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## PROCEEDING

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<b>Ida Ryanti, Henny Suharyati</b>	279
STUDENTS' INTERACTION IN THE ENVIRONMENTAL SCIENCES CLASSROOM: IMPLEMENTATION OF ARGUMENTATION REAL-WORLD INQUIRY MODEL <b>Rita Istiana, Desti Herawati</b>	286
STUDENTS' PERCEPTION ON IMPLEMENTING LSLC (LESSON STUDY FOR LEARNING COMMUNITY) <b>Sri Rejeki, Humaira, Nanang Rahman</b>	291
THE IMPEMEMNTATION OF DISCOVERY LEARNING METHOD THROUGH LESSON STUDY TO INCREASE LEARNING INTEREST AND LEARNING ACHIEVEMENT <b>Tarpin Juandi, Sy. Rossida Safiqyani</b>	294
COLLABORATION OF TPACK (Technological Pedagogical Content Knowledge) BIOLOGICAL LEARNING DEVICES IN ASSESSING STUDENT ACTIVITIES IN HIGH SCHOOL PASUNDAN 1 BANDUNG <b>Cita Tresnawati, Kurniawati Rahayu, Uus Toharudin, Cartono</b>	301
IMPROVEMENT CRITICAL THINKING SKILL USING DISCOVERY LEARNING TROUGH LESSON STUDY IN BHAKTI WINAYA PRIMARY SCHOOL BANDUNG <b>Nurul Fazriyah, N. Mamah Komalawati, Aas Sarawasati, Acep Roni Hamdani</b>	306
THE INTEGRATION OF SYSTEM THINKING IN STEM ACTIVITIES USING THE LESSON STUDY APPROACH <b>Sayidah Nusaibah Mohd Salehudin, Zanaton H. Iksan, Siti Nur Diyana Mahmud</b>	311
IMPROVING PROFESSIONAL COMMITMENT THROUGH DEVELOPMENT OF ORGANIZATIONAL CLIMATE AND SELF-EFFICACY <b>Setya Aprilia, Sumardi, Henny Suharyati</b>	318
IMPLEMENTATION OF INTEGRATER CHARACTER THAT LEARNING DISOBEY CHEMISTRY AND BIOLOGY IS <i>LESSON STUDY</i> BASE BECAUSE OF CONCTRUKTIVE INTELLIGENCE STUDENT SMA PARIGI MOUTONG DAN SMA KOTA PALU <b>Suherman and Sri Mulyani S.</b>	325
THE APPLICATION OF <i>PROCESS-ORIENTED GUIDED-INQUIRY LEARNING</i> (POGIL) TECHNIQUES THROUGH LESSON STUDY ACTIVITIES IN EDUCATIONAL MANAGEMENT COURSES TO INCREASE LEARNING ACTIVITY <b>Veny Agustini Prianggita</b>	336
EXPLORING THE CHALLENGES OF COLLABORATIVE PLANNING IN THE IMPLEMENTATION OF LSLC IN MICRO TEACHING <b>Yenni Rozimela</b>	343

# IMPROVEMENT CRITICAL THINKING SKILL USING DISCOVERY LEARNING THROUGH LESSON STUDY IN BHAKTI WINAYA PRIMARY SCHOOL BANDUNG

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**Abstract**— Improving the quality of learning at this time is very urgent. Various efforts that can be done by educators one of them is through using the right learning model. This study aims: (1) To describe the application of lesson study through the use of discovery models (2) To improve the critical thinking skills of elementary students through the use of discovery learning models. This type of research is qualitative with descriptive method. The subject of the research was the fourth grade students of SDN Bhakti Winaya. The data of this research is the implementation of plan, do and see. The research was carried out in the form of assignments of lecturers to schools and conducted as many as 8 meetings. The validity of the data is done through triangulation techniques. Based on the results of the study it can be concluded that the application of lesson study uses discovery learning models carried out according to the stages in the lesson study namely plan, do, and see. Lesson study makes the learning planning process easier so that in the implementation of learning the model lecturer feels more prepared. Lesson Study can effectively improve the quality of learning.

**Keywords**—*critical thinking, lesson study, discovery learning*

## INTRODUCTION

Learning is an activity or a process to gain knowledge, improve skills, improve behavior, attitudes, and strengthen personality. In the context of becoming aware or the process of gaining knowledge, according to conventional scientific understanding, contact with humans with nature is termed experience. Experience that has happened repeatedly gave birth to knowledge, or a body of knowledge.

Learning is said to be successful if someone is able to repeat the material he has learned, so learning like this is called rote learning, learning memorization, learning through memory, by heart, out of mind, without predicting meaning. Rote learning is the opposite of meaningful learning, meaningful learning. According to Hilgard, learning is a process where a behavior arises or changes due to a response to a situation. Furthermore, with the Marquis, Hilgard renewed his definition by stating that learning is a process of seeking knowledge that occurs in a person through practice, learning and so on so that there is a change in oneself.

Student learn from their experience in their life included in the class. Learning can move from the interaction and experience gained by the individual. Learning activities will affect the learning outcomes obtained by individuals during the learning process, whether they can obtain knowledge well or only temporarily, it depends on each individual who performs the learning process.

The learning process can be said to be effective if students active (intellectual, emotional, social) take part in learning activities, dare to express opinions, be enthusiastic, critical, and cooperative. Likewise with optimal learning outcomes can be seen from the completeness of learning, skilled in doing tasks, and have a good appreciation of the lesson. Optimal learning outcomes are the acquisition of an optimal learning process as well. To obtain optimal learning processes and outcomes, educators should pay attention to the principles and stages of learning during the learning process activities.

Thinking activities and learning activities have relationships. The more students develop thinking skills, the more they learn. If students learn more and more about a topic, the better

their thinking skills are. hence the ability to think is very important to note so that student learning outcomes can increase due to contact.

The thought process can manifest in two forms, namely: low-level thinking processes and high-level thinking processes. In humans high-level thinking skills are in the form of argumentation, problem solving, critical thinking, innovative thinking, and becoming an entrepreneur. Some regard all the skills for cognitive processes beyond perception and memorization as higher order thinking, while others think that only complex thinking skills such as problem solving, critical thinking, decision making and creative problem solving belong to higher-order thinking skills.

Johnson suggested that thinking skills can be distinguished into critical thinking and creative thinking. These two types of abilities are also called high-level thinking skills. Tilaar explained that these two types of thinking are based on critical or judgment decisions. Critical decisions are the basis of critical thinking and creative thinking. Creative decisions are also the basis of critical thinking and creative thinking. So it can be said that critical thinking is based on critical decisions and creative decisions. In other words, critical thinking includes critical thinking and decision.

Based on the results of critical thinking ability pre-test, it is known that the ability of fourth grade students in the Bhakti Winaya elementary school is still low. Then when seen in observations their learning activities are also many who are passive and embarrassed to ask question to the teacher. So this is the reason why this research do to improve critical thinking ability student on Bhakti Winaya School especially class IV.

This study uses Lesson Study as a solution to the problem of improving the quality of learning and improving students' critical thinking skills. Lesson Study is a competency development process professional teachers developed systematically in the system education in Japan with a purpose main makes the learning process become better and more effective. Lesson Study is defined as a model professional training of educators through learning assessment collaborative and sustainable, based on corporate principles to build a learning community.

Lewis stated that Lesson study has four objectives main, namely to: (1) obtain better understanding about how students learn and lecturers teach; (2) obtain results certain that can be utilized by other lecturers, outside the lesson participants study; (3) improve learning systematically through inquiry collaborative; (4) build a pedagogical knowledge, where is one lecturers can draw knowledge from other lecturers.

Learning model used in this study is a discovery learning model. the reason for using this model is Bruner's opinion that discovery learning is learning to find out where a student is faced with a problem or situation that seems odd so students can find a way to solve it. This model departs from the view that students as subjects and objects in learning have the basic ability to develop optimally according to their abilities. The learning process must be seen as a stimulus that can challenge students to carry out learning activities. The role of educators is to establish themselves as instructors or learning leaders and facilitators of learning. Thus, students do more activities on their own or in the form of groups solving problems with the guidance of educators.

## **METHOD**

This type of research is qualitative using descriptive methods. The research subjects were students fourth grade elementary school which numbered 31 students. The data of this study are the implementation of plan, do, and see lesson study in the Thematic learning eye. 2. Data is collected in accordance with participant principles, observation, and field notes or documentation. Meanwhile, the research data sources are critical thinking tests and observers'

observations on open class activities. Examination of the validity of research data is done through triangulation techniques.

In this study, triangulation techniques were used by utilizing researchers or other observers for the purpose of re-checking the degree of data trust. For the validity of the data, the implementation of lesson study in the eye collected according to the plan stage, do, and see lesson study. Deep data analysis techniques this research was carried out with the following steps. First, collect all research data, starting from the plan, do, and see to the eye elementary school teacher. Second, classify data based on division, starting from the plan, do, and see based on activities already conducted at each meeting. Third, inventory data in the form of results recording / video of the implementation of the activity plan, do, and see in lesson study. Fourth, connect data research starts from the plan, do, and see. Fifth, describe the data lesson study based on research findings, which is then concluded from the results of research that has been done.

Before being given to the sample, this instrument was tested beforehand to 34 respondents. After testing, this instrument was then tested for validity and reliability was measured to see the truth. The validity of the instrument was carried out using Pearson Product Moment and measurement of reliability using Cronbach Alpha. This test of critical thinking skills is in the form of essays with limited answers. Giving values on answers according to the scoring rubric that has been made on a scale of 3-1

## RESULT

The first step in the lesson study team is in the plan activity is conducting classroom observations to find out how learning on thematic subjects 2 sub themes 2 Energy Benefits class IV. Observation is done twice. Some things are prepared so that the activities can be optimized, including:

a. Review lesson plan

The lecturer team reviews the lesson plan. After the lesson study team observes learning in the classroom and discuss with the teaching lecturers of Integrated Learning Courses Elementary Learning then the material distribution will be conducted to be taught in lesson study. In this study selected material types, techniques, and forms of assessment.

b. Determine the Learning Model to be Used

The lecturer team discusses the learning model that will be used in lesson study learning. Model selection learning based on the results of observation and study of theory. In this study the lecturer team concluded that the model learning that will be used is the discovery learning model.

c. Making Learning Devices

Implementation **Plan** the lesson study team compiled learning device with material that has been determined, namely type, technique, and form judgment. Learning Media arranged among other things, Chapter Design, Lesson Design, syllabus, media learning, and evaluation tools. Plan I was conducted by a lecturer team before carrying out Do I, while Plan II is implementation the results of the reflection that has been done at the end of do I. Results reflection that needs to be corrected is at the time of implementation learning while planning did not experience many changes only need improvement.

Implementation **Do** stage intended to apply learning design that has been planned. One member groups act as teachers models and other group members observe. Focus of observation directed at student learning activities guided by procedures and agreed instruments at the planning stage, not at the appearance of moderate educators in charge of teaching. For learning takes place, Observer not allowed to interfere the learning process even though they are may record it with a camera video or digital camera. Aim the main presence of

the observer is learn from learning ongoing. In research this, there is one model lecturer teach and there are 6 people who become an observer. Observer is a colleague team colleague, namely Pasundan University Bandung lecturer. After the activity model lecturer learning share the response questionnaire students must fill. Questionnaire response aims to find out the response students towards learning lesson study. In the implementation of classroom learning, model lecturer always come early with destination can prepare learning well. Learning starts at 7:30 a.m. and ends at o'clock 14.30. Learning is carried out at Bhakti Winaya Bandung. Thematic Subject 2 Subtema 2. Inside model lecturer learning use learning equipment.

Reflection activities are carried out together by the lesson team Study and observer. Results of the sheet observations made during learning is discussed in the discussion. Inputs and findings obtained, explained during reflection, including revisions that need to be done for further learning. Impression from the lecturer model about implementation between other; (1) feel happy because get a chance implement lesson study; (2) lecturers the model feels insecure teaching in front of the observed class by many observers; (3) lecturers the model was alarmed if the plan made cannot goes as expected.

Each cyclus get result of critical thinking and describe by this table :

TABLE VIII. RESULT OF CRITICAL THINKING BY EACH CYCLUS

<b>Indicator</b>	<b>Cyclus 1</b>	<b>Cyclus 2</b>	<b>Cyclus 3</b>
have the ability to induce,	10%	18%	25%
assess the credibility of an information source,	25%	30%	50%
be able to observe,	22%	40%	51%
be able to deduction	9%	12%	20%
identify assumptions.	30%	35%	46%

Based reflection on Cyclus 1, 2 and 3 there are finding in this research :

1. Students are most difficult to answer questions that deduce, and recognize problems
2. Students learn still in the form of Lower Order Thinking questions, making it difficult to answer
3. Students still weak analyze item problems solving
4. Based interview, teacher feels difficult to plan the activity based discovery learning.

Even not all indicator get raise, but findings in this result are few of indicator get raise even not much. This reason by Ashari that Critical thinking get raise if teacher always challenging student by thinking condition.

Another findings that based observation is activity student get much better from Cyclus 1 to 3. Student get active to answer, asking question and discussion with their group or in front of class. This id indicate that active learning are happen wjich is better that before. Lesson Study can effectively improve the quality of learning conducted by model lecturers. This matter because the main purpose in the implementation Lesson Study is improving quality of student learning used as the main focus and attention in classroom learning, activity students in learning increase and model lecturers play a role as a learning developer



Based on the results achieved can prove that learning by using the Discovery Learning model there is an increase in the percentage of critical thinking in each cycle on several indicators. Rationalization of this is when students are given continuous basic understanding besides being interspersed with learning strategies interesting, then slowly students will understand by themselves material or other matters whether related to teaching material or problems that exist in everyday life. [9]

## CONCLUSION

Result suggest that discovery model can raise critical thinking skill specially at elementary learner. This result can answer the question how to increase high-level thinking skills through a learning process especially lesson study. Also raise important question for current assessment in process learning.

Although it is not perfect yet because there are still not many students who can record according to critical indicators through learning based on learning findings, there is an increase in the increase.

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