THE EFFORTS TO IMPROVE THE LEARNING MOTIVATION BY USING DISCUSSION METHODS IN MATHEMATICS FOR VII GRADE STUDENTS

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ABSTRACT

The learning method that is less interesting in the Mathematics subject makes the low student's motivation to learn Mathematics. This research aims to improve student's motivation in Mathematics subject by using the discussion method for VII grade students "A" of Muhammadiyah Pakem Junior High School (SMP Muhammadiyah Pakem) at even semester in Sleman districts academic year 2016/2017. This research is Classroom Action Research (CAR). The subject is the seven grades students "A" of Muhammadiyah Pakem Junior High School, and the object is student's learning motivation after the implementation of the discussion method in Mathematics subject. The data collection technique uses observation, tests, and questionnaires. The data analysis uses descriptive qualitative and quantitative analysis. The research is conducted in two sessions, where each session consists of two meetings. The session was stopped after the result of the indicator was reached out to a minimum of 60% or good criteria. The results show that the discussion method can improve the learning motivation in Mathematics subject for VII grade students "A" of Muhammadiyah Pakem Junior High School in Sleman at even semester of academic year 2016/2017. It is shown based on the observation result from each session. The first session is 56,025% with sufficient criteria, and the second session increase becoming 72,631% with good criteria. At the same time, the test result of learning shows that the first session is 57,368, and the second session gets 72,631. Then, the questionnaires' results for the student's learning motivation show that the first session gets 57.906% with sufficient criteria, and the second session increases, becoming 73.867% with good criteria.

Keywords: motivation, discussion method, and mathematics subject.

INTRODUCTION

Education plays an important role in preparing human resources for life in the future. Education is a human endeavor to be able to develop their potential, among others through the learning process in schools, both Elementary Schools (SD), Junior High Schools (SMP), Public High Schools (SMU), and Vocational High Schools (SMK), and Higher Education (PT), each of which has a specific vision, mission and goals. The educational process will be widely assessed because it is one of the starting points for the success and progress of a nation. Mathematics is one of the subjects that play an important role in shaping students into quality human beings because mathematics forms a systematic and logical mindset. Therefore it is necessary to improve the quality of education in the field of mathematics, one of which is by efforts to increase motivation to learn in learning mathematics in schools. In learning mathematics, learning is needed. It includes students to actively participate in learning activities so that there is the interaction between the teacher and students or students and other students.

The quality of education in the era of globalization has an important role in the development of science. Therefore, the ability of graduates must be in line with the demands of change that is the advancement of increasingly sophisticated science, rapid changes in society, the culture of the homeland began to disappear. This kind of situation presents challenges for teachers as educators who are required to have creativity and quality in the learning process. The learning process aims to develop student activity, motivation, creativity through interaction, and student learning experiences directly at school.

However, in the implementation of the learning process, there are not a few obstacles that make learning activities become obstructed.

In the learning process students not only sit, listen to the teacher, and note important things that have been conveyed by the teacher, but students must be active, motivated, critical, creative, and try to find a solution to the problem with the guidance of a friend or teacher so that the learning process can run effectively. Student-centered learning (student-centered) and the results students will be accustomed to being active in classroom learning. In the learning process, motivation is necessary because someone who has no motivation in learning will not be able to do learning activities. Because everything that interests one student may not be attractive to other students, good motivation besides being obtained from the family is at school. According to Djamarah, Syaiful Bahri (2011: 149), a person who conducts continuous learning activities without outside motivation is intrinsic motivation, which is very important in learning activities. However, someone who has no desire to learn, and encouragement, from outside himself is the expected extrinsic motivation. Therefore extrinsic motivation is needed if intrinsic motivation is not present in a person as a learning subject.

Based on the interviews conducted by researchers on 13 October 2016, with Mrs. Farida as a grade VII mathematics teacher in Muhammadiyah Middle School Pakem Sleman Regency. The mathematics teacher guides three of the four classes, namely classes VII A, VII B, and VII C. That the mathematics learning outcomes of the three classes are not optimal. This is indicated by the value of the results of all three UTS classes that have not been finished. Uts result data from all three classes can be seen in the table.

Table 1. UTS Results for Class VII Students of SMP Muhammadiyah Pakem

	VII A	VII B	VII C
Many students complete	2	-	2
Many students have not been completed	36	36	36

The lack of optimal student motivation also reinforces this. There are still many students less active in the learning process and difficulty understanding what is conveyed by the teacher, seen from the many mistakes students make in the problems given by mathematics educators. One effort that can be done is to use learning methods that attract student motivation to learn mathematics so that each student can understand the material delivered by the teacher. Students are also directly involved in the learning process. The learning method that can be used is the discussion method. According to Misiah (2016: 219), the discussion method is a mastery of teaching materials or subject matter through a vehicle for exchanging opinions based on the knowledge and experience obtained to solve a problem.

According to Suryosubroto, B (2002: 181-182), that there are five steps in the use of the discussion method, as follows:

1. The teacher raises the problem to be discussed and gives direction as needed on ways to solve it.
2. Students form discussion groups choosing discussion leaders (chair, secretary, reporter) arranging the seating, room, and so on with the teacher's guidance.
3. Students discuss in their respective groups, while the teacher goes around from one group to another group, maintaining order and providing encouragement and assistance so that group members participate actively and discussions can run smoothly. Each student should know exactly what will be discussed and how to discuss it.
4. Each group must report the results of their discussion. The results of the discussion were reportedly responded to by all students, especially from other groups. The teacher provides a review or explanation of the report.
5. Finally, students record the results of the discussion, while the teacher concludes the report on the results of each group's discussion.

This research aims to increase learning motivation in mathematics using the discussion method for grade VII students of SMP Muhammadiyah Pakem, Sleman Regency, Even Semester Academic Year 2016/2017.

METHODS

This research is a Classroom Action Research (CAR). According to Sanjaya, Wina (2009: 33-34), Classroom Action Research is to improve the learning process in the context of achieving learning objectives and maximum learning outcomes. According to Arikunto, Suharsimi., Et al. (2014: 16), in general, four stages are commonly passed, namely (1) planning, (2) implementation, (3) observation, and (4) reflection. This research was conducted in the even semester of the 2016/2017 school year at SMP Muhammadiyah Pakem, Sleman Regency. The subjects of this study were all grade VII A students of 2016/2017 Academic Year at SMP Muhammadiyah Pakem, Sleman Regency. At the same time, the research object is the implementation of mathematics learning by applying the discussion method.

The procedures in this study include:

1. Planning. At this planning stage the activities carried out are:
   1) Make a Lesson Plan
   2) Arrange and prepare teacher observation sheets and student observation sheets.
   3) Arrange and prepare test questions
2. Action. The things done at the implementation stage of the action are the implementation of the plan that was prepared by the previous researcher at the planning stage. Educators carry out learning activities by the lesson plan, while researchers and observers will observe the learning activities. The actions taken are flexible and open to changes in the classroom. These changes are noted in the observation sheet.
3. Observation. Observations were made by researchers and observers using observation sheets that have been made. At this stage, the learning process is observed using the discussion method, and student behavior follows mathematics learning.
4. Reflection. After actions and observations are made, the next step is reflection. In this reflection, it is analyzed whether the learning process is by the stages of the discussion method, and how much the increase in student motivation in mathematics in class VII A students in Muhammadiyah Pakem, Sleman Regency. If it is not as expected, a learning improvement plan is made for the next cycle.

Data collection techniques in this study used observation and test methods. At the same time, this research instrument is to use the observation sheet of learning implementation and test sheets. The data analysis technique in this study is the analysis of observation and test data. In this study, indicators of success are the increase in student learning motivation each cycle seen during the learning process takes place as well as from an increase in the percentage of observation and is marked by a change towards a better direction that is an increase in student learning motivation achieved ≥ 60%.

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 two meetings, while in cycle II Cycle, I consisted of two meetings. This research was conducted at Muhammadiyah Middle School Pakem Sleman Regency on 27 April 2017 to 18 May 2017. Mathematical learning activities are carried out with a predetermined schedule of 5 hours each week. The Allocation of time for each hour is 40 minutes.

The study was conducted four times using the discussion method. In the first cycle, there were still many students who did not pay attention when the researcher explained the material, and students also seemed less enthusiastic about working on LKK. Also, some students do not participate in discussions. Students have not been able to use time effectively in solving problems. The classroom atmosphere is very crowded, and students lack the courage to give an opinion in a discussion, the interaction between students is lacking where students still ask the researcher rather than searching for answers together with the group and at the time of the test there were still some students who cheated and asked answers to other friends.

While in cycle II, students seemed to pay attention to the explanations of researchers and students could participate in learning activities using the discussion method. Students were very enthusiastic and enthusiastic about participating in learning. Also, the course of the discussion process looks smooth and orderly. Students perfect each other's completion of the assigned LKK questions. The classroom atmosphere is calmer than in the first cycle because students use the discussion method. Most students can solve problems with the right steps and answer the questions of friends when presenting in front of the class. Many students have already answered the test questions correctly.

Based on the observation sheet of students 'learning motivation, the percentage of students learning motivation is obtained by using the following discussion method:

Table 2. Analysis of Observation Results of Student Motivation for Learning Cycles I and II

No.	Indicator	Percentage		Information
		Cycle 1	Cycle II	
1.	The desire and desire to succeed	57,894% (Enough)	70,394% (Good)	Increase
2.	There are encouragement and learning needs	58,552% (Enough)	75,657% (Good)	Increase
3.	The hopes and ideals of the future	53,947% (Enough)	75,657% (Good)	Increase
4.	There is an appreciation for learning	59,263% (Enough)	77,342% (Good)	Increase
5.	There are interesting activities in learning	59,210 % (Enough)	77,631% (Good)	Increase
6.	The existence of a conducive learning environment	51,315% (Enough)	76,315% (Good)	Increase

Based on the results of the observation sheet of student learning motivation, student motivation has increased after the implementation of the discussion method with an average criterion of the cycle I 56.025% and cycle II increasing to 74.9993%. For more details, it will be presented in Figure I.

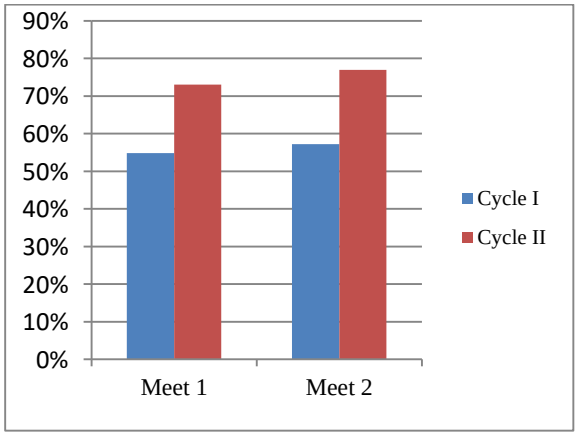

Figure I. Percentage Graph Analysis Results in Observation Sheet Student Motivation Learning

The first cycle test was carried out on 10 May 2017. The test results showed the students' ability to understand the material was still sufficient, this result was seen from the average student scores that were sufficient, and there were still many students who did not meet the Minimum Completeness Criteria (MCC) criteria. The cycle II test was held on 18 May 2017. The test results show the ability of students to understand the material has increased compared to the results of the first cycle test, and this can be seen from the increase in the average value of student learning outcomes compared to cycle I and the increasing number of students who meet the MCC criteria. These results can be seen in table 2.

Table 2. Comparison of Cycle I and II Test Results

	Test I	Test II
Mean	57,368	72,631
Highest score	80	90
Lowest score	40	50
Many students complete	5	24
Many students do not complete	33	14

From table 2, it can be concluded that the average student learning outcomes per cycle have increased. The average student learning outcomes in the first cycle obtained 57,368 and, in the second cycle, increased to 72,631. For more details, it will be presented in Figure III.

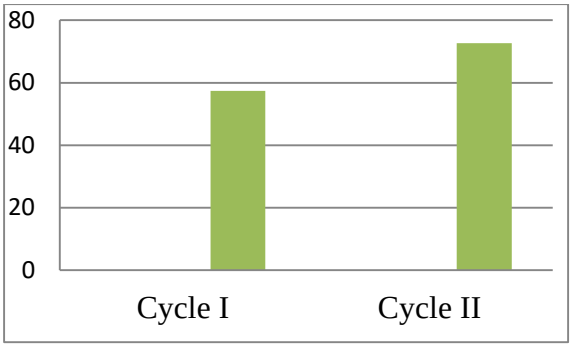

Figure III. Average Graph of Student Learning Outcomes

CONCLUSION

Based on the results of classroom action research and through the method of a discussion carried out on class VII A students of SMP Muhammadiyah Pakem Sleman Regency Even Semester 2016/2017 academic year, it can be concluded that there is an increase in learning motivation in mathematics after using the discussion method. This is shown based on the results of the observation sheet of students who experienced an increase in the first cycle of 56.025% with sufficient criteria and the second cycle increased to 74.9993% with good criteria, while the results of the questionnaire in the first cycle obtained a percentage of 57.906% with sufficient criteria and at the second cycle increased to 73.867% with good criteria, and learning outcomes in the first cycle amounted to 57.386 and in the second cycle increased to 72.631.

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