

The Effect of Cooperative Learning to Enhance Students' Independence Learning in the 21st Century

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ABSTRACT

The research aims to evaluate the effectiveness of cooperative learning through lesson study in enhancing the students' self-learning in the twenty-first century. Classroom action research is the type of this study. The sample of this study was 24 students. The class is divided randomly into five small groups with 4 to 5 students. The cycle I showed that the average value of the motivation aspect was 3.17 or 79.25%; the discipline aspect was 3.37 or 84.25%; the initiative aspect was 3.21 or 80.25%, and the responsibility aspect was 3.25 or 81.25%. Cycle II found that the average value of the motivation aspect was 3.29 or 82.25%; the discipline aspect was 3.45 or 86.25%; the initiative aspect was 3.42 or 86.25%, and the responsibility aspect was 3.5 or 87.25%. In conclusion, it can be said that there was an improvement of students' autonomous learning by using Lesson Study.

Keywords: *Cooperative Learning, Independence Learning, 21st Century*

1. INTRODUCTION

In the twenty-first century, education is the best way to enhance the human index development in each country. Education is one of the main requirements to face rapid world changes. Furthermore, in the twenty-first century, students are expected to have high talent and various abilities or competencies. Additionally, the learning process is one of the primary important things for the young generation, especially students in the university. Most citizens would have at least six separate professions, necessitating essential retraining, as the constant rate of creativity would necessitate the acquisition of new skills and information. Thinking skills such as strategic thinking, problem-solving skills, imagination, and metacognition; actions skills such as teamwork, coordination, and Digital Literacy and Technology; and life skills such as leadership and career growth are only a few of the qualities that should be possessed in order to succeed in the twenty-first century (Greenstein, 2012). In the industrial revolution 4.0 Era, students must have the capacity and capability in expertise, both academic and non-academic, to compete on a global level. In the era revolution industry 4.0 or industrial revolution to succeed in the modern world, an individual or a student must learn seven skills: (1) strategic thought and problem-solving, (2) collaboration in teamwork through networks and leading through force, (3) resilience and adaptability, (4) initiative and entrepreneurialism skills, (5) communication and writing

skills, (6) knowledge access and analysis; and (7) Excitement and creativity (Tony Wagner, 2008). This phenomenon requires students to think critically and collaborate as well as autonomous learners to resolve the issue. Educators with the necessary experience would be more critical of strengthening their teaching skills. Furthermore, Educator' strategic reasoning skills have an impact on student learning outcomes. Similarly, the ability to collaborate with the collaboration of good educators will bring his class into a fun class (Yvonne L. Goddard et al., 2007).

Critical thinking skills and collaborative capabilities are indispensable in addressing problems in student's lives. Experience, a deep knowledge of a subject, simple thought processes, and attitudes are factors that go into developing college students' critical thinking abilities (Mahanal et al., 2016). The desire to collaborate is referred to as collaboration capability. Collaboration skills must be established in the twenty-first century for students and learn to improve themselves (Anantyartha & Sari, 2017). Some learning styles can help students improve critical thinking and collaborative skills. According to a report on the problem-based learning paradigm, it was discovered that it would enhance analytical thought and collaborative skills (Jones et al., 2013).

When educators perform learning well, students' critical reasoning skills and teamwork will be fully developed. One approach to do this is with the use of

lesson study. Since it has a continuous duration, lesson study may be used to enhance the learning experience. As a result, the more time spent studying, the easier it (Lenski et al., 2009). Lesson study is the type of research in the classroom research-based on learning that can develop students' ability. Lesson Study is a form of career development for teachers that encourages them to focus on their instructional activities through a preparation period that addresses collaboration, learning, and students' evaluation learning process (Lenski et al., 2009). Another side that lesson study impacts the learning process (Yakar & Turgut, 2017).

Autonomous learning is one important element in providing learning experiences to students to complete the task given for better learning. Autonomous learning is an essential element in dealing with the times, especially in 21st-century life skills that are important for students to face the changes. Problem-based learning is believed can provide students' learning autonomy (Mulyana & Sumarmo, 2015). Autonomous learning can be developed and improved by using the media of instruction to assist students in resolving the problem (Luke & Hogarth, 2011). Independence study is believed to provide the academic foundation and provide personal success for students (Field et al., 2016).

2. METHOD

Classroom action research is the type of this study. The research was conducted in September 2018. The subjects of this study were 24 undergraduate students of the Micro Economics course at Malang State University. The research was done in two meetings. The researcher was a model and four other members of the Lesson Study group as an observer (three junior lecturers and one senior lecture). The research is based on Lesson Study using a cooperative learning model, were Problem Solving and Jigsaw. Critical thinking and collaboration capabilities measured using the rubric assessment of student's proficiency in self-reliance. The received score is divided into four categories: very fine, good, less good, and poor. The percentage of self-reliance of students at the first and second meetings was compared to see whether there was an increase in their ability to think independently. Students' autonomous learning in the learning process is measured using four indicators: motivation, discipline, initiative, and responsibility. Students divided randomly into a group of 4 to 5 students using the numbering system.

3. RESULTS AND DISCUSSION

1.1 Stage I the implementation of the Lesson Study

1.1.1 The implementation of Plan Stage

Plan activity was done with the Lesson Study group. All members were internship junior lecturers. In this

activity, members discussed the lesson plan implemented in the DO stage of Lesson Study. As an example, the researcher gave an outline of his teaching goals. Furthermore, members tried to design appropriate activities to gain the objective of the study.

As a result, the team had a lesson plan for the Micro Economics course to implement Lesson Study. Based on group discussion, there were some suggestions; the researcher provided video as media for his teaching material. Lesson Study group members suggested they show the video in pre-activity as an apperception activity. It would help students to stimulate their thinking process. In while-activity, the researcher should limit the number of materials presented by students in groups. Each group at least presented two topic materials to other group members as reinforcement. As a model in this Lesson Study, the researcher should be aware of time management since it has been determined in each activity. Jigsaw is one method in teaching that required good time management to save time in teaching many things in a short time.

1.1.2 The Implementation of Do Stage

On September 21, 2018, the Do Stage was conducted for 2 x 50 minutes, with the class spread into five classes. First, each group will be given a student worksheet to explore basic economic principles. Then the group was asked to discuss the completion of the student worksheet with the other members of the group. Next, members of a group should visit other groups to understand the topic's results discussed after they finished visiting each group and the group back to their group. The last stage was presenting the group discussion results in their group in turn in front of the class.

1.1.3 The implementation of See Stage

See stage conducted after Do stage implemented by all members of the Lesson Study with a writer and a moderator. The following were the observation findings: (1) the model was still anxious at the start of the teaching and learning phase, especially in the early minutes of instruction.

There were some notes to reflect from observers (1): Group II were number 28,19, 13, 33, and 24 run according to the scheme in learning and the group running according to the model's instructions, Jigsaw was exciting for students. (2): Group V number 35,26, 30, and 14 run well until the number 14 is looking for answers via mobile for the worksheet conclusions, and number 35 dominated in the discussion. (3): Group III and IV still worked individually, not in the group, such as number 18. Numbers 34 and 23 focused on the reading book to find answers for their worksheet. Number 25 remained passive in the group. Inactive in learning to work on the MFI that the lecturer models already give. (4) the learning process is already well done, especially

in conducted by Group II so that the activities under discussion go according to the direction of the lecturer model to perform a task or group of tasks completion.

1.2 Stage II the implementation of the Lesson Study

Implementation Plan Phase plan Activities with Lesson Study team members. In this task, the results of the Research Lesson Plan are dependent on the feedback of participants of the lesson study for the use of time. The importance of making the most of the session's time is addressed, and the party can be portrayed by up to three groups depending on the right time and stage appearance.

1.2.1 The Implementation of Do Stage

On September 28, 2018, the Do Stage was introduced for 2 x 50 minutes, the students spread into five classes. Each group was given a student worksheet that discussed the consumers' behavior. The group then discussed the completion of the student worksheet by using the learning problems-based method, and the last stage was presenting the results of the group discussion.

1.2.2 The implementation of See Stage

See stage conducted after Do stage implemented by all members of the Lesson Study with a writer and a moderator. The observation results were; (1) Students actively participated in group learning and asked the model lecturer to complete the student worksheet. The data showed that a student who could not learn well in the group's activities is caused due to difficulty in solving the problem. (2) Students in Group II worked well by

following lecturer instruction as a group and individual work assignments. (3) each student has learned well according to the learning topics, except group 4 due to not understanding or being familiar with the material presented, they still need the help.

2. The Results of Students; Autonomous Learning

In order to increase the level of student learning in the classroom, students' autonomy is an essential component of learning practices. Students are enthusiastic about academic learning (Arliani & Widjajanti, 2006). Learning can have a significant impact on student learning autonomy in the course of learning performance. However, it must be backed up by a variety of considerations, most notably in students. Students should be aware of the importance of autonomous learning to motivate them to succeed in learning. The learning methods can be used as an alternative to learning in the classroom (Setyansah & Suprpto, 2017).

There were some aspects of observations in this study. The indicators were; (1) motivation (in following the spirit of learning, liveliness in the study), (2) discipline (following discipline classroom learning, discussion regularly, and follow carefully), (3) Initiatives (active in providing ideas and views and opinions in learning and discussion), (4) responsibility (responsible in completing the task groups and discussion). The table below shows the percentage of student learning autonomy observation outcomes

Table 1: Results of observation on students' autonomous learning in cycle I

Aspects	Average	Percentage
Motivation	3.17	79.25%
Discipline	3.37	84.25%
Initiative	3.21	80.25%
Responsibility	3.25	81.25%

Source: Primary Data processed

Based on the table, it can be concluded that the motivation aspect on cycle I was 3.17 or 79.25%, the disciplinary aspect was 3.37 or 84.25%, the initiative aspect was 3.21 or 80.25%, and the responsibility aspect was 3.25 or 81.25%.

The students' autonomous learning on cycle II in the implementation of Lesson Study showed an increase in

students' learning independence. On cycle II of the introduction of Lesson Study, the number of students increased. The table below shows the effects of observation of students' autonomous learning during period II.

Tabel 2. Results of observation on students' autonomous learning in cycle II

Aspects	Average	Percentage
Motivation	3.29	82.25%
Discipline	3.45	86.25%
Initiative	3.45	86.25%
Responsibility	3.5	87.5%

Source: Primary Data Processed

Based on the data on cycle II on the independence of the student in learning, it can be concluded that the aspect of motivation on cycle II was 3.29 or of 82.25%, aspects of discipline was 3.45 or 86.25%, aspects of the initiative was 3.45 or 86.25%, and aspects of responsibility in students' independence were 3.5 or 87.5%.

There was an increase in students' autonomy learning in each learning period as the Lesson Study cycle I and II

learning practices were implemented. For example, in the first cycle, a cooperative learning model with jigsaw learning methods was used, while another cycle used the problem-based learning method. The increase of students' autonomous learning on the learning cycles I and II can be seen in the table below.

Tabel 3. Comparison of students' autonomous learning in cycle I and II

Aspects	Comparison cycle I and II		
	I	II	Average
Motivation	79.25%	82.25%	80.75%
Discipline	84.25%	86.25%	85.25%
Initiative	80.25%	86.25%	83.25%
Responsibility	81.25%	87.5%	84.37%

Source: Primary Data Processed

It is possible to infer from the data provided that the comparison based on the value of both cycles I and cycle II has increased from all aspects of the student's independence. On the aspect of motivation with an average value of 80.75% or experiencing an increase in cycle I and cycle II with a category of very good, aspects of the discipline with an average rating of 85.25% with an increase in cycles I and II were in the category of good, aspects of the initiative in a study conducted by students also experienced an increase from cycle I to cycle II with an average value of 83.25% on a category and last aspect was responsibility with the average value of 84.37% or experience increased on each cycle and are on a very good category.

The result can be concluded that students' autonomous learning ability on the 1st and second meetings has increased. The increase of students' autonomous learning in learning can be developed through the learning process. The increase of students' group work in the cycle I to II caused by the high interest and attitude of the students in the process of learning. Cooperative learning and fun learning were the elements in increasing the independence of student learning. The lesson-study method is one of the methods that can be used to design a good learning environment. (Ermeling & Graff-Ermeling, 2014). Lesson study can form collaborations, observations in learning between teachers with the learning community and improve the analytical study (Gero, 2015). In addition to improved learning, and effective learning paradigm resulted in increased student independence in learning. The second meeting's learning style is problem-based learning, which has been shown to have a positive impact on students' critical reasoning abilities (Azmi et al., 2016).

4. CONCLUSIONS

The findings indicate that using the cooperative learning model through Lesson Study improves critical thinking abilities and student teamwork capacity as determined by student learning autonomy. Based on the findings, the percentage of cycle II was higher than cycle I, which means that using Lesson Study positively impacts students' learning outcomes. Plan, do and see are the generally process in lesson study. The stages are organized very well so that learning can be done as well as development of students' autonomous learning. The findings were calculated not only by the observation sheet but also by the task and questionnaire results.

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