EFFORTS TO IMPROVE STUDENTS 'RESPONSIBILITIES IN MATHEMATICS LEARNING USING THE JIGSAW TYPE COOPERATIVE LEARNING MODEL IN CLASS VII B STUDENTS OF SMP NEGERI 13 YOGYAKARTA

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ABSTRACT

Teacher-centered learning caused the students are not serious, enthusiastic, and confident in their own ability so that students are not so responsible in following the learning of Mathematics for the students of class VII B SMP Negeri 13 Yogyakarta. The use of the Jigsaw type cooperative learning model in Mathematics learning is expected to improve student responsibility better than usual. This study aims to improve students responsibility in learning mathematics the students of class VII B SMP Negeri 13 Yogyakarta in the odd semester Academic Year 2016/2017 by using the Jigsaw type cooperative learning model. This research included in Classroom Action Research. The subjects in this study were the students of class VII B SMP Negeri 13 Yogyakarta in the odd semester, which amounted to 34 students consisting of 18 female students and 16 students of the male. Data collection techniques through observation, interviews, and triangulation. The instruments used in this data collection are observation sheets and interview guides. The data analysis used is quantitative and qualitative analysis. The criterion of success in this study is the responsibility of students in involving the learning process increases if the student's responsibility reaches at least 61%. The result of the research shows that learning with the Jigsaw type cooperative learning model on VII B students of SMP Negeri 13 Yogyakarta in the academic year of 2016/2017 increase the student's responsibility. It is proven by the result of student responsibility observation every cycle has increased, that is the percentage of success of student responsibility research in cycle I equal to 44,85 % (Enough), and in cycle II increase to 66,30% (Good).

Keywords: Cooperative Learning Model, Student Responsibility, Jigsaw

INTRODUCTION

Education often occurs under the guidance of others, but can also be obtained from one's own experience or those of others. Success in education is attempted by all components involved in the education process. Education can be pursued in three ways, namely formal, non-formal, and informal education at every level and type of education. One of the lines of formal education in secondary education in Junior High School (SMP). Learning in junior high school is an effort to develop students' potential, skills, character, and abilities. The development of aspects in these students is not entirely obtained from the teacher, but rather is obtained from the students themselves in finding and developing themselves. So that students are fully responsible for the success of their education. One of the subjects taught in junior high in mathematics. Mathematics continues to develop dynamically along with the times. Lack of student interest in learning mathematics is one of the problems for himself and also for the teacher. The process of learning mathematics in class VII B is only centered on the teacher and the active teacher explains. So that during learning, some students do not listen to the teacher's explanation. When the teacher gives practice questions, some students are lazy to work on the problems and only rely on the answers given by the teacher without looking for a solution first, and students cheat on each other when the teacher gives individual assignments. In addition, the interaction between teacher and student is also lacking where students are usually reluctant to ask teachers about unclear material. This shows that the responsibility of students in mathematics is still low.

To increase student responsibility in learning mathematics, teachers must be able to create an atmosphere of active and fun learning by applying various learning models. However, in applying the learning model must be adapted to the situations and conditions of students and adapted to the material to be taught. One alternative learning that can be applied is the Jigsaw cooperative learning model.

Cooperative jigsaw students not only learn the material provided, but they must also be prepared to give and teach the material to members of the group. Thus, students are interdependent with each other and must cooperate cooperatively to learn the material assigned. So that through this Jigsaw cooperative learning model students are expected to be more responsible in learning mathematics and make students happy and not feel bored whenever there is a math lesson.

The purpose of this study is to increase the responsibility of students in learning mathematics by using the Jigsaw Cooperative Learning Model in class VII B of SMP Negeri 13 Yogyakarta Odd Semester Academic Year 2016/2017.

METHODS

This research is a type of classroom action research. This research was conducted using the stages of planning, action, observation, and reflection. This research was carried out in Yogyakarta State Junior High School 13 Odd Semester 2016/2017 Academic Year. The subjects in this study were all students of class VII B Odd Semester, SMP Negeri 13 Yogyakarta 2016/2017 Academic Year. Meanwhile, the object of this research is mathematics learning by using a Jigsaw cooperative learning model for all grade VII B students of SMP Negeri 13 Yogyakarta. The procedures in this study include

a. Planning

In this stage, it explains what, why, when, where, by whom, and how the action was carried out. In the planning stage, the researcher determines the point or focus of the event that needs special attention to be observed, then makes an observation instrument to help the researcher record the facts that occur during the action.

b. Implementation

This implementation is the application of the plan that has been prepared. At the implementation stage, the learning process is carried out in the classroom led by the teacher, and this implementation must be in accordance with the plan so that the desired learning objectives can be achieved.

c. Observation

Observation is an observation activity carried out by an observer. This action serves to document the things that occur during the action and the effect of the related action. In this stage the teacher observes the actions being carried out. Both take place at the same time.

d. Reflection

Reflection is an activity to restate what has been done. This reflection activity is very appropriate when the implementation teacher has finished taking action, then confronts the researcher to discuss the implementation of the action plan.

Data collection techniques in this research are to use the method of observation, interview methods, and triangulation. Meanwhile, data collection instruments in this study were to use observation sheets and interview guidelines. Data analysis techniques in this study are using data reduction, data presentation, and data conclusions.

RESULTS AND DISCUSSION

This class action research was carried out in 2 cycles, where each cycle consisted of 4 stages, namely planning, implementing, observing, and reflecting. Cycle I consisted of one meeting, whereas in cycle II it consisted of two meetings. Learning activities carried out according to the mathematics schedule class VII B with the allocation of time each face-to-face 40 minutes and this learning uses a Jigsaw cooperative learning model.

In cycle I, showing that students' responsibility in learning mathematics is still lacking, it appears that some students work on problems not based on their own work, discussions in groups have not been active, students interfere with other friends when learning takes place, and students do not give or propose a solution to problem. In addition, students are good enough in terms of carrying out instructions during the learning process. Students are also on time in submitting assignments, doing

assignments according to instructions and students are diligent during the learning process where students record answers from friends who write them on the blackboard and record summaries written by the teacher. Students are also good enough to help their friends who have difficulty in understanding explanations from the teacher.

In the first cycle, students' responsibility for each indicator was obtained, namely responsibility for themselves by 48.53% and responsibility for the group by 41.17%. So as to get an average percentage of successful cycle I responsibilities of 44.85% the Fair category. In addition, the results of the analysis of daily tests in the first cycle showed that in the daily tests of the first cycle there were 15 students whose scores were ≥75, and the percentage of students who completed was 44.11%.

In cycle II, students are more responsible for themselves and are eager to participate in learning that is marked by the majority of students not disturbing other friends while learning takes place, students take instructions seriously given by the teacher, and students are diligent and diligent when learning takes place. During the learning process, students are more active in discussing with groups and competing with each other to complete the assignments so students can write the answers in front of the class and present them. In working on the evaluation questions, some students have completed them based on their own work.

After correcting the deficiencies found in cycle I, the responsibility of students using the Jigsaw cooperative model in cycle II has increased. This can be seen from the increasing percentage of student responsibility, where responsibility for oneself is 72.30% and responsibility for groups is 60.30%. So as to get an average percentage of successful responsibilities in the second cycle of 66.30%. This means that with the qualification results of the percentage score of observation of student responsibility, in this second cycle has reached the criteria of Good. So this research was stopped in Cycle II. In addition, the results of the analysis of daily tests in cycle II showed that in cycle II daily tests, there was a percentage of students who completed that was 73.53%.

The increase in the percentage of student responsibility based on the results of the observation sheet of student responsibility and the results of daily tests from cycle I and cycle II can be seen in Table 1 and Table 2 as follows:
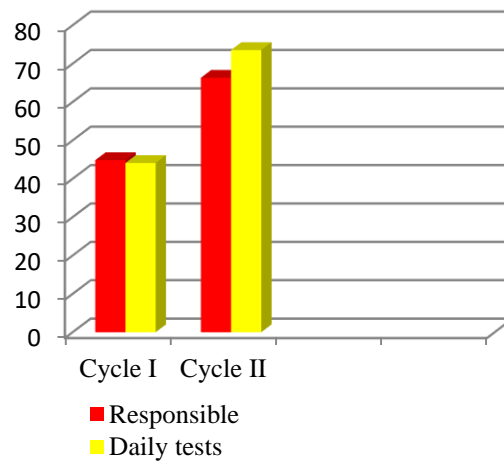
Table 1: Increase in Percentage of Observations of Student Responsibility Results

No	Indicator	Percentage of the activities (%)	
		Cycle I	Cycle II
1.	Self-responsibility.	48,53	72,30
2.	Responsibility towards groups.	41,17	60,30
Average percentage (%)		44,85	66,30

Table 2: Increased Daily Test Results

	Cycle I	Cycle II	
		Meeting 1	Meeting 2
The highest score	82	100	100
Lowest value	36	60	60
Average	60,61	69,56	81,18
Number of students who score ≥75	15	22	28
Percentage (%)	44,11	64,70	82,35
Percentage average	44,11	73,53	

For more details, Table 1 and Table 2 can be presented in graphical form as follows:

Graph 1. Percentage of Increase in Observation Results for Student Responsibilities and Daily Test Results

CONCLUSION

Based on the results of the study it can be concluded that using the Jigsaw cooperative learning model can increase student responsibility in learning mathematics in class VII B students of SMP Negeri 13 Yogyakarta Odd Semester 2016/2017 Academic Year on comparative material and social arithmetic. Mathematics learning using the Jigsaw type cooperative learning model gets positive responses from students, which means students are interested in learning. This is evident from the results of interviews of several students who said that the learning applied was very fun and interesting.

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