The Implementation of Cooperative Learning by Using Jigsaw and Make a Match Method to Improve the Activity and Learning Outcomes of Social Science

Nur Aini Wahyu Hidayah[1], Suharno[2], Mintasih Indriayu[3]

[1]Sebelas Maret University, Surakarta, Indonesia, [2]Sebelas Maret University, Surakarta, Indonesia

Corresponding email: idaa.aini@yahoo.com

ABSTRACT

The objective of this research is to find out the result of the implementation of cooperative learning by using jigsaw and make a match method to improve activity and learning outcomes of social science to the third grade of student SD Negeri 02 Troketon Klaten in the academic year of 2015/2016. The research was classroom action research conducted in SD Negeri 02 Troketon Klaten with the research subject was 25 students. The results of activity in pre-cycle was 16% seen by all of indicators. There is an improvement of students activity of each indicator in each cycle that has been done in the end of the third cycle of all indicators. The activity of students has reached $\geq$ 75%. The result of learning outcomes passing rate was 44% in pre-cycle, increasing to 52% in cycle I, increasing to 64% in cycle II, and to 84% in cycle III. The conclusion of research showed that cooperative learning by using jigsaw and make a match method to improve active learning and learning outcomes.

Keywords: Activity, learning outcomes, jigsaw, make a match

1 INTRODUCTION

Education is a process of learning activity for students deliberately to make an appropriate result with the aim that has been established (Purwanto, 2014: 18). The learning activity comes from the interaction between teacher, student, and transferring knowledge conducted by the teacher to the student. Social sciences (IPS) discuss the relationship between people and his environment. Social learning can be a media for students to know the condition of social environment around them. Through the learning of social science in the school, the students can learn about his role as human life and will be able to comprehend the role in society.

Based on the information and interview to the teacher in the third grade of SDN 2 Troketon, the learning of social science in SDN 2 Troketon found that the most students in the third grade have difficulty to understand and comprehend the subject matter in social science, they were afraid and do not ask the things which could not understand. The teacher already looking for the way how to make the students could be more actives to ask the difficulty they find. However, there were some students that choose to silent than ask to the teacher or the other friends. They think that it will make them seen like the foulest one in the class. The learning method used by the teacher was dominated by teacher centered, thus the students become passive in the learning process. It needs the interaction between teacher and student to make the atmosphere to be more pleasant, thus it can improve the students activity. The mean score in social science is 56.64 while the passing grade is 60. It shows that the students could not reach the passing grade (KKM) of social. Thus, the atmosphere in learning process could be more interest to make the students enjoy during learning process.

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According to Moh.Yamin (2015: 117) states that a pleasant learning is the atmosphere that could develop the student enthusiasm to study. The active student happens to students which can identify the problem, infiry the problem then take a conclusion (Dimyati and Mudjiono, 2013: 45). According Sardiman (2014: 103) the view of modern sciences on the principle of learning activities explain that a learning activity was dominated by the student than the teacher. The teacher only facilitate the student, thus that student can be active during learning activity.

According to Soedijarto (Purwanto, 2014: 46), the result of learning outcomes become the grade of comprehending that has been achieved by student in participating in learning activities until they achieve the aim of learning. Comprehending material that achieved by the student was obtained by the teacher's way when they give the material in the classroom. During the learning process, the teacher was not act as the material's transporter, but they must assess the students' comprehension after they get the material through the oral test or written test. According to Sugihartono, et al (2012: 85) the teacher act as a corrector of assessing and correcting the learning outcomes both attitudes and behaviour of students in the school and outside of school. The teacher evaluated the results of tests that have been carried out, while to determine the change in attitudes and behaviour. The teacher assess by using observation sheet.

Based on the problem, the researcher applied one of the learning model that is "cooperative learning in the form of Jigsaw and make a match method" to solve these problems. The kind of innovative learning model is a cooperative learning in the form of jigsaw and make match method (look for the pair). According to Lie (Rusman, 2013: 218), "cooperative learning in the form of Jigsaw method" is a learning do by the students with each other as cooperatively, which are grouped into small groups consist of 4-6 people heterogeneously and the student have responsibilities independently to the material assigned by the teacher. Cooperative learning in the form of Jigsaw method is more emphasized to the students to participate with each other actively and cooperatively, thus it can develop the interaction between students with others, so that the learning process can be more fun. Make a match method is a learning model which ask student to search a pair of answer card/question card before the timeout. The type of make a match will be used for the assessment of the active role of students in the classroom, thus that students do not feel bored during learning activity.

In this classroom action research, the researcher accompanied by the teacher to combine two kinds of cooperative learning "Cooperative learning in the form of Jigsaw and make a match method. According to Slameto (2010: 96) a teacher should use kind of learning methods in order to improve the activity of students in the learning process. Cooperative learning in the form of Jigsaw method is a model of learning in the form of discussion groups consist of each member in a group. By using cooperative learning in the form of Jigsaw method, the students are required to be more active in discussion, with the aim they can explain the material that has been studied in group, while make a match method requires the students to find matching (friends) that have a reply card or a matter of cards that already got by them. This model also aimed to re-evaluate what they have learned. To the direction of learning in this study is a combination of cooperative learning in the form of Jigsaw method and make a match.

The hypothesis of this study is the improvement of activity level and social result studies by the students of the third grade in SDN 02 Troketon Pedan Klaten 2015/2016 academic year by implementing cooperative learning in the form of jigsaw and makes a match method.

2 METHODOLOGY

The research design used by the researchers is classroom action research (CAR). Arikunto, Suhardjono, and Supardi (2009: 39) argues that the setting of research is describes the location and description of the subjects study. The place of the research was conducted in the third grade of SDN 02 Troketon the academic year 2015/2016, which is located at Troketon, Pedan, Klaten.

The subject study is the third grade of students in SDN 02 Troketon in academic year 2015/2016. The sum of the students is 25 students that consist of 10 male students and 15 female students. The data collection techniques in this study were the observation, documentation, and test.

The performance indicators in this study obtained from documentation, observation, and the test results with the score achievement (KKM) was 60. The indicator of this research is there were improving score by the social studies and activity of students. The improving of students' score in social science and the activity of student can be seen from the previous learning before implemented cooperative learning in the form of Jigsaw and make a match method until implemented cooperative learning in the form of Jigsaw and make a match method. This study will be done when the were the indicators of performance as follows:

a.   The students' activity increased about 75% from the sum of students.
b.   There was increasing result of students' score after implementing cooperative learning "Cooperative learning in the form of Jigsaw method and make a match" with the score achievement 62 (based on the minimum score of KKM) about 75% from the sum of the students

Based on these calculations, there were 19 students from 25 students in the third grade that should be improved in social and the students' activity during learning process. It means that the research will be stopped when the student could reach the minimum score of KKM.

The research procedure was conducted in the form of repeated cycles. According Suharsimi Arikunto, Suhardjono, and Supardi (2009: 16) the model of action research carried out through four stages: (1) planning, (2) implementation, (3) observation, and (4) reflection. If the result of the first cycle of the learning process has not reached yet, this research was continued in the second cycle by observing the problems come in the first cycle, thus in the second cycle there have been improvements. The activity in the second cycle is the continuation from the first cycle, but the activity in the second cycle is to solve the problems in the first cycle. If the results of the research were appropriate with the indicators of performance and the learning process could be better, the research can stop and take a conclusion.

3 RESULTS AND DISCUSSION

3.1 Results

The improving of students' activity and the result of study can be seen in the following table.

Table 1. Summary of students' activity, result of study, and teacher activity

Num	Indicators	Pre- cycle	Cycle I	Cycle II	Cycle III
1	Students Activity				
	a. Delivering idea		28%	48%	80%
	b. Listen the feedback		24%	44%	76%
	c. Solving the problem collaboratively	16%	40%	48%	88%
			32%	76%	88%
	d. Asking to the teacher or other		60%	68%	82%
	e. Reading the subject matter carefully		28%	60%	84%
2	Result of study				
	Mean Score (KKM: 60)	56,64	59,96	66,8	75,28
	The percentage of passing grade	44%	52%	64%	84%
3	Teache' activity	-	57	70	86

3.2   Discussion

This classroom action research was conducted in three cycles, each cycle consist of two meetings for treatment. The first meeting is used to apply Cooperative learning in the form of Jigsaw method, and then the second meeting is used to apply make a match method and students' evaluation. There was an observer that observes the teacher activity and the students' activity during learning process in each meeting. Each cycle in this study consisted of 4 stages: (1) planning; (2) implementation; (3) observations; and (4) reflection. The description in each cycle will be discussed in this part. The implementation of the research was appropriate with the research procedure, thus the researcher can solve the problems during the implementation of research that can be improve the activity and the study result of students with implementation of Cooperative learning in the form of Jigsaw method and make a match method. The student activity before implementation cooperative learning in the form of Jigsaw method and make a match method, there were four students only who were active, while 21 students choose to be silence. There were improvement in the students' activity of each indicator in each cycle that has been done in the end of the third cycle all; all of indicators have reached ≥ 75%. By the improvement of the students' activity, thus the teaching learning process has been effective. That was appropriate with the statement by Oemar Hamalik (2009: 171), the effective teaching is the teaching which provides the opportunity to learn by them, experience by them and do their own activities, and in other words the student becomes active to conduct their own learning activities. While the action was conducted, the teacher give the opportunity for student to learn on their own in a group to comprehend the material that has been given by teacher, so that the student was really do the learning activities independently. The act of students here seen by the way of student discussion in a group.

Based on the results of the research conducted in SDN 2 Troketon in the third grade by the implementation of cooperative learning in the form of Jigsaw and make a match method there was improvement of social learning outcomes. It can be seen from the mean score was 56.64 with the percentage of achievement was 44% or 11 student completed. In the first cycle, the mean score was 59.8 with the percentage of achievement was 52%

or 13 students completed. The learning outcomes have increased from pre-cycle to the first cycle of 8% with the highest score in the first cycle and the lowest score was 90; 30. In the second cycle, the mean score was 67 with the percentage of achievement was 64% or 16 students completed. The learning outcomes have increased by the first cycle to the second cycle about 12% with the highest score in the second cycle was 90 and the lowest score was 40. In the third cycle, the mean score could reach 75.4 with the percentage of achievement was 84% or 21 students. The learning outcomes have increased by the second cycle to the third cycle was 20% with the highest score in the third cycle 95 and the lowest score was 45. The total score of student in learning outcomes showed that half of students could reach the passing grade (KKM). In can be concluded that the student can be better in comprehending the material, thus they can do the evaluation given by the teacher. The students comprehension could improve in each cycle, it means the implementation of cooperative learning in the form of Jigsaw and Make a match method continuously and repeatedly, it gives contribution to students in learning the materials. It was appropriate with the statement by Ahmad Susanto (2014: 1), the learning outcomes are a changeover of behaviour in the form of comprehending, skills and attitudes acquired by students in the learning process.

The teacher activity increased from each cycle. Firstly, the teacher still found some problems and weaknesses in the previous cycle, but it can be corrected in the next cycle. It can be seen from the total of students score obtained by the teacher observation sheet each cycle which is always increased. At the beginning of the cycle, the teacher get score was 57 and become 70 in the second cycle. The increasing up to 13 point. In the third cycle, the student score up to 86. There was an increasing 16 point.

Based on the observation and test result of student can be seen that there is an improvement in students activity and learning outcomes of students in the third of SDN 02 Troketon Klaten. During the learning process trough cooperative learning in the form of Jigsaw and Make a match method, the student are provided the learning material differently from each expert group, then each member of the expert group back to the original group to present the result of discussions at the expert group while in the implementation of student game in group match a question card and the right answer. In each learning by using cooperative learning in the form of Jigsaw method and make a match method emphasized to students for discussion. This discussion was used to train the cooperation between students and strengthen the interaction both of students and teacher, because in discussion the student can deliver their conception, express their ideas, solve the problems and in the end session they can do the evaluation test.

The implementation of cooperative learning in the form of Jigsaw method and make a match method give the positive impact on the attitude of students during the learning process and learning outcomes of students which can increase more than the passing grade (KKM). The findings that find during the learning process, as follows:

a.   The leaning activity was focussed on the students, thus the students join the learning process actively in the learning process with the rule made by the teacher. The role of students was realized in group discussions and during the game, thus it can improve the cooperative among students.

b.   The use of the model cooperative learning in the form of Jigsaw and make a match method can facilitate the students to comprehend the learning material, because the students can learn in groups where in the group discussed the mutual cooperation among students if there were the material which could not understand yet. They can repeat the material more to remind the material as good as they can.

c.   The implementation of cooperative learning in the form of jigsaw and make match method can improve the activity and learning outcomes of students. It was proved by the mostly students in the activity indicator up to 75% and get a score more than the passing grade (KKM) was 60.

4   CONCLUSION

The results of action research already carried out in SDN 2 Troketon Klaten. The findings showed that the students activity was low during the learning process while implementing cooperative learning in the form of jigsaw and make match method. Before implementing of cooperative learning in the form of jigsaw and make match method, there were 4 students only who can be active during learning process while 21 other students get more passive. The is an improvement of students study of each indicator in each cycle that has been done in the end of the third cycle of all indicators. The activity of students has reached ≥ 75%. The mean score was 56,64 with a percentage of pre-cycle achievement was 44% or 11 students who pass the score ≥ 60. In the first cycle, the mean score was 59.8 with achievement percentage of 52% or 13 participants' students. The learning outcomes increased from pre-cycle to the first cycle of 8% with the highest score was 90 of the first cycle and the lowest score 30. In the second cycle, the mean score was 67 with the achievement percentage was 64% or 16 students. The learning outcomes have increased in the first cycle to the second cycle of 12% with the highest score on the second cycle was 90 and the lowest score was 40. The last cycle is in the third cycle, the mean score was 75.4 with the achievement percentage was 84% or 21 students. The learning outcomes have increased in the second cycle to the third cycle was 20% with the highest score in the third cycle 95 and the lowest score was 45.

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