THE EFFORTS TO IMPROVE ACTIVITY IN LEARNING MATHEMATICS THROUGH TEAMS GAMES TOURNAMENT LEARNING MODEL

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ABSTRACT

Learning mathematics is still a lesson that is considered difficult for students. Student activity also seems to be lacking. This can be seen from some students who pay less attention to the teacher's lessons, and some students chat with their friends. Students also do not want to ask the teacher if they have difficulty learning or working on math problems. Sometimes students lack the confidence to ask questions or express their opinions. For this reason, students need an active attitude in solving problems during the learning process of mathematics. This study aims to improve students' mathematics learning activities. This study's subjects were the sixth-grade students of Junior High School (SMP) Muhammadiyah Ngemplak Sleman Regency, totaling 32 students consisting of 20 male students and 12 female students. This research aims to apply the team's games tournament (TGT) type learning model. Data collection techniques were carried out by observation and interview methods. The research instrument used observation sheets and interview sheets. The data analysis technique in this study used a qualitative descriptive. This study indicates that passing the TGT cooperative learning model can improve mathematics learning activities in VIIA students in the Middle Semester of SMP Muhammadiyah Ngemplak Sleman Regency 2018/2019. This is shown from the results of the observation sheet of student learning activities in mathematics learning, which has increased every Cycle, namely in Cycle I, indicators of student enthusiasm in participating in learning amounted to 59,38% with sufficient criteria, student and teacher interaction of 55,86% with sufficient criteria, the interaction between students was 53,52% with sufficient criteria, group collaboration was 62,90% with good criteria, student activity in the group was 57,82% with sufficient criteria, student participation in concluding the discussion result was 55,86% with sufficient criteria. While in Cycle II, each indicator has increased, namely the indicator of student enthusiasm in participating in learning amounting to 79,69% with good criteria, the interaction between students and teachers amounted to 73,83% with good criteria, the interaction between students was 71,10% with good criteria, group collaboration amounted to 78,91% with good criteria, student activities in the group amounted to 76,95% with good criteria, student participation in concluding the results of the discussion amounted to 73,44% with good criteria.

Keywords: Activities, Classroom Action Research, Teams Games Tournament

INTRODUCTION

According to Slavin, Robert E (2009, 143), Cooperative learning type team games tournament (TGT) consists of five stages, namely: 1) class presentation (class presentation), 2) learning in groups (teams), 3) games (games), 4) matches (tournaments), and 5) group awards (team recognition). From observations made by researchers on September 25, 2017, in class VII-A students of SMP Muhammadiyah Ngemplak, Sleman Regency, students consider mathematics a complicated subject from interviews with several students. Students are embarrassed to ask the teacher. Student activities also seem to be lacking, but students pay less attention to the teacher's lessons, and some students are chatting with friends. One math teacher also mentioned that students' numeracy skills were still low. Seen when students are given a problem, there are still cheating when working on problems, and there are people who look confused to do it, there are also some who do not even work on the problem to silence. This study aimed to determine whether learning using the Type Games Games Tournament (TGT) learning model can improve student mathematics learning activities.

METHODS

In this study (Arikunto, Suharsimi: 2006: 17), researchers will use a class action research model consisting of 4 (four) stages, namely:

1. Planning. Step taken by the teacher when starting an action. The description that needs and must be stated is to arrange activities students will do what.
2. Implementation. Implementation of the plan that has been made.
3. Observation. The process of looking at the course of action.
4. Reflection, also known as recollection, is a step to recall past activities carried out by both teacher and student. In this contemplation, the teacher re-imagines the past event, when the action took place.

The study subjects were students of class VII-A odd semester of SMP Muhammadiyah Ngemplak, Sleman Regency in the academic year 2018/2019, amounting to 32 students consisting of 20 male students and 12 female students. In contrast, the object of this study was mathematics learning using the TGT type learning model. Data collection techniques are a method of observation and interview methods. At the same time, the research instruments are observation guidelines and interview guidelines as in Table 1, and the interview guidelines in Table 2.

Table 1. Lattice Observation Sheet Student learning activities

No	Indicator	Item Number
1	Enthusiastic students participate in learning.	a1,a2,a3,a4
2	Student interaction with the teacher.	b1,b2,b3,b4
3	Interaction between students	c1,c2,c3,c4
4	Group collaboration	d1,d2,d3,d4
5	Student activities in groups	e1,e2,e3,e4
6	Student participation in concluding the results of the discussion	f1,f2,f3,f4

Table 2. Grid of Student Interview Guidelines

No	Aspect	Item Number
1	Enthusiastic students participate in learning.	1
2	Student interaction with the teacher during the learning process	2
3	Interaction between students during the learning process	3
4	Group collaboration during the learning process	4
5	Student activities in groups during the learning process	5
6	Student participation in concluding the results of the discussion during the learning process	6
7	Student suggestions for the learning process	7

Data analysis techniques with observation sheets and interview data analysis using criteria as in Table 3.

Table 3. Criteria for Results Scores Student Learning activities

The percentage obtained by students	Qualification
$80\% \leq \mathbf{P} \leq 100\%$	Very well
$60\% \leq \mathbf{P} < 80\%$	Well
$40\% \leq \mathbf{P} < 60\%$	Enough
$20\% \leq \mathbf{P} < 40\%$	Less
$\mathbf{P} < 20\%$	Very, very little

The resulting score is then processed using the formula:

$$P = \frac{JS}{JM} \times 100\%$$

Information:

P: Activity score obtained

JS: Number of scores

JM: Maximum score

After applying the TGT learning model in the teaching and learning process of mathematics in the classroom, it is expected that the indicator of its success will be achieved, namely an increase in the percentage of students' mathematics learning activities with each indicator of student learning activities reaching minimum criteria of good (≥60%).

RESULTS AND DISCUSSION

       This class action research was carried out at SMP Muhammadiyah Ngemplak, Sleman district, from July 27, 2018, to August 4, 2018. The classroom action research implementation was carried out in class VII A with 32 students consisting of 20 male students and 12 female students. The implementation schedule of the first Cycle I class action research was held on July 27, 2018, and the second meeting was held on July 28, 2018. Whereas the second Cycle II meeting was held on August 3, 2018, and the second meeting was on August 4, 2018. The description of the results of research during the implementation of classroom action research as follows.

1. Cycle I
   a. Planning

      Learning activities at the Cycle I stage are carried out using the TGT type learning model. The things are done in the planning of Cycle I are:

      1) Planning the learning process by implementing learning with the guidance of mathematics teacher class VII-A about the material being taught using the TGT type learning model is useful as a teaching and learning guideline. The Lesson Plan compiled in Cycle I consists of 1 Lesson Plan, which will be used for two meetings.

      2) Prepare an observation sheet. The observation sheet prepared is the observation sheet of students' learning activities in learning. The observation sheet of students' mathematics learning activities is used to obtain student learning activity data during the learning process seen from the indicators and things that occur during teaching and learning activities using the TGT type learning model.

      3) Prepare an interview sheet. Interview sheets prepared are student interview sheets used to determine student responses to learning activities using the TGT type learning model. This interview sheet aims as an input for researchers to correct deficiencies in learning.

   b. Implementation

      At this stage, the researcher carries out the implementation according to the compiled lesson plan. Cycle I, a class action, is held on Friday, July 27, 2018, at 1-2 hours (07.00-08.20) and on Saturday, July 28, 2018, at 2-3 hours (07.40-09.00). The material taught in Cycle I is the integer operating integer material.

      1) First Meeting

         This meeting was held on Friday, July 27, 2018, at 1-2 hours (07.00-08.20) with integer material sub-material integer operations. Thirty-two students attended this meeting. Learning activities are carried out by the lesson plans that have been made. The details of the activities in the implementation of the first Cycle I learning meeting are as follows

         a) Early activities

            Early activities researchers open teaching and learning activities with greetings and prayers and ask students how they are doing. After that, researchers began to check the presence of students. The researcher informs students about the learning objectives to be carried out using the TGT type learning model and explains students' steps during the learning process. Researchers convey learning objectives that will be carried out.

b) Core Activities

Researchers divided students into eight groups, each group consisting of 4 students. The division of groups is carried out heterogeneously. Then students adjust their seating positions according to the group. Researchers give a little picture of the material to be taught. After that, the researcher asked the question: Does anyone know what integers are?. Some of the students tried to answer, but the answers still could not explain clearly and correctly.

Then the researcher explains the meaning and gives material about integers. Researchers also provide several examples of questions about integers. Researchers walk around the class and guide students if there are students who are experiencing difficulties.

c) Final Activity

At the end of the lesson, researchers and students together conclude the material learned and inform students that learning will be done using a cooperative type TGT model at the next meeting. Researchers ended teaching and learning activities by saying greetings.

2) Second Meeting

The second meeting was held on Saturday, July 28, 2018, at 2-3 hours (07.40-09.00), and 32 students attended. At this meeting, the researchers will carry out the type of TGT learning. The details of activities in learning are as follows.

a) Initial Activity

The researcher opened the meeting by saying greetings and praying, and asking students how they were doing. After that, researchers check the presence of students and condition students. The researcher also informed that at this meeting, TGT type learning would be carried out. The steps of this activity have been explained in the previous meeting.

b) Core Activities

Researchers asked students to join their respective groups that have been divided at previous meetings. Then students adjust their seating positions according to their respective groups.

The researcher explains the steps of the TGT type learning model again to students. Then the researchers gave a question card and answer card to each group. In carrying out this tournament, each group will be given 60 minutes.

After the tournament time ends, the researcher asks each group to mention the total score obtained.

c) Final Activity

At the end of the meeting, the researcher announces the winner of the tournament. Then the researchers gave rewards to each group that became the winner. Researchers and students together conclude the learning outcomes that have been implemented. The researcher ended the meeting by praying and saying hello.

c. Observation of Class Actions

The observation stage of students' learning activities in Cycle I was carried out during the teaching and learning activities. The researcher was assisted by three friends as observers to carry out observations using observation sheets made by researchers. Student learning activities during the teaching and learning process were observed with six aspects: students' enthusiasm for participating in learning, student interactions with teachers, interactions between students, group collaboration, student learning activities in groups, and student participation in concluding the results of the discussion.

1) First Meeting

At the first meeting, students seemed enthusiastic to take part in learning mathematics. Most students pay attention to the researcher's explanation. There are also students seen playing and joking with other friends. Some students are still affected by situations outside the classroom. Student participation in asking researchers is still lacking because only a few students dare to ask researchers when experiencing difficulties.

Student participation in group assignments also tends to be unfavorable because students work on group assignments individually. Some students only dare to convey their difficulties when asked by researchers. Students are still impressed, shy, and do not want to ask. Student participation in concluding learning outcomes is good. This can be seen when concluding learning outcomes; students respond to questions or conclusions from researchers. However, in perfecting the results of student conclusions still look lacking.

2) Second Meeting

The observation results during the implementation of the second meeting showed that students could follow the learning well. From the observations of student learning activities in learning at this second meeting, there was an increase in all aspects, even though it had not yet reached the good category in terms of the six aspects observed.

TGT type learning model activities carried out are enough to make an increase in student learning activities. Even though they work in groups, the discussion process is still not going well because students still directly ask the researcher when they find a difficult problem without discussing it with a groupmate first.

From the results of the research that has been done, based on observations of the learning activities of students in Cycle I, the results obtained with the details of the percentage are students' enthusiasm in learning by 59.38% with sufficient criteria, student interaction with teachers by 55.86% with sufficient criteria, the interaction between students amounted to 53.52% with sufficient criteria, group collaboration amounted to 62.90% with good criteria, student learning activities in groups amounted to 57.82% with sufficient criteria, student participation in concluding the results of the discussion amounted to 55.86% with sufficient criteria. The percentage of student learning activities is still not good, so it is necessary to increase student learning activities. While in Cycle II, the details of the percentage of observations were enthusiastic students in participating in learning by 79.69% with good criteria, student interaction with teachers by 73.83% with good criteria, the interaction between students by 71.10% with good criteria, group collaboration of 78.91% with good criteria, student activity in groups of 76.95% with good criteria, student participation in concluding the results of the discussion amounted to 73.44% with good criteria.

CONCLUSION

Based on research carried out on Grade VII A odd semester students at SMP Muhammadiyah Ngemplakin 2018/2019 with integer material, it can be concluded that using the TGT type learning model can increase student learning activities in learning mathematics. This is shown from the observations on each indicator that has increased in Cycle II of Cycle I.

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