dialogue with colleagues.

Lewis in Syamsuri and Ibrohim (2011) suggests "lesson study is a cycle in which teachers work together to consider their long-term goals for students, bring those goals to life in actual" research lessons ", and collaboratively observe, discuss, and refine the lesson." The transformation in attitude of brave and confident of student in expressing opinion in cycle 1 and cycle 2 could not be separated from the role of lecturer team that assist in improving the quality of learning, starting from planning, implementing, and assessment. Fatmawati (2014) argued that the implementation of lesson study had an impact on the creation of collegiality between lecturers and lecturers, as well as lecturers and students.

Brave and confident attitudes are two attitudes which influence each other. Qaimi (2003) argues that developing confidence attitude can encourage brave attitude. Confidence is one of the characteristics of brave (Munawar, 2010). Confidence is someone's power to do something. Wijaya in Rosita (2012) self-confidence is the power of someone's mental beliefs over his ability and condition that can influence the condition and development of someone's personality entirely.

CONCLUSIONS AND SUGGESTIONS

The results of this study can be concluded that there is a transformation of brave and confident attitudes of students in expressing their opinions through collaborative learning in Biology lectures at UMSurabaya. The practice of lesson study in the lecturer community gives well contributes in improving the quality of learning and professional performance of lecturers.

Suggestions of this research are the practice of lesson study in university need to be continuously studied the usefulness and compatibility with the mental development of learners in higher education. Moreover, it is necessary to synchronize the results of previous LS research.

REFERENCES

Callahan, J. (2004). Effects Of Different Seating Arrangements In Higher Education Computer Lab Classrooms On Student Learning, Teaching Style, And Classroom Appraisal. A Thesis Presented To The Graduate School Of The University Of Florida In Partial Fulfillment Of The Requirements For The Degree Of Master Of Interior Design University Of Florida.

Fatmawati, B. (2014). The Effect of Implementation Lesson Study at Environment Science Course. Proceedings Becoming Reflective Eductitors and professionals of Learnig. ISBN 978-602-99410-1-2: 379-381.

Kitada. Y. (2016). Pembelajaran Kolaboratif dan Lesson Design. Makalah ITTEP-Japan: JICA.

Munawar, I. (2010). Pengertian dan Ciri-Ciri Keberanian. Online. http://indramunawar.blogspot.co.id/2010/03/pengertian-dan-ciri-ciri-keberanian.html. Accessed on August 2nd , 2017.

Nurmala. (2014). The Effect Of U-Shape(Horseshoe) Seating Arrangement On Speaking Ability Of The Tenth Grade Students At Smk Ti Airlangga Samarinda. Journal

Presented to Mulawarman University In partial fulfilment of the requirements For the Sarjana Degree in English Department.

Qaimi, A. (2003). Mengajarkan Keberanian dan Kejujuran pada Anak. Comas Bogor: Penerbit Cahaya

Rosita, H. (2012). Hubungan Antara Perilaku Asertif Dengan Kepercayaan Diri Pada Mahasiswa. Online. https://scholar.google.co.id/scholar?/. Accessed on August 2nd , 2017.

Sato, M., (2013). Mereformasi Sekolah: Kosep dan Praktek Komunitas Belajar. Edisi Indonesia. Tokyo: The International Development Cnter of Japan Inc.

Setiowati, A. 2016. Peningkatan Rasa Percaya Diri Melalui Teknik Permainan Pada Layanan Bimbingan dan Konseling Kelompok. Jurnal Penelitian Tindakan Bimbingan dan Konseling Vol. 2 (1): 18-24

Smith, B. and Macgregor, J.T. (1992). *What Is Collaborative Learning*? Pennsylvania State University: **R**the National Center On Postsecondary Teaching, Learning, and Assessment

Syamsuri. I. dan Ibrohim. (2011). *Lesson Study*: Studi pembelajaran. Malang: Penerbit UM-Press.

Tan, Oong-Seng. (2004). Enhancing Thinking Through Problem-based Learning Approaches. Singapore: Thomson Learning.

Wasnock, D.P. (2010). Classroom Environment: Emphasis on Seating Arrangement. Submitted in partial fulfillment of the requirements for the degree M.S. Mathematics, Science, and Technology. Online. http://fisherpub.sjfc.edu/mathcs_etd_masters/17. Accessed on February 6rd , 2017.

Implementation of Lesson Study towards Science Process Skills In The Basic Chemistry Practicum Subject

Fitria Fatichatul Hidayah
Chemistry Education University of Muhammadiyah Semarang
fitriafatichatul@gmail.com

The lecturers' ability in planning and implementing the well learning is an important part of professionalism. The development of professionalism of lecturers in improving the quality of learning can be done through Lesson Study. Besides, Lesson Study is also the source of science in observing and collecting the documentation data. The results of observation and also documentation of the data can be used as a source of learning for other subjects. The Lesson Study implementation is able to change learning to be more effective and efficient, increasing sensitivity as an observer. The research methodology used qualitative descriptive research. The researchers play a role as model lecturer for open Class in Lesson Study. Lecturer model designs lesson by making RPP, Chapter Design Syllabus and Lesson Design with Lesson Study team. The Lesson Study team is all the lecturers of Faculty of Mathematics and Sciences University of Muhammadiyah Semarang. The stages of Lesson Study consist of Planning; Implementation (Do); Reflection (See). Based on the Lesson Study cycle 1 result on the chemistry practicum subject, it is found that students' skill in general science process is not maximal yet. This is seen from the ability of students' science process skills are good at indicators able to plan experiments, able to communicate experiments, and able to observe carefully. Whereas, the concept comprehension is still low and the ability to use the tool is also low. Moreover, the system used in the learning needs improvement which also needs approval first before practicing the practicum. Furthermore, the students more easily apply in the concept of calculation. Based on the results of Lesson Study reflection required well preparation so that the learning results are better and maximal.

Keyword: Lesson Study, Science Skill Process, Asidi-Alkalimetri, Problem Base Learning

1. Introduction

One of the profiles of the Chemistry Education Program is to be a professional teacher. The formation of four teacher competencies in the form of pedagogical, professional, personality and social competence can be fulfilled by applying curriculum. The skills-based curriculum of the science process being taught should be able to shape the characters and the four competencies. The learning process taught during the lecturing process provides an experience for prospective chemistry teachers.

In accordance with Permendiknas no 16/2007 that the chemistry teacher should be able to design, and carry out the chemical experiment properly and correctly. Achieving these goals can be achieved through the laboratory. Practicum is a learning method that serves to clarify the concept through contact with tools, materials directly. Increasing intellectual teacher candidate through observation, seeking complete and selective information is to support problem solving. The practicum also serves to train, plan, and implement the experiments, implement data and train the scientific work. This is also confirmed by Depdiknas (2007) that the lab is divided into five types according to the willingness of problems, tools and materials, work processes, and goals or answers achieved. Practicum is an activity that uses minds on approach (think logical or reasoning) and hands on (physical activity) (Supahar, 2010). So, in practice there is a skill of science process (Abigu, 2014).

Scientific process skills are skills that emphasize aspects of processes and products. The process of sciences is problem solving, formulation of hypotheses, observations, experiments, analyzing data, and draw conclusions. While product science means building systematic knowledge as a result of the process. This is also stated by Dawson in Dahniar (2006) that the product of science process skills can build knowledge of the results of the practice process. Some aspects of the science process that must be possessed by prospective chemistry teachers are designing, observing, forecasting, interpreting observations, applying concepts, and using tools and materials and communicating. Based on the findings of Hidayah (2015) that the ability of the science process skill of chemistry teacher candidate of University of Muhammadiyah Semarang on the aspects understanding and application of material concepts and implementing are on low-key daily issues. The low ability of chemistry teacher candidate in constructs the concept of science to self actualization in practicum.

The ability of lecturers to plan and implement the learning well is part of professionalism. The development of professionalism of teachers in improving the quality of learning can be done through Lesson Study. The Implementation of Lesson Study starts from Plan or Plan that is curriculum observation, understanding teacher

candidate characteristic, planning of learning (RPP, Syllabus, Lesson Design, and Design Chapter). The implementation or Do is to apply the planning results that have been designed before learning. The last stage of a Lesson Study cycle is See or reflecting on the activities that have been implemented as the basic consideration for improving the quality of the next lesson. According Susilo (2011) Lesson Study collaboratively consists of four stages which are learning the curriculum; designing learning; implement and observe a Lesson; reflection for subsequent learning planning.

The benefits of Lesson Study are improving the quality of learning, the source of science in observing, and collecting data documentation. The results of observation and documentation of the data can be used as a source of learning for other subjects. The Lesson Study is able to change learning to be more effective and efficient, increase sensitivity as an observer too. According to Supahar (2010) that the Lesson Study makes teachers able to document their progress, they can get feedback from other members, and they can publish and disseminate the end result of the Lesson Study.

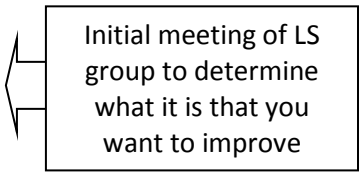
Based on the benefits of the Lesson Study above, the researchers implement Lesson Study to solve the problems arising from the learning activities in the basic chemistry laboratory subjects. The low concentration, the low readiness of students in carrying out practicum, as well as practical science process skills have not been observed by the researchers. Student learning outcomes have not been maximized to make the role of the importance of Lesson Study implemented to perfect learning. Basic chemistry practice is the basis of other practicum activities in the chemical education subjects. In conclusion, the Lesson Study implementation on the science process skills for the basic chemistry practicum subject able to give positive contribution in learning.

Based on the description above, the existence of Lesson Study is able to solve the existing problems in the basic chemistry laboratory lectures to find out about 1. Why the students' science process skills in the lectures of the Basic Chemistry Practicum, 2. How to implement the Basic Chemistry Practicum lesson through Lesson Study, 3. How is the technique or methods appropriate for the basic chemistry laboratory. The Lesson Study has been done on the basic chemistry practicum subject that has objective such as; 1. To know the Student's Science Process skill; 2. To know the implementation of Lesson Study on the basic chemistry practicum subject; 3. To know the appropriate method or model for the basic chemistry practicum subject.

2. Research Methodology

The subject of this research is the students of Chemistry Education Program University of Muhammadiyah Semarang. The place of research is the laboratory of

chemistry education program of University of Muhammadiyah Semarang. The research approach used in this research is qualitative descriptive research. The researchers play a role model lecturer for open Class in Lesson Study. The lecturer model designs lesson by making RPP, Chapter Design and Lesson Design syllabus with Lesson Study team. The Lesson Study team is all the lecturers of Faculty of Mathematics and Sciences University of Muhammadiyah Semarang. The Lesson Study stages are Planning; Implementation (Do); Reflection (See). First, the Planning Stage consists of Lecturer Model and Lesson Study Team makes planning of learning such as; RPP, Syllabus, Lesson Design Design, before entering the classroom, then doing briefing. The purpose of this briefing activity is to equate the perception of the lesson that is delivered for the open lesson. Secondly, the Implementation Phase meant that the model lecturer delivered the material according to the stages in the Lesson Design and observed by some observers. Thirdly, the Reflection Stages meant that the stages of reviewing the learning outcomes that have been implemented, discussion of problems that arise and provide solutions in accordance with the problems that make input for the next learning process. Fourthly, the stages of Improvement is the action of some inputs that have been given then improves the results of the first cycle to proceed to the second cycle. The Lesson Study cycle can be seen in Figure 1 below.



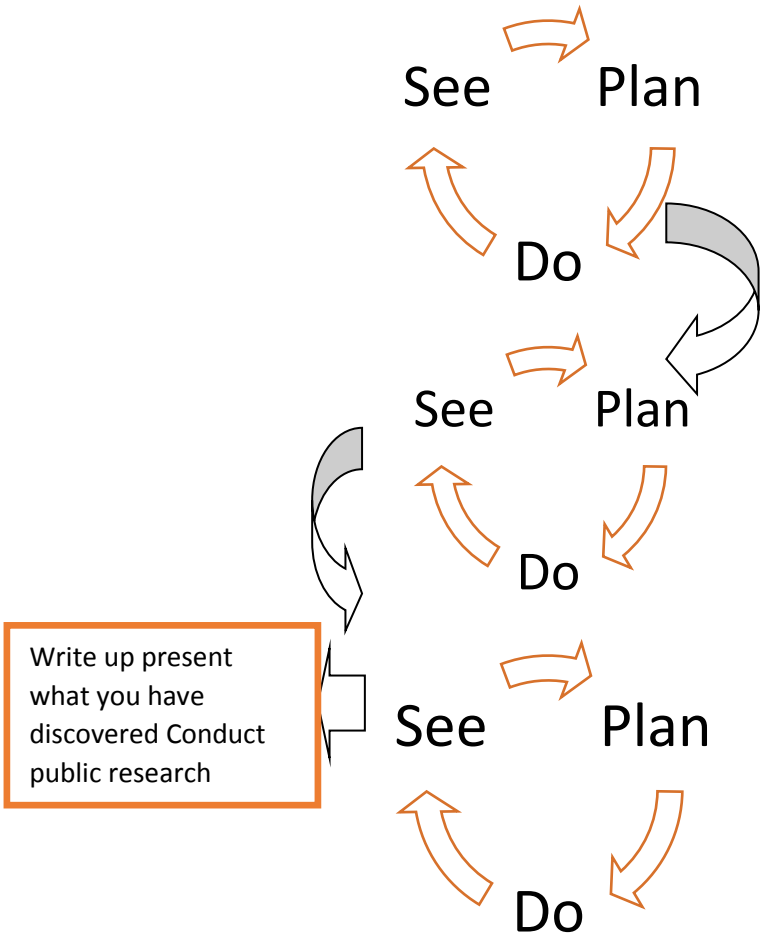


Figure1. *Lesson Study Cycle Modification* (Dudly, 2011)

The instrument used in this research is the observation sheet. The data collection techniques are through the results of the observation instrument sheet, the documentation, the recording of learning outcomes, and the questions integrated with the skills of the science process. The science process skills assessment can be measured through science process skill instruments (Cakir, 2010). IML-Based Student Sheet (Inquiry-Problem Based Learning) Asidi-Alkalimetri experimental material is prepared to facilitate students in the practicum practice. According to Karsli (2011), the use of student worksheets can provide motivation and increase students 'activity during the lecturing. The research data obtained from the qualitative data which uses the field note of lecturer model about the basic chemistry laboratory and the field note from the observer based on the learning process observation. Besides, the constraint field notes

faced by lecturer model and observer become qualitative data. Next, the quantitative data is the result of the student's achievement of the science process skills score.

3. Result and Discussion

The objective of this research is to know the implementation of Lesson Study on the chemistry practicum; to know the Student Science Process Skill through Lesson Study; to know the method or model appropriate for the basic chemistry practicum subject. Lesson Study activity on the basic chemistry practicum is done through three stages such as; Plan, Do, and See. Each stage has its own goal. Before entering into the stages of Lesson Study, the lecturer model analyzed the characteristics of the students and also the problems that had been happening in the learning of basic chemistry practicum.

3.1 The Problems and the Constraints on the Basic Chemistry Practicum

The low motivation of students made the readiness of students in the implementation of the laboratory is also low. This was reflected in the student's lack of discipline in entering the laboratory room. There were still students who did not bring laboratory coats which they forgot to bring it. There were unfinished practicum journal containing title, purpose, basic theory, and hypothesis.

Besides, the low students'motivation, the other problems that arose were the low sensitivity of students to the problems that existed in the environment. This happened because the students had not been accustomed to work on some questions (tests) which were based on the problem based learning. There were the low-skill science processes in planning or designing experiments, observing, predicting, interpreting observations, applying concepts, using tools & materials, and communicating. Based on the results of student interviews practicum activities were very time-consuming because we were preoccupied with journals and reports, but the concept of understanding received was not maximized. The students were already exhausted by the steps of practicum activities by writing. Furthermore, if aspects of the science process were ruled out because lecturers only judged in terms of science products. It was also experienced by Dahniar (2006) that teachers provided a science products portion more than the process of science so that students ignored the process of science. In this case, "the student did not need to practice because later on the exam was the ability to calculate the amount of the heat".

The results analysis of the basic chemistry questionnaire integrated the skills of the science process in 2015 on the Asidi-Alkalimetri material. The observation result of science process skill on the observing indicator showed that some students were able

to use the senses to observe TAT or end point of titration. The other part was still excessive in the use of titrant in the titration process. The color of erlenmayer should be pink instead of purple. The use of PP indicator as the indicator of acid-base titration. The activity of "observing" was reflected from the student's activity of observing miniskus. This experiment was a quantitative experiment, the role of tool validation, and highly observation is emphasized. The most still used the measuring glass as a tool to measure the solution of vinegar and KOH acid.

The second indicator was "interpreting observations". The students were able to record the observations well. This could be seen when students presented the data in tabular form. The titration process was carried out three times repetition. The students had been able to find the resulting volume patterns generated in forming the end point of the titration.

The third indicator was "applying the concept". The students were still confused about the concept used. Students were confused in distinguishing the concept of alkali and acidimetry. One group had an error in the experimental alkalimetry. Student determined oxalic acid as a titrant and NaOH base as a titrat on NaOH standardization. The use of NaOH was as a standard for determining the level of vinegar acid. The concept errors occured when determining the level of vinegar acid, students did not know the formula that should be used.

The fourth indicator was "using tools and materials", used beaker glass to make and dilute KOH. Whereas, there were the available flasks for using in the process of dilution and manufacture of solution. The fifth indicator was "designing experiments. The students were able to design experiments by looking at the materials available in the laboratory by considering the similarity of the properties of the material. The students had not been able to determine the independent variable and the dependent variable. The students were able to determine the data to be observed. Appamaraka (2009) stated that observing, calculating, interpreting data, and interpreting observations could increase significantly with continuous practicum activities. All the science process skill indicators discussions above can be seen in table 1 below.

Tabel 1. Table Skills of Science Process
The Modification from (Phardan, 2000; Mei, 2007;Dahniar, 2006)

Science Process Skills	Sub Science Process Skills
Observing	✓ Using senses ✓ Collecting relevant fact

	✓ Looking for the similarities and the differences
Interpreting the Observation	✓ Writing the activities individually ✓ Relating Observation result ✓ Finding the pattern in one model ✓ Making conclusion
Applying Concept	✓ Using information, conclusion, amd theory concept in the new environment
Using Tolls and Materials	✓ Using Tools and Materials well
Planning the Activities	✓ Using tools , materials, and sources ✓ Determining variable ✓ Determining what being observed ✓ Determining the steps and the ways of working ✓ Determining steps and how to analyze the observation results

Based on the table 1, some students have been able to apply the skills of the science process well. There was still a mistake in the use of tools and concepts in the application of asidi-alkalimetry materials because of the low of basic laboratory techniques. The improvements were implemented by using Lesson Study.

3.2 **The Implementation of Lesson Study in One Cycle**

The model lecturers prepared the learning achievement objectives that were expected in the learning process. The learning outcomes were discussed with a team of chemistry lecturers. The suggestions and inputs were obtained in the stages of this discussion. This step planned lecturer model to prepare Lesson. Design. The Lesson Design results can be seen in Figure 2.

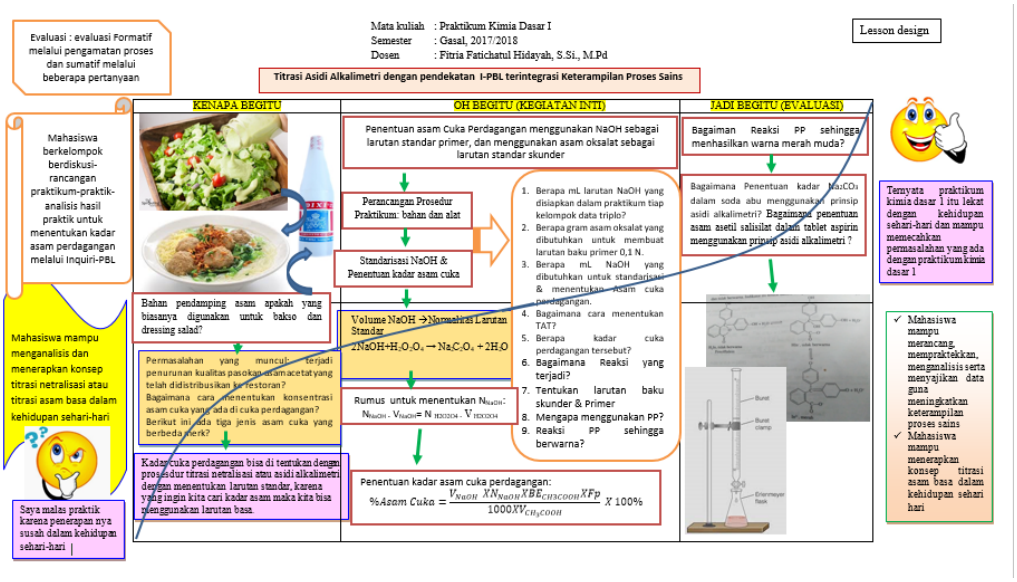


Figure 2. Lesson Design of the first phase of Basic Chemistry Practicum Subject

Based on the results of the constraints and problems of practice in 2015, the model lecturers applied learning through I-PBL or Inquiry-Problem Based Learning. In this study, science-based learning process of science skill emphasized the individual students' activities in constructing chemical knowledge but provided opportunities for students to interact socially through scaffolding to help students who had difficulty in learning. In the student discussion activities there could be scaffolding, interaction between students occurred in one group and between groups. Students who understood the material well could help students who had not understood the material well.

Monson (2011) stated that "the concept behind inquiry-based construction education is the best practice of constructivist learning. The selection of Inquiry's learning model is able to reconstruct the students so that the independence and exploration of learning can be done by the students. It is also confirmed by Akinbolbola (2010) that the use of inquiry model can improve data manipulation (17.20%), calculate (14.20%), record (13.60%), observe (12.00%) and communicating (11.40%). The providing problems could make students more curious and able to solve the problem through the help of various learning resources. In Figure 3 was a picture of the problem given to the practicum activity.

Vinegar and olive oil are the main ingredients in most salad dressings. Acetic acid is present in vinegar. Vinegar is an aqueous solution containing acetic acid as a solute. You are a member of the chemical analysis team. Your team is asked to analyze the quality of the vinegar supply used in a company. This is because, the company has received a complaint that one of their dressings is not suitable for serving a salad that is served, but the condition of olive oil is not problematic. Your team is required to determine the concentration (molarity and vinegar content) of acetic acid in vinegar samples that the company distributes to restaurants.

Figure 3. The Problem about vinegar acids

Based on figure 3, students helped the restaurant to determine the level of vinegar acids trade. Vinegar comes from three types of vinegar companies namely "virtual" vinegar, "Value Plus" and "Dixi". The concept of alkalimetry is used in the determination of the levels of commercial vinegar. In addition to alkalimetry, the principle of preparation of the solution, the dilution principle, the stoichiometric principle also supports this practicum. Practically, there are some prerequisite subjects that must be taken for the basic chemistry practicum courses, basic laboratory techniques and basic chemistry.

The implementation stages of Lesson Study began with briefing. The model lecturer inforeds about the stages and methods in the lecture. The Model lecturers and observer team equated the perceptions related to practice material in the form of determination of vinegar acids trade. The Students solved the problem of "How to determine the level of trade vinegar acids" in Figure 3. The flow of this practice activity can be seen in figure 4. There were five stages in I-PBL-based practice to improve students' science process skills. The Apperception carried out through the picture "meatballs and salads". The Students mentioned completeness of spice from the food. Furthermore, the lecturer gave the problem in Figure 3 for discussion.

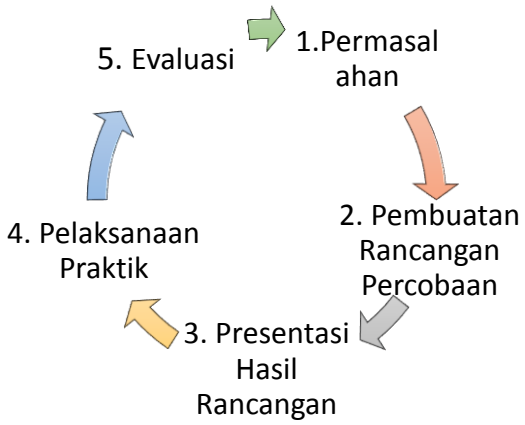


Figure 4. Basic Chemistry Practicum Steps

Based on the results of the discussion, obtained three working procedures to determine the level of acetic acid trading. The Preparation of the experimental plan was expected to enable students to design high school level practice. Based on the draft,

students carried out the practice in accordance with the practice procedure of each group design.

The results of each group's design had different uniqueness. Figure 5 shows the results of experimental designs beginning with the KOH standardization process, and determination.

Figure 5. The Results of Experimental Design Determination of Acid Trading

The analysis of the use of tools and materials was complete but there were still some tools that had not been thought of to be used were stative, glass funnel, tray, spray bottle, clamp, scales or balance, round bottom flask or pumpkin *takar*, some used measuring glass. It was able to determine the material needed in the determination of vinegar acid levels. The initial plan for the use of base as a secondary standard solution was NaOH. But students replaced it with KOH solution. Students were able to analyze the similarity of the properties of both materials. Based on the description, students had been able to determine the material as a secondary solution. Students were not transfixed by exploration results from other sources of reading.

This group had been able to determine the variables to be observed that is the volume of KOH used for acid base titration. In addition, it was able to determine the point of titrasi (TAT) well. It was happened because of some mistakes that did not pay attention to miniskus when the titration process, so the result of titration was not maximal. Generally, all groups had been able to write down the work steps correctly but the work that made was still lack of detail. The need for improvement in accuracy and coherency of the ability to write the working procedure through the picture needs

to be trained again so that there were no misunderstanding in the use of tools. The drawing was considered trivial, but it required precision to be able to visualize laboratory equipment.

The ability to communicate the experimental results is not maximized. It was seen there was still one group not yet confident with the results of the experiment. The activity of throwing paper notes from one member to another made the indicator of self-confidence. According to Wening (2011) group work can give students the opportunity to cooperate in their group comfortably without feeling ashamed to communicate and the students are free to issue their ideas without fear in criticism. But ,it is not well understood by students.

The system of practice flow in learning needed improvement namely the existence of prior approval before practicum. Furthermore, the students more easily applied in the concept of calculation. So, it would form a learning system that was directed and more optimal. The experimental path began with the design-presentation-approval-evaluation-design-issue feed.

4. Conclusion

The ability of students' science process skills is good on the indicators capable of planning experiments, able to communicate experiments, and able to observe closely. Whereas, the concept comprehension is still low and the ability to use the tool is also low. Moreover, the system used in the learning needs improvement which also needs approval first before practicing the practicum. Furthermore, the students more easily apply in the concept of calculation. Based on the results of Lesson Study reflection required well preparation so that the learning results are better and maximal.

Reference

Abungu, H. (2014). Effects Of Science Process Skills Teaching Approach On Secondary School Students' Self-Concept In Chemistry In Nyando District, Kenya International Journal of Social Science & Interdisciplinary Research_____ ISSN 2277-3630 IJSSIR, Vol. 3 (6), JUNE (2014), PP. 23-35 Online available at indianresearchjournals.com.

Akinbobol, A.O. (2010). Analysis of Science Process Skills in West African Senior Secondary School Certificate Physics Practical Examinations in Nigeria. American-Eurasian Journal of Scientific Research 5 (4): 234-240, 2010 ISSN 1818-6785 © IDOSI Publications, 2010.

Appamaraka, Sombat. (2009). Effects of Learning Enviromental Education Using the 5Ed-Learning Cycle Approach with the Metacognitive move and The Teacher's Handbook Approach on Learning Achivment, Integrated Science Process Skills and Critical Thinking Of High School (Grade 9)Student. Pakistan Journal of Social Sciences 6 (5) 287-291,2009. ISSN: 1683-8831.

Çakir, K.H. (2010). An evaluation of science process skills of the science teaching majors. Procedia Social and Behavioral Sciences 9 (2010) 1592–1596.

Dahniar, H. (2006). *Science Project* Sebagai Salah Satu Alternatif dalam meningkatkan Keterampilan Proses Sains di SMP. Jurnal Pendidikan Inovatif Volume 2, Nomor 1, September 2006. Tanggal akses 08 September 2017

Dudley, Pete. (2011).Lesson Study: a handbook. www.lesson study.uk. Tanggal akses 08 September 2017

Hidayah, Fitria.F. (2015). Diskripsi Keterampilan Proses Sains Calon Guru Kimia Berbasis Inquiry Pada Praktikum Kimia Dasar. Jurnal Pendidikan Kimia UNIMUS. Volume 03 Nomor 01 2015. Tanggal akses 08 September 2017

Karsli, F. (2011). Developing a Laboratory Activity on Electrochemical Cell By Using 5e Learning Model for Teaching and Improving Science Process Skills. Western Anatolia Journal of Educational Sciences (WAJES), Dokuz Eylul University Institute, Izmir, Turkey ISSN 1308-8971.

Mason, C. (2011). Concept of inquiry, constructivist learning, and the potentials of studio in contruction education. *Annual International Conferennce Proceeding*: Mississippi State University.

Mei, Greace. T.Y.(2007). Promoting Science Process Skills And The Relevance Of Science Through Science Alive! Programm*Procceding* of the Redesigning: Culture, knowledge and Understanding Conference, Singapore, May 2007.

Phardan, Harcharan. (2000). Science Activities and Ideas Experiencing Science Process Skills. *Teacher's Resource*. University Of Alberta. [Akses tanggal 08 September 2017].

Supahar. (2010).Menanamkan Keterampilan Proses Sains IPA Pada Siswa Dengan Strategi Pembelajaran Outdoor Activities Dalam Kegiatan Lesson Study Berbasis Sekolah (LSBS).Prosiding Seminar Nasional Penelitian, Pendidikan dan Penerapan MIPA, Fakultas MIPA, Universitas Negeri Yogyakarta, 15 Mei 2010

Susilo, H, dkk. (2011). Lesson StudyBerbasis Sekolah. Malang: Bayumedia publising. Tanggal akses 08 September 2017.

Wenning, Carl. J. (2011). Experimental Inquiry in Introductory Physics Courses. Journal of Physics Teacher Education, 6(2) : 1-8.

The implementation of Guided Discovery Methods to Improve Students Interest and Learning Activities in Statistics

B. Fitri Rahmawati[1], Badarudin[2], Sri Setyawati, Mulyaningsih[3]

fitri.fkiphamzanwadi@gmail.com

Abstract

The purpose of this study is to describe the aplication of guided discovery method to increase student's interest and learning activities of statistics courses on students of history education. This research uses the classroom action research model of Kemmis and Taggart wich is impelemented in two cycles. Data collection techniques using observation sheets to measure the implementation of guided discovery method and student learning activities, questionnaires to measure student interest and interview. Data analysis in this study using descriptive analysis both quantitative and qualitative. The result of this study indicate that the application of guided discovery method can increase student interest and learning activities. In the first cycle the impelementation of learning method reaches 75% and increase to 80% in the second cycle, the student's learning activity reaches 60% and increase to 80% in the second cycle, and the student's interest reaches 60% and increase to 80% in the second cycle. The results of this study have implication for teaching practices, that the guided discovery methods can be used as an alternative to develop student interest and provide a conducive learning environment for the activities, the involvement, and the participation of students in the process of learning.

Keywords : *guided discovery, students interest, learning activities*

A. Introduction

Statistics is one of the less desirable subjects by students of History Education Studies Program. According to the results of a short interview with students, all assume that statistics is a difficult course to understand. Therefore, none of the students have plans to conduct quantitative research that utilizes statistics as an analysis. The conditions reflected in the early learning process of the statistics are the students paying little attention to the lecturer's explanation, looking sleepy during the lesson, not doing the assigned task, not asking or answering questions, and conditions that indicate the non-conducive learning atmosphere. This condition indicates a very low student interest in statistics courses. This is certainly a challenge for the learner of statistical subjects.

Interest is very important to encourage students to learn as stated that interest is a powerful motivator to perform an activity (Sandjaja, 2005). Interest in moving students to perform activities in learning activities because it can cause a sense of fun and

interest in something. States that interest is "a sedentary tendency in the subject to be interested in a particular field or thing and feel good about it" (Winkel, 1984, p.30). Similarly, Djamarah states that interest is "a tendency settled to pay attention and remember some activities. A person who is interested in the activity will pay attention to the activity consistently with pleasure (2008, p.132). That means that students who have an interest in learning statistics will be actively involved in learning activities. It is done consistently with great pleasure and enthusiasm. Slameto also states the same thing that interest is "a sense of preferences and a sense of interest in a thing or activity"(2010, p.180).

A sense of pleasure leads to tendency, attraction, excitement and desire for something. Purwadarminta (2007, p.744) and Baharudin (2007, p.24) and Shah (2011, p.152) also stated the same thing that interest means tendency, enthusiasm and high desire for something. Students who have an interest in statistical are characterized by a sense of attraction, full attention, high involvement, tend to be passionate and have a high desire to study and explore statistical materials. This condition is very expected to occur in the learning activities so that the learning objectives set can be achieved.

Singer states that interest is not something that a person has for granted, but is something that can be developed(1987, p. 93). Hurlock (2003) also states that interest is not permanent, but interest is temporary or subject to change. The presence or absence of student interest in learning can be influenced by two factors namely internal and external factors.

According to Shah, internal factors include concentration of attention, curiosity, motivation, and needs (2011, p. 152). While external factors are something that makes students interested coming from outside the self, such as: encouragement from parents, encouragement from teachers, the availability of infrastructure and facilities or facilities, and environmental conditions. According to Arends (2008, p.162) that using various activities and learning methods keeps students interested in school and school tasks. Thus, one way that can be done to develop student interest is by applying a model of learning that can stimulate student interest to do learning activities, because according to Dewey, learning is about what to do for students themselves, the teacher only acts as a facilitator (Wikipedia, 2017)

One of the learning methods that can be applied is the method of guided discovery as found in Ibe (2013) in his research that guided discovery makes the students become more active. Active students become one of the indicators of high interest. Guided discovery methods are deliberately designed to enhance the activity of larger, process-oriented students, to find out for themselves the information needed to achieve instructional objectives.

Discovery is "a process", ie student activity in finding problem solving. In guided discovery method, lecturers are still involved in the learning process (Cooney, 1975, p.

138). According to Martin (2006, p. 223), "guided invention incorporates expository methods with free-discovery". That means, guided discovery methods combine teacher-centered approach with student-centered. Ganyaupfu (2013) calls it by the term teacher-student interactive method. He further states that "The method encourages the students to search for relevant knowledge rather than the lecturer of monopolizing the transmission of information to the learners".

In guided discovery, the lecturer's role is to guide, support, and facilitate the learning process. In this case, lecturers choose the topic and set the learning objectives, then students who seek their own answers or solutions to problems and make conclusions and reconstruct the concept according to agreed procedures. As Leslie, et al stated that in a guided inquiry, the students are encouraged to resolve problems either on their own or in groups (2004, p. 191). Guided discovery learning activities emphasize direct learning experiences through inquiry activities, finding concepts and then applying the concepts that have been gained in daily life. Students are encouraged to think critically, analyze themselves, so they can find general concept or principle based on material / data provided by the teacher.

Guided discovery learning methods are also applied in different forms as Eggen stated (2012, p. 177) that guided discovery is a method of learning where in the learning process where the teacher gives students specific examples of topics and guides students to understand the topic. This method of learning is a way to understand a topic. The function of teachers here is not to solve problems for learners, but to make learners are able to solve the problem itself.

In this study, Martin uses the concept (2006, p. 223) which states that guided discovery methods are methods that combine expository methods with free-discovery. In this model, lecturer assist students in formulating problem, establishes the hypothesis, determining analytical tools, performing analysis, and draw the conclusion / decision on the test.

This guided discovery method requires students to solve problems directly, so as to increase student learning activities. The results of Juweni, Sumadji and Wulandari (2016) suggest that guided discovery methods can improve student learning activities. Similarly with the results of Lestari research, Subiki and Lesmono (2017) that students who are taught using guided discovery method is quite active because this method provides an opportunity for students to participate in the learning process. One of the advantages of using guided discovery methods is that the student can actively participate in the learning presented (Markaban, 2006, p. 17) because he thinks and uses the ability to find the final outcome (Suherman, et al., 2003, p. 214). Therefore, in this research will examine the implementation of guided discovery method in increasing interest and learning activity of statistics student of study program of history education.

B. Method

This research uses classroom action research (Classroon Action Research) with qualitative approach. In this approach where description is descriptive in the form of words, researchers are the first instrument in data collection, the process is as important as the product. This study adopted a model developed by Kemmis and Taggart which consists of four steps: planning, acting, observing and reflecting in two cycles. The study was conducted on 14th semester students. Data collection techniques in this study using an observation sheet to measure the implementation of guided discovery methods and student activities, as well as questionnaires to measure student interest. Data analysis using descriptive analysis both quantitative and qualitative.

C. Findings and Discussion

This study was conducted in two cycles where the second cycle is an improvement of the deficiencies that occur in the first cycle.

Preliminary

This stage is done at the initial meetings of statistical learning to identify the learning problems that the solution wants to improve or solve. Through lecture activities, simultaneous observations and interviews were conducted related to how students' responses and perceptions of statistical learning, materials, understanding and methods were used.

Cycle I

Planning

At the planning stage, a lecturer who is both a researcher and collaborator with two colleagues determines the method of learning that will be applied based on identified problems. The established learning method is the guided discovery method. The next step is to prepare a learning scenario of guided discovery methods. Guided discovery scenarios consist of preliminary activities, core activities and coverings. Preliminary activities include apperception and motivation. While the core activities contain learning steps using guided discovery methods, namely:

1. Identify the problem
2. Formulate the problem.
3. Formulate the hypothesis to be tested.
4. Determine how to test the hypothesis and decision criteria.
5. Analyze the data used as an example in the calculation process.
6. Drawing conclusions

In closing activities, the lecturer gives direction, explanation, clarification and emphasis on the concepts that have been found. The next activity is to arrange the instrument in the form of observation sheet to measure the implementation of learning

method and student activity, and questionnaire to measure student's interest. Observation sheet to measure the implementation of learning method refers to the learning scenario of guided learning method that contains the activities of lecturers at each learning step. While the observation sheet for the student activity contains about the activities that must be done by the students on each of the learning steps using guided discovery method. Questionnaires for measuring student interest are based on operational definitions and interest-learning indicators used in this study: feelings of pleasure, student interest, student attention, and student involvement.

Acting

The implementation of cycle I action lasted for 3 meetings and discussed the requirements analysis test material. Preliminary activities begin by praying and checking the attendance of the students, then the lecturer gives apersepsi in the form of initial knowledge about the normality of data and provide examples and questions about the surrounding events related to the learning materials.

In the core activities, the lecturer guides students to identify issues related to the material of data normality and provide worksheets containing the data to be tested for their normality. After the problem has been identified, the student assisted by the lecturer formulates the problem clearly and formulates the hypothesis. The next step is to determine the analytical formula to be used, and then proceed with analyzing the data already given. At this stage, the lecturers help the students by modeling the way of counting which is then continued by the students. To simplify the counting process, the student worksheet contains data and help tables for normality testing. The helper table is empty because it will be filled by the students. The next step is to provide worksheets to students in the form of empty tables that will be filled by the students themselves through the process of self-done calculations guided by the lecturer. Worksheets were given to each student and asked to work alone. After the counting process is completed, the student with the supervised lecturer gives a conclusion about whether or not the data is calculated. The meeting was closed by giving direction, explanation and clarification on the material already discussed and giving questionnaires to the students.

Observing

Observations are conducted in conjunction with the implementation of the action. The observer is a two-person researcher who is each assigned to observe the implementation of learning methods and student activities. based on the analysis of the observation sheet on lecturer activity, it can be stated that the percentage of implementation of guided discovery method has reached 75%, while the new student activity reaches 60%. The result of observation shows that student participation in all learning step is still low. There are still many students who show indifference to the activities of identifying and formulating problems, analyzing data and drawing conclusions. The result of

questionnaire analysis of student interest also shows that students are interested enough in learning with percentage of 60%. Although students are happy with the application of guided discovery methods, their participation in learning activities is lacking.

Reflecting

In this activity, researchers and members discuss the shortcomings that occur both in planning and implementation of learning. The shortcomings in cycle I are:

1. Lecturer's activities are still not good in terms of quantity and quality of each learning step is given. Lecturers do not convey the purpose of learning and less motivate students, provide classical guidance and only when somebody asks.
2. Student activity is still low, there are still many students who do not participate in learning activities.
3. Student interest also needs to be improved although already in the category enough, especially attention and involvement in learning activities.

Cycle II

Planning

Referring to the shortcomings that occur in cycle I then there are some things that are changed related to the learning scenario. In the first cycle, the data analysis activities performed individually, then in this second cycle of data analysis activities conducted in groups. Thus, all students are expected to be actively involved in the discussion activities and can optimize the time as specified.

Acting

Cycle II discusses hypothesis testing consisting of three types of hypotheses namely descriptive hypothesis, associative hypothesis and comparative hypothesis. Learning activities are held for three meetings. At each meeting, learning activities begin by praying and checking the attendance of students. The activity is then continued by giving apperception by providing an introduction to the material discussed, giving examples and linking the material discussed with the previous material. After giving apersepsi, students are given motivation by giving explanation about the usefulness and relevance for the sustainability of student studies.

In the core activities, after identifying the problem, formulating the problem and the hypothesis, the student is given a worksheet and is asked to sit face-to-face with his colleagues, discussing the answer of each problem on the shared worksheet, with the division of the task of one person counting and the other writing the result. Only then will it conclude or determine the decision about the rejection and acceptance of the hypothesis. Learning activities are closed by providing explanations, affirmations and clarifications related to the learning process and concepts that have been discussed. In the final activity, students are asked to fill the questionnaire of interest in learning.

Observing

Observation activity in cycle II is also simultaneously with the implementation of learning activities. Based on the results of observation can be stated that the implementation of learning using guided discovery method reached 80%. Observations on student learning activities have also reached 85%. The student's interest in learning also increased to 75%. The analysis shows that the lecturers have implemented the learning steps as planned, the drawback is the quality of each activity. Students also showed high participation, especially in data analysis activities. Guided learning method also improves students' interest.

Reflection

At this stage, all researchers discuss the success rate of the study. Based on the results of the above analysis, it appears that cycle II shows success in achieving the target of research results that reaches at least 75% for each variable measured. Therefore, the research is sufficient for up to two cycles.

Based on the analysis results from cycles I and II in this study, it appears that there is an increase in the implementation of learning using guided discovery methods, learning activities and student interest towards the course statistics. For more details the increase can be presented in the following table:

Table 1 Percentage Achievement of Each Cycle

Variable	% Cycle I	% Cycle II	Description
Implementation of guided discovery method	75	80	Increases
Learning activities	60	80	Increases
Students interest	60	75	Increases

Through guided learning methods, learning activities and interest of students to the course of statistics can be improved. Guided discovery provides an opportunity for students to be directly involved in learning activities. All the learning steps in this method, designed based on the student-centered paradigm, that the learning is centered on the students. Students who study, lecturers only act as facilitators and mediators so that the process of learning in the students can occur.

In this guided discovery method, students undertake all core learning activities from identifying problems to decision-making with mentors guided. This learning activity requires students to be actively involved so as to enhance their learning activities. As stated Sardiman (2011: 96) that learning activities can be seen from student activities

during learning. In the interaction of teaching and learning, teachers act as mentors. Teachers must try to live and motivate conducive interaction, teachers must be ready as mediator in all teaching and learning process situation, so that teacher is a character that will be seen and will be imitated by student behavior. The teacher as a facilitator will lead the interaction of teaching and learning. This kind of learning activities make students active in the learning process, teachers only act as facilitators to organize the course of learning. Such learning process brings a positive impact on the development of students' thinking creativity. According to Joyce & Weil (2000, p.199) the advantage of the method of discovery is to help students develop intellectual discipline and skill needs to arouse curiosity and seek answers from his curiosity.

In addition to improving student learning activities, guided learning methods also increase student interest in statistics courses. High learning activities show high participation as well. An active student indicates he has an interest in what he or she is learnig. From the interview, the students stated that they were happy to be able to solve the problem that had been considered difficult. By finding out for themselves the solution of the problem, the students become aware that the course of statistics is not as difficult as imagined. From their experience, it seems clear that all the problems that they learned in the lesson can be solved well. This condition of course change their perceptions and fears in the course of statistics. This is what fosters student's passion and interest, so that interest increases. Purwanto (2007, p. 56) states that what attracts one's interest pushes him to do more active and better. This study shows that learning activities are also increasing. This shows that when students are interested in statistics, they will do their best in learning and understanding. Student activity can be an indicator of the success of learning because the activity is one of the attitudes and efforts of students in acquiring knowledge so as to strengthen their understanding of the material that will be able to improve learning achievement. As expressed Djamarah (2008, p. 133) that great interest influence on learning activities.

D. Conclusions and Suggestions

Based on the results of research and discussion that has been stated above it can be concluded that the application of guided learning method (guided discovery) can increase interest and learning activities of student statistics.

Based on the above conclusions can be put forward the following suggestions:

1. Guided discovery methods can be a chosen alternative to increase student interest and learning activities.
2. For further research to develop guided discovery learning method that can be applied not only in science of science, but also on social science learning.

E. References

Baharudin & Wahyuni, E. N. (2007). *Teori Belajar dan Pembelajaran*. Jogjakarta: Ar-Ruzz Media.

Cooney, T. J. (1975). *Dynamics Of Teaching Secondary School Mathematics*. Boston: Houghton Mifflin.

Djamarah, S.B. (2008). Psikologi Belajar. Jakarta: Rineka Cipta

Eggen, Paul and Kauchak, Don. (2012). *Strategi dan Metode Pembelajaran Mengejar Konten dan Keterampilan berpikir*. Jakarta: Indeks

Ganyaupfu, E.M . (2013). Teaching Methods and Students' Academic Performance. *International Journal of Humanities and Social Science Invention*, 2 (9), 29-35. ISSN (Online): 2319 – 7722, ISSN (Print): 2319 – 7714 Available online at www.ijhssi.org.

Hudojo, H. (1988). *Mengajar Belajar Matematika.* Jakarta: Departemen Pendidikan dan Kebudayaan.

Hurlock, E. (2003). *Psikologi Perkembangan suatu pendekatan*. Jakarta: Erlangga.

Ibe, H.N.N. (2013). Effects Of Guided-Inquir And Expository Teaching Methods On Senior Secondary School Students' Performances In Biology In Imo State. *Journal of Education Research and Behavioral Sciences*, 2(4), 051-057, ISSN 2315-8735. Available online at http://www.apexjournal.org/

Joyce, B & M. Weil. (2000). *Model of Teaching*. Amerika: A. Pearson Educational Company.

Juweni, Sumadji, & Wulandari, T.C. 2016. Penerapan Metode Penemuan Terbimbing Untuk Meningkatkan Hasil Belajar Mahasiswa. *Prosiding Seminar Nasional Pendidikan Matematika Universitas Kanjuruhan Malang*

Leslie, et al. (2004). *Teaching Secondary School Science: Strategies for Developing Scientific Literacy*. United States: Pearson Education.

Lestari, M.E., Subiki, & Lesmono, A.D. (2017). The Effect of Guided Discovery Model with LKS of Mind Mapping on Learning Outcomes and Learning Activities in Physics Learning at SMA 1 Cluring. *PancaranPendidikan*, 6 (2), 133-140. DOI:10.25037. Available online at http://www.pancaranpendidikan.or.id

Markaban. (2006). *Model Pembelajaran Matematika Dengan Pendekatan Penemuan Terbimbing*. Yogyakarta: Departemen pendidikan nasional pusat pengembangan dan penetaran guru matematika.

Martin, A.J & Marsh, H.W. (2006). Academic Resilience And Its Psychological And Educational Correlates: A Construct Validity Approach. *Psychology in the School*, 43(3), 267-281.

Purwadarminta. (2007). *Kamus umum bahasa Indonesia*. Jakarta: PN Balai

Sandjaja, S. (2005). *Pengaruh keterlibatan orang tua terhadap minat membaca anak ditinjau dari pendekatan stress ligkungan* (online), 11 halaman. Tersedia : www.unika.ac.id. 02/05/05. (5 Januari 2017)

Sardiman, A.M. (2011). *Interaksi dan Motivasi Belajar Mengajar*. Jakarta: Rajagrafindo.

Singer, Kurk, dkk.. (1987). *Membina Hasrat Belajar di Sekolah*. Jakarta: Remaja Rosdakarya

Slameto. (2010). *Belajar Dan Faktor-Faktor Yang Mempengaruhinya*. Jakarta: Rineka Cipta

Syah, M. (2011). *Psikologi Belajar*. Jakarta: PT Raja Grafindo Persada.

Winkel, WS. (1984). *Psikologi Pendidikan dan Evaluasi Belajar*. Jakarta: Gramedia

Suherman, E. dkk. (2003). *Strategi Pembelajaran Matematika Kontemporer*. Bandung: UPI.