EFFORTS TO IMPROVE LEARNING MOTIVATION USING COOPERATIVE LEARNING MODEL TYPE STAD (STUDENT TEAM-ACHIEVEMENT DIVISION) STUDENTS GRADE VIII JUNIOR HIGH SCHOOL

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ABSTRACT

The model of learning mathematic who are not appealing will make the student low in learning mathematic. This research aims to increase the motivation of learning mathematics by using a learning cooperative model type STAD student in class VIII A SMP Muhammadiyah Pakem Sleman District Academic Year 2016-2017. This study is a Classroom Action Research with the subject of research class VIII A SMP Muhammadiyah Pakem. Objects in this study are the motivation to learn mathematics students after learning mathematics with the STAD type cooperative learning model. The study was conducted in two cycles, each cycle consisting of two face-to-face. Data collection techniques used observation, interviews, and questionnaires to analyze data using qualitative and quantitative descriptive analysis. The results showed that the STAD type cooperative learning model could improve the motivation of learning mathematics students of class VIII A SMP Muhammadiyah Pakem Sleman District even semester of the academic year 2016/2017. This is evident from the observation of each cycle in the first cycle of 63.400% (Good), and the second cycle increased to 84.572% (Very Good). The result of the questionnaire of student's learning motivation shows that there is an increase of motivation to learn math that is seen from the mean of the survey of student's learning motivation in cycle I get percentage 70,789% (Good) and in period II increase to 82,616% (Very Good)—similarly, the results of interviews with teachers in the field of mathematics studies. From an interview with seven students of class VIII A can be concluded most of the students at the beginning of the meeting that is on the first cycle of a student, motivation has not been seen, because students have not understood the explanation submitted by researchers using STAD type cooperative learning model but at the next meeting and on cycle II Student motivation indicates an increase.

Keywords: Motivation, Cooperative Learning, Student Team Achievement Division

INTRODUCTION

Improving the quality of human resources is an absolute prerequisite for achieving development goals. One effort to improve the quality of human resources is through education. The term education is familiar to everyone. Moreover, in the era of globalization is known as the age of advances in science and technology (science and technology) as it is today. The development of the community follows the development of science and technology thought patterns. In the development of community thinking, as it is today, education is vital in life because competition for survival is getting tougher with the difficulty of employment as capital to sustain life and continue offspring.

One factor that can determine student learning success is motivation. A student must have motivation in learning. Learning motivation is a driver of student activity and initiative that leads to the perseverance and success of student learning in the learning process. Learning motivation plays a vital role in achieving student success in achieving excellent learning outcomes. Students will be severe in carrying out and completing assignments given by the teacher with the motivation to learn.

Based on the results of interviews conducted by researchers on Tuesday, October 18, 2016, with mathematics studies teachers in class VIII at SMP Muhammadiyah Pakem, Sleman, students' motivation was found below. The low motivation to learn mathematics in class VIII SMP Muhammadiyah Pakem Sleman Regency is due to the large number of students who are often late for school, when there are math assignments that must be collected on time there are still some students who do not collect them on time

when the teacher explains the lesson there are still some students who less active in following mathematics learning when class changes, the teacher has entered the class. However, some students leave and do not permit the teacher.

Based on the results of an interview conducted by researchers on Tuesday, October 18, 2016, with Mr. Maryanto., S.Pd., as a mathematics teacher in class VIII at SMP Muhammadiyah Pakem Sleman Regency, the learning methods used were lecture and discussion methods. The lecture and discussion methods are still not successful. This is seen from the fact that many students do not understand what is conveyed by the teacher. There are still many students who are less actively asking questions. Students just take notes and listen and do activities according to the teacher's orders.

Responding to the above problems, the teacher must choose methods/models/strategies that are more motivating students in learning mathematics. So students who lack or do not understand want to ask the teacher or a friend. In line with the emergence of various studies on students, we realize that it cannot be denied, students of class VIII of SMP Muhammadiyah Pakem Sleman Regency want a process of learning mathematics that is by their thought processes. Based on this understanding, several attempts were made, one of which was to try learning through the STAD Cooperative Learning Model Type (Student Team Achievement Division). STAD is one of the simplest cooperative learning models and is the best model for beginning new teachers. They use a cooperative approach (Slavin, Robert E., 2005).

Cooperative learning type STAD (Student Team Achievement Division) is one type of cooperative learning model. Students are divided into groups that will work together into a team. In STAD type cooperative learning, each student will contribute a score to his group through an individual quiz, which they will do. Individual progress scores are accumulated in one group. Groups that achieve specific criteria will receive an award. With this award, it is expected that student motivation will increase.

This research aims to discover the increase in motivation to learn mathematics using the STAD (Student Team Achievement Division) cooperative learning model in Class VIII A students at SMP Muhammadiyah Pakem Sleman Regency in the Even Semester of the 2016/2017 Academic Year.

RESEARCH METHODS

This research is a type of classroom action research. This research was conducted using the stages of planning, implementation, observation, and reflection. This study is an assessment that aims to correct real and practical problems in improving the quality of learning in the classroom experienced directly in the interaction between teachers and students who are learning (Arikunto, Suharsimi., Et al., 2014: 60). The planned action is to apply the STAD (Student Team Achievement Division) cooperative learning model to increase the motivation of eighth-grade students at SMP Muhammadiyah Pakem Sleman Regency. According to Arikunto, Suharsimi., Et al., (2014: 16) in general, four stages are commonly passed, namely:

1) Planning,
2) Implementation,
3) Observation,
4) Reflection and so on until the expected improvement or improvement is achieved.

This research was conducted in the even semester and the place of its implementation in SMP Muhammadiyah Pakem Sleman Regency 2016/2017 academic year. The subjects in this study were class VIII A 2016/2017 Academic Year at SMP Muhammadiyah Pakem with 37 students. The object of research is the implementation of mathematics learning by applying the STAD type cooperative learning model to increase the motivation of students of class VIII A at SMP Muhammadiyah Pakem Sleman Regency. The study was conducted at SMP Muhammadiyah Pakem Even Semester 2016/2017 Academic Year. Researchers chose SMP Muhammadiyah Pakem as a place of research because the results of the interview on October 18, 2016, obtained information that students' motivation to learn mathematics is still low, so it is necessary to increase motivation to learn mathematics.

After knowing the problems that exist in the school through observation and interviews with subject educators concerned, and an agreement was reached between researchers and mathematics educators in class VIII A at Muhammadiyah Pakem Middle School, the researchers began to draw up an action plan. The planning activities include the preparation of Learning Implementation Plans, Group Activity, observation sheets, interview guidelines, and cycle tests. 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 action taken is flexible in the changes that occur in class. These changes are noted in the observation sheet, during the implementation of the action recorded by the observation sheet and interview guidelines.

This observation was carried out to see the implementation of the learning process by the stages of the application of the STAD (Student Team-Achievement Division) cooperative learning model that could increase the motivation of students of Class VIII A at SMP Muhammadiyah Pakem. During the observation, some observed things were the implementation of the stages of the STAD (Student Team Achievement Division) cooperative learning model, which included class presentations, group learning, individual score improvement, and group rewards. 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 STAD (Student Team Achievement Division) cooperative learning model, and how much the motivation for grade VIII students at SMP Muhammadiyah Pakem is increased. If it is not as expected, a learning improvement plan is made for the next cycle.

Data collection techniques in this study were using observation, questionnaires, and interviews. Data collection instruments in this study were using observation sheets, questionnaire guidelines, and interview guidelines.

1) Analyze observation sheet data
2) Questionnaire data analysis
3) Analysis of interview data

The data analysis technique used in this research is a descriptive qualitative method. Qualitative descriptive method is a method of analysis that tends to use words to explain the phenomena or data obtained (Sugiyono, 2010: 197). The data analysis technique that will be used for research problems is to use data triangulation methods. According to Moleong (2009: 330), Triangulation is a data checking technique that utilizes something other than the data for checking or as a comparison of that data.

Indicators of success are components that indicate how far the level of success demanded by assessors for learning behavior in the final situation (Arikunto, 2006: 140). Indicators of success of this study are that if after the learning process is given with the STAD type cooperative learning model marked by changes towards a better direction that is an increase in student motivation has increased to reach the minimum criteria of good (≥60%) in mathematics learning using the type of cooperative learning model STAD.

RESULTS AND DISCUSSION

This class group activity sheet action research was carried out in 2 cycles. Each cycle consisted of 4 stages, namely, planning, implementing, observing, and reflecting. The results of classroom action research consisting of two cycles, namely cycle I and cycle II using the STAD type cooperative learning model are as follows.

In cycle I, students do not pay attention to the explanation of the material delivered by researchers. They are not serious about doing the assignments given by researchers. Students have not been able to follow the learning applied by researchers so that some students interfere with other students who are seriously paying attention to the explanations of the material by researchers. Students are still lazy to solve problems and are hopeless in working on challenging problems. Students are not enthusiastic about learning implemented by researchers, so they do not pay attention when they submit material. Students are not yet interested in learning implemented by researchers. Students feel the classroom

atmosphere is uncomfortable for learning when researchers apply the STAD type cooperative learning model.

While in cycle II, students have the will and are interested in learning in completing assignments given by researchers. Students can take STAD type cooperative learning and are eager to follow the learning. Students do not hesitate to ask researchers when experiencing difficulties understanding the material or when it is challenging to work on the assigned group activity sheet problems. Students become excited and do not despair in doing the assignments given by researchers. Students are increasingly excited about competing to be the best in class. Students are increasingly excited by the praise given by researchers. The classroom atmosphere is calmer and more comfortable, so the learning activities run smoothly. Students are getting used to learning by using the STAD type cooperative learning model.

Based on the observation sheet of student learning motivation obtained a percentage of student motivation in STAD type cooperative learning as follows:

Table 1. Analysis of Observation Results of Student Motivation for Learning Cycles I and II

No	Indicator	Percentage		Information
		Cycle I	Cycle II	
1	The desire and want to succeed	61,486% (Good)	85,810% (Very Good)	Increase
2	There are encouragement and learning needs	63,513% (Good)	83,108% (Very Good)	Increase
3	The hopes and ideals of the future	63,513% (Good)	83,783% (Very Good)	Increase
4	There is an appreciation for learning	65,540% (Baik)	85,135% (Very Good)	Increase
5	There are exciting activities in learning	63,513% (Good)	84,459% (Very Good)	Increase
6	The existence of a learning environment that is conducive	62,837% (Good)	85,135% (Very Good)	Increase

Based on the results of the observation sheet of student learning motivation, student motivation has increased after implementing the STAD type learning model with an average criterion of the first cycle of 63.400%. The second cycle increased to 84.572%. For more details will be presented in the following graph:

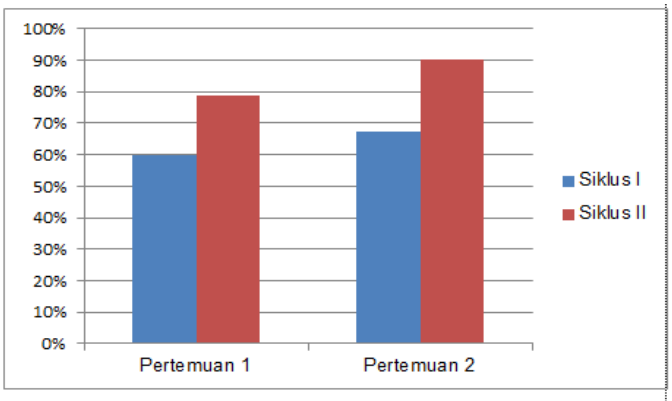

Figure I. Percentage Graph Analysis Results in Observation Sheet Student Motivation

Based on the results of the questionnaire filled out by students, the percentage of student motivation obtained based on indicators is as follows:

Table 2. Percentage of Student Learning Motivation Based on Questionnaire Results

No	Indicator	Percentage		Information
		Cycle I	Cycle II	
1	The desire and want to succeed	69,189% (Good)	83,378% (Very Good)	Increase
2	There are encouragement and learning needs	71,135% (Good)	81,514% (Very Good)	Increase
3	The hopes and ideals of the future	73,297% (Good)	86,703% (Very Good)	Increase
4	There is an appreciation for learning	69,324% (Good)	80,270% (Very Good)	Increase
5	There are exciting activities in learning	74,324% (Good)	86,216% (Very Good)	Increase
6	The existence of a learning environment that is conducive	68,973% (Good)	79,459% (Good)	Increase

For more details will be presented in the following graph:

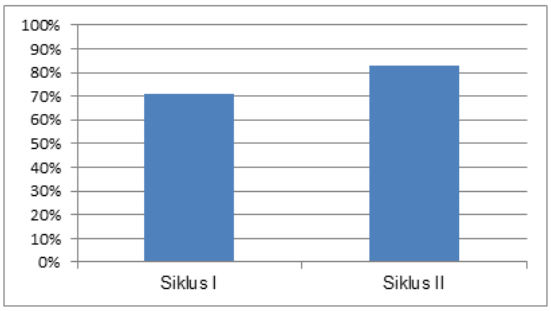

Figure II. Percentage Graph Analysis Results of Student Learning Motivation Questionnaire.

In this study, in addition to using observational data, researchers used data in the form of interviews conducted both with teachers and students. Interviews were conducted in each cycle. The results of interviews conducted with teachers can be concluded as follows:

a. Cycle I

1) The motivation of children has not been seen to increase after applying the STAD type cooperative learning model. Some students still do not understand the material delivered with the STAD type cooperative learning model applied. However, some other students have begun to understand.
2) Some students have not shown an interest in learning after using the STAD type cooperative learning model. Some have started to be interested in learning with the STAD type cooperative learning model.
3) During the learning process, by using the STAD type cooperative learning model, some obstacles, including some students still playing alone, not paying attention to the explanation of the material presented by the researcher, and not seriously working on the assignments given by the researcher.
4) Efforts to fix the obstacles above are by giving special attention to approaching the student and asking what difficulties the student feels while following the ongoing teaching and learning process.

5) Some students have not been fully able to participate in learning by using the STAD type cooperative learning model so well that some of these students even bother other students who are seriously paying attention to the explanations of the material presented by researchers.

b. Cycle II

1) Overall, in this second cycle, students' motivation increases after applying the STAD type cooperative learning model.
2) Students as a whole already have the will. They are interested in learning in completing tasks given by researchers after using the STAD type cooperative learning model.
3) In cycle II, compared to cycle, I only had a few obstacles. Namely, at least students who had indifference and uncomfortable seating made some students less focused on following the learning process.
4) Efforts to fix these obstacles can be made by changing each group's seating position, so students do not get bored.
5) As far as is observed, overall, students have been able to follow the learning by using the STAD type cooperative learning model. For more details, see the attachment.

While the conclusions of the results of interviews conducted with students after applying the STAD type cooperative learning model are as follows:

a. Cycle I

1) Mathematics learning that has been carried out using the STAD type cooperative learning model in this cycle I, some students still feel hopeless in doing the assignments given by the teacher.
2) Students as a whole have not competed in wanting to be the best in class, and it can be seen when researchers ask students to work in front of the class, some students are afraid to advance.
3) Students have actively asked about material and questions that are considered difficult to do after applying the STAD type cooperative learning model.
4) Students are still not enthusiastic when researchers give praise to them.
5) Students do not feel interested in learning mathematics.
6) Students feel uncomfortable with the classroom atmosphere when the STAD type cooperative learning model is applied. Some students consider the class to be quiet, not as usual.

b. Cycle II

1) Mathematics learning that has been carried out using the STAD type cooperative learning model in cycle II students are excited and interested in learning mathematics.
2) Students become active in asking questions about materials and questions that are considered difficult to do after applying the STAD type cooperative learning model.
3) Students become enthusiastic and not easily discouraged in doing the assignments given by researchers.
4) Students want to be the best in class, so most students are more motivated to learn.
5) Students get excited when researchers give praise to them.
6) Students pay more attention to the explanations given by researchers.
7) Students feel comfortable with the class atmosphere and with their respective group members.

Overall, it can be concluded that mathematics learning through the STAD type cooperative learning model can be used to improve mathematics learning motivation of students of class VIII A, SMP Muhammadiyah Pakem Middle School, and Sleman, 2016/2017 academic year and get positive responses from students and teachers. Thus the action hypothesis on this research is proven.

CONCLUSION

Based on the research results using the cooperative learning model type Student Team Achievement Division (STAD) in class VIII A even semester of SMP Muhammadiyah Pakem Sleman in the 2016/2017 school year, it can be concluded that:

The use of STAD type cooperative learning models can increase student motivation. This is evident from the average results of student learning motivation questionnaires that have increased, i.e., in the first cycle obtained a percentage of 70.789% (Good) and in the second cycle increased to 82.616% (Very Good). The observation results showed the first cycle of 63.400% (Good) and, in the second cycle, increased to 84.572% (Very Good).

Mathematics learning using the Student Team Achievement Division (STAD) type of cooperative learning model received positive responses from teachers in mathematics and students. At the first meeting of the first cycle, overall, students have not shown enthusiasm and encouragement to follow learning by using STAD cooperative learning delivered by researchers. It happened because students did not understand learning by using the STAD cooperative learning model. However, at the second meeting of the first cycle, students have begun to enthusiasm for learning and doing the tasks given by researchers. Then in the second cycle, overall, students have shown an increase in motivation to learn mathematics by using the cooperative learning model type Student Team Achievement Division (STAD). This is evident from the results of the teacher and student interviews at each cycle.

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