



DEVELOPING STUDENTS LEARNING ATTRIBUTES THROUGH COLLABORATIVE LEARNING BASED ON FLIPPED CLASSROOM

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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 character through collaborative learning based on flipped class. The study was done in the framework of lesson study, using three steps (plan, do, and see). The technical steps included socialization, identifying problem, designing learning process, implementation, evaluation and reflection, and follow up. 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.

Keywords: Collaborative Learning, Flipped Classroom, Learning Attributes.

1. 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. In the 21st century, the four competencies (1) core subject and 21st century themes, 2) learning and innovative skills, 3) information, media and technology skills and 4) life and career skills) for 21st century learning must be possessed by graduates of educational institutions (Nofrion and Wijayanto, 2018). 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. Meaningful

learning is a process of linking new information to basic concepts. Today, the students needed to be knowledge regarding the season of the year, environmental condition, and climate change. Many of the aspect of the earth were closely associated with interaction between people and earth (Stoltman 2012). Geography is a very broad and complex field of science of the earth that needs to use many learning resources(Suharwati, Sumarmi, & I Nyoman, 2016). Geography is complex scientific discipline about the earth and with is interdisciplinary approach. (Markuszevska, Tanskanen, and Subiros, 2018). Using the interdisciplinary approach means looking at solving a problem by using a review of the various relevant cognate perspectives in an integrated manner.

In order to improve the quality of the learning process, lesson study is conducted through collaborative learning based on flipped classroom. 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. Flipped classroom is student centered approach to increase the quality of period within class (Ozdamli&Asiksoy, 2016). Flipped classroom method enhanced student capacity to apply concept and develop skill by discussions, group works, and application during course ((Ragg and Piers, 2017)

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.

Learning experience in geography not only using a traditional way of learning using handbooks but also need new ways to learn geography (Markuszevska, Tanskanen, and Subiros, 2018). Researcher is interested to implement a collaborative learning based on flipped classroom 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 lesson study to apply collaborative learning in order to enhance cooperation of individuals and groups as the key to success, to build positive attributes that support adherence to the learning process, to minimize conflicts that often occur in teamwork

through collaborative learning, and to improve the quality of classroom teaching and learning outcomes in Introduction of Geography.

2. The Methods

2.1 Place and Time

Lesson study was conducted in Offering A, B, C, and D of Geography Education first year students in University of Kanjuruhan Malang. Lesson study lasted for two weeks (16—26 January, 2017) consisting of two cycles of activity. Each cycle stages consisted of Plan, Do and See.

2.2 Objective

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.

2.3 Attributes to be Developed

Character education has a higher meaning than moral education, because in it doesn't only teach what is right and wrong, but rather the habituation merit. This is in line with what was proposed by Wynne in Zuchdi (2009) that character education is more focused on how to apply the value of good deed in the form of behavior (Zuchdi 2009). 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 (2007). The seven aspects of the attributes include: honesty, responsibility, visionary, discipline, cooperation, fairness, and caring (Agustian 2007). 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.

2.4. 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 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.

2.5 Procedures

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

2.5.1 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 (minimum two cycle of plan, do, and see), time, and documentation was made. The documentation was needed as supplement in reflection.

2.5.2 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 proses. (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.

2.5.3 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.

3. Result and Discussion

Lesson study is an activity to increase learning collaboratively and sustainably based on the principle of collegiality and mutual learning. The establishment of a learning community which is a form of developing learning through the stages of plan-do-see (Zubaidah, 2017). The focus of Lesson Study is on improving learning, through observation towards students, so they can think of ways to improve learning activities and student thinking activities, and not on teacher activities (Zubaidah 2017).

3.1. Implementation of *Lesson Study*

3.1.1 First Cycle

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.

a. 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.

b. 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.

c. See

Evaluation was 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 lesson was 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.

3.1.2 Second Cycle

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 to monitor the team target.

a. 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 plan in 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.

b. 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.

c. 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 conducted because 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.

3.2. Limitations of Implementation of Lesson Study

Some limitations in implementation of Lesson Study were described as follows.

- 3.2.1 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.
- 3.2.2 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.
- 3.2.3 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.

Flipped classroom is a student-centered approach to increase the quality of period within class. Generally this approach whose applications are in Geography Education first year students in University of Kanjuruhan Malang. The basic idea in flipped classroom teaching is to reverse the traditional order of instruction where lectures precede student activities. In flipped classroom students are instead given homework as preparation for class, and classroom time is then spent on active learning under the guidance of the teacher (Karlsson and Janson 2016). Flipped classroom is a way that educators can provide by minimizing the amount of direct instruction in teaching practices while maximizing interaction with one another

Flipped classroom is also known as a student-centred approach to learning where the students are more active than the instructor in the classroom activity. In this case, the

instructor acts as a facilitator to motivate, guide, and give feedback on students' performance. In implementing flipped classroom, remembering and understanding as the lowest levels of cognitive domain are practiced outside the class hour (Karlsson and Janson 2016). While in the classroom, the learners focused on higher forms of cognitive work, including applying, analyzing, evaluating, and creating. With the flipped model, the lower levels are presented before class through recorded lectures and video. Readings, simulations, and other materials also provide this foundational support for learning so that in-class time can be spent working on higher levels of learning from application to evaluation. In flipped classrooms, students go from the lowest level (remembering) to achieve the highest level (creating).

Based on the results of the study, the advantages of doing a flipped classroom are developing the spirit of cooperation, honesty, discipline, and openness as it prioritized on the ability to cooperate with the others, increased understanding independently in the discussion process, increasing comfort and openness when interacting with colleagues, and increased learning motivation. The flipped as an educational technique moves the lectures outside the classrooms and uses learning activities to move practice with concepts inside the classroom (Pavanelli, 2018)

4. Conclusion

Based on the implementation of learning that has been done, it can be concluded that: 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. Lesson Study generally went smoothly, however, some limitation on the timing and size class was some problems to deal with. Lesson Study provides a significant impact on improvement of the learning process of Introduction to Geography. Attribute of learning is successfully developed in Introduction to Geography courses through lesson study activities, including cooperation and discipline.

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