IMPLEMENTATION OF COOPERATIVE SCRIPT LEARNING STRATEGIES TO IMPROVE MATHEMATICS LEARNING ACTIVITIES AND OUTCOMES

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ABSTRACT

The research is in the background of low learning activity and low learning outcomes for students for mathematics lessons. This research aims to increase mathematics learning activity and improve grade VIII B students of Junior High School (SMP) Muhammadiyah Sewon Bantul Yogyakarta used a cooperative script learning strategy. This research used Classroom Action Research (CAR) used by a cooperative script learning strategy, which lasted for two cycles. Data collection mathematics learning activities using observation sheets, mathematics learning activities, and interviews with research subjects. While the measurement of student mathematics learning outcomes using test instruments formative at every end of the cycle. Data analysis uses qualitative analysis and uses descriptive statistical analysis. Research results revealed that the cooperative script learning strategy improves student mathematics learning activities and improves grade VIII B students of SMP Muhammadiyah Sewon Bantul Yogyakarta.

Keywords: Cooperative Script, The Activity of Learning, Learning Outcomes.

INTRODUCTION

The 2003 national education system act no. Twenty states that education is a conscious and deliberate attempt to bring about a learning environment that encourages learners to develop themselves for the spiritual powers of religion, self-control, personality, intelligence, noble moral character, self-important skills, and society, nation, and country. The curriculum is a reference to organizing education and as a benchmark on the attainment of educational goals. As outlined in the rules of the ministry of education and culture (Minister Of Education And Culture Rules: 2013) states that: the curriculum is a set of plans and arrangements for purpose, the content, and materials of study and the means used to guide the setting of learning activities for special education. The curriculum centers on student potential, student development, student growth, and students' and ward interests. In the rules of the ministry of education and culture number. Twenty-two the year 2016 included that: the learning process should take note of the participation of learners' activities and center on learners to encourage a spirit of learning, motivation for learning, interest in learning, creativity, initiative, inspiration, innovation, and self-reliance.

Based on the observation results in SMP Muhammadiyah Sewon VIII B grade, the class's learning process indicates that students' learning activities are still below. This student's low activity is due to students' lack of involvement and self-reliance in teaching-learning activities. Students tend to be passive, not bold in expressing opinions, embarrassed to ask, a lack of interaction between teachers and students, and students with students.

Learning activities are activities that learners must engage in to produce knowledge, value attitudes, and students' skills as a deliberate exercise. Learning activities are a vital principle or principle in learning to teach both physical and mental. Sardiman (2018) made 177 kinds of student activities: visual activities, oral activities, listening activities, writing activities, activities motor activities, and emotional activities. In addition to low learning activities, it is also obtained that the students' learning outcomes are low. This can be seen from the outcomes learning of the midterm examination, which has not yet reached the minimum rating set by 61, while the average midterm rating for the VIII B grade is 52.10 in the mathematics class, in which it is said that almost all students in the VIII B grade have not yet achieved the minimum rating criteria. One cause of low average learning value is to lack the proper use of learning methods or to lack the variety of learning methods. To overcome this situation, a proper,

exciting, and effective study method is needed to be active in learning activities and produce what students must learn after the learning process has taken place. According to research carried out by Acek M Jamil (2019), cooperative learning strategies could increase the activity and outcomes of mathematics. Researchers, therefore, draw on the initiative to draw over by using a cooperative script study strategy.

Cooperative script according to lambiotte, and comrades (in huda, 2018). The cooperative script is one of the learning strategies over which students work in pairs and interchangeably internalize over study materials. This strategy is aimed at helping students think systematically and concentrate on the lesson material. Students are also trained to cooperate in pleasant Settings. The cooperative script also allows students to determine the key ideas of the greatest ideas conveyed by teachers.

Does research provide the following insight into the subject: (1) Whether using a cooperative script study strategy could increase activity and outcomes on mathematics students of the VIII B grade for SMP muhammadiyah sewon helps?. (2) How did the cooperative script study strategy exercise increase activity and student's outcomes on the mathematics of the VIII B grade for SMP muhammadiyah sewon?

From the subjects outlined above, the purpose of this research is: (1) To increase the activity of studying the mathematics students VIII B grade at SMP muhammadiyah sewon for help. (2) To increase the outcomes of mathematics student's VIII B grade SMP muhammadiyah sewon.

METHODS

This type of research is a class action study. The method of study used is a method developed by Kurt Lewin quoted by Sanjaya, w (2016), which is composed of four stages: (1) planning, (2) action, (3) observation, and (4) reflection. In detail, the experimental stage is presented in Figure 1.
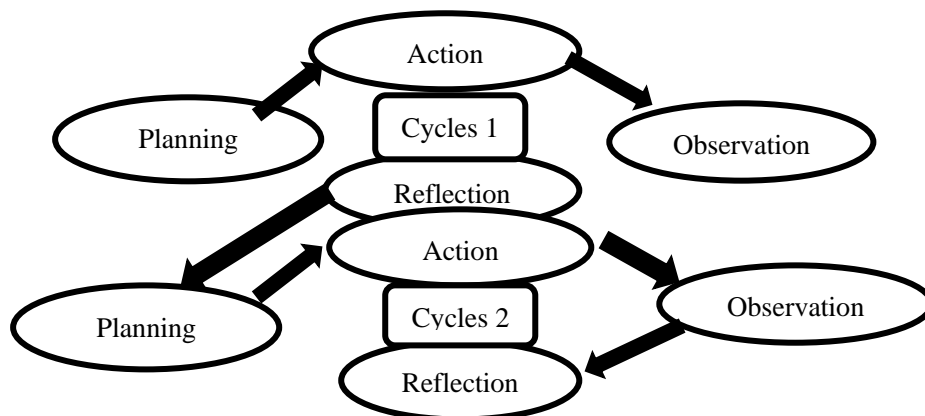

Figure I. Cycles Of Research

This research was carried out at SMP muhammadiyah sewon bantul Yogyakarta. The subject of this research was the VIII B grade students SMP muhammadiyah sewon. This research's object was the activity learning and outcomes learning on mathematics student's VIII B grade at SMP muhammadiyah sewon. The data-collection techniques used are observation, interviews, and study results. The technique of data analysis used is qualitative descriptive analysis.

RESULTS AND DISCUSSION

Class action studies over two cycles over cooperative script learning strategies to mathematical study show increased activities learning and outcomes learning on mathematics. In this study, determining action's success is marked by an increase in the average percentage of student activity that has achieved a minimum rating of 60% and by the way. These student outcomes can be seen from the average test results of a student who has reached minimum slant criteria of at least 61 and the performance of all cooperative program learning strategies over a cooperative script being sound. The results of student activity learning and outcomes learning of the cycle I was presented in Table 1 and Table 2.

Tabel 1. Cycle I Student Activity Observation Result

No	Indicator	First Meeting	Second Meeting	Average	Category
1.	Visual Activities	70,16%	71,77%	70,97%	Good
2.	Oral Activities	62,10%	63,71%	62,91%	Good
3.	Writing Activities	69,35%	72,58%	70,97%	Good
4.	Drawing Activities	62,10%	64,52%	63,31%	Good
5.	Mental Activities	63,71%	66,13%	64,92%	Good
6.	Listening Activities	62,90%	68,55%	65,73%	Good
7.	Motor Activities	63,71%	66,13%	64,92%	Good
8.	Emotional Activities	47,58%	49,19%	48,39%	Passable

On table 1 shows that students' learning activities are suitable, but not maximum. This has been evident in the eight indicators that the emotional activities students who are still in the category well have not achieved good categories. Other indicators also need to be focused on because any student learning activities indicators will affect the student learning results.

Tabel 2. The Data Test Results For Students Gread VIII B Cycle I

Minimum Sloughing Criteria	Many Students	Percentage	Attainment
< 61	6	19,35%	Unfinished
≥ 61	25	80,65%	Thorough
Total	31	100%	

Resource: The Data Test Results For Students Grade VIII B SMP Muhammadiyah Sewon Bantul Academic Year 2018/2019

According to table 2, 80.65% of students have reached the height of outcomes, but these outcomes have not yet been achieved because of the observation of student learning activities grouped into eight sub-subjects. Therefore, researchers will continue to study into cycle II hoping that on cycle II, researchers can lead students to even more maximize student learning activities that will result in increased student learning outcomes and reduce the percentage of students who have not yet learned.

In cycle II, after reflecting on the flaws in the cycle, I found that things needed to be improved: (1) There were 29.03% of students not noticing or reading the lesson material. This can be because some students focus only on reading material but pay little attention to their teachers or friends. Some students also focus on recording the material on the board. Some students still revel in talking to themselves while studying. (2) 37,09% As many as 37,09% of students are less active to ask or respond as the study progresses. This may be because students are still shy to ask, or students are still afraid to respond or answer a question given by a teacher or a researcher, or a friend. (3) There are as many as 29,03% less-active students taking notes of the lesson material. This may be because students still assume that all lesson materials are listed in their book. This research picked up on the form of one of the students that the researchers heard while monitoring the recording activity by the student who did the researchers give a specific time to record the material. (4) As many as 36,69% of students are less active in making patterns or diagrams, or graphics. This could be because some material in cycle I meetings has not been directly linked to graphic portrayal, although early learning described the way it describes the pattern or graphic. (5) There are as many as 35.08% of students less active in solving problems or responding to problems. This may be because students are still afraid or reluctant to respond to an issue or are still afraid to give answers out of an existing problem or problem. The conclusion that researchers draw from this is that students lack the confidence to express the answer since they still fear being wrong with their work by a teacher or a classmate. (6) As many as 34,27% of students listen less to teachers or friends' explanation about the material and less closely follows the discussion. Because some students are busy discussing their own when a teacher or a friend explains the material in front of the class, they do not follow the discussion very well. (7) As many as 35,08% of students do not enough experiments. This may be because some students are simply waiting for discussion results or answers from friends or groups who first finish

working on their assigned problems. (8) As many as 51,61% of students lack interest or boredom. This can be because students cannot control their emotional control. We can observe when students are feeling good and they are having fun. They can have fun, and they can have fun, and they can have fun, and they can have fun, and they can have fun, and they can have fun. They can have fun, and they can do any activity that comes with feeling good even when the activity is hard, but when their hearts are bad, they can get bored or reluctant to do something easier for them. From the results of research observations for the 8th indicator, which was the emotional activities on this I cycle, researchers concluded that students have not been able to control their emotions well. At a certain time, students felt excited suddenly. A few minutes later, they were bored and otherwise. So in all, there are still 35,99% less-active students in the learning activity. Some of these factors may be inferred that students' learning activities are good but not overdone.

Then as an improvement of the cycle I, in cycle II the researchers performed the following actions: (1) Make sure students pay attention to explaining a teacher or friend and reading the lesson material. (2) Ensure students understand the material explained and ask material that the students do not understand and increase the students' confidence in responding to or answering questions from a teacher or a friend. (3) make sure students do assignments and record lesson materials. (4) Guide students in drawing patterns or making graphs or diagrams. (5) Guide students in solving problems and guide students on how to respond to those problems or issues. (6) Ensure students follow a good discussion and hear explanations from a teacher or a friend about the lesson material. (7) Ensure that students are active in conducting experiments on the given issue. (8) Try to blend more in with students to increase their interest in learning.

Over the II cycle, following improvement over cycle I, the mathematical learning process used cooperative learning strategies to enhance students' mathematical activity. This conforms to research carried out by Acek M Jamil (2019) with cooperative learning strategies that could increase the activity and outcomes of student mathematics.

This can be seen from the average percentage of student learning activities at the first and second meetings on cycle II presented in Table 3.

Table 3. Cycle II Student Activity Observation Result

No	Indicator	Indicator	First Meeting	Second Meeting	Average
1.	Visual Activities	75,81%	79,84%	77,83%	Good
2.	Oral Activities	64,52%	64,52%	64,52%	Good
3.	Writing Activities	79,03%	83,87%	81,45%	Good
4.	Drawing Activities	67,74%	62,90%	65,32%	Good
5.	Mental Activities	67,74%	72,58%	70,16%	Good
6.	Listening Activities	72,58%	72,58%	72,58%	Good
7.	Motor Activities	63,71%	70,97%	67,34%	Good
8.	Emotional Activities	50%	49,19%	49,60%	Passable

Next to the data test results learned on cycle II can be seen in table 4.

Tabel 4. The Data Test Results For Students Gread VIII B Cycle II

Minimum Sloughing Criteria	Many Students	Percentage	Attainment
< 61	1	3,22%	Unfinished
≥ 61	30	96,78%	Thorough
Total	31	100%	

Resource: The Data Test Results For Students Grade VIII B SMP Muhammadiayh Sewon Bantul Academic Year 2018/2019

After all the action on cycle II is done and over, it should be stated that the average percentage of every activity indicator increases from cycle I to cycle II. This is listed in Table 5.

Table 5. The average percentage of activity cycle

No	Indicator	Percentage		Category
		Cycle I	Cycle II	
1.	Visual Activities	70,91%	77,83%	Escalate
2.	Oral Activities	62,91%	64,52%	Escalate
3.	Writing Activities	70,97%	81,45%	Escalate
4.	Drawing Activities	63,31%	65,32%	Escalate
5.	Mental Activities	64,92%	70,16%	Escalate
6.	Listening Activities	65,73%	72,58%	Escalate
7.	Motor Activities	64,92%	67,34%	Escalate
8.	Emotional Activities	48,39%	49,60%	Escalate
	Total	64,01%	68,60%	Escalate

Then after doing the study test on cycle II, it can be stated that the result of a student's study of mathematics is an improvement over the first cycle and the second cycle. This is listed in Table 6.

Table 6. Percentage Data Of Test Result study

Minimum Sloughing Criteria	Percentage Cycle I	Percentage Cycle II	Attainment	Category
< 61	19,35%	3,22%	Unfinished	Decline
≥ 61	80,65%	96,78%	Thorough	Escalate
Total	100%	100%		

Table 5 and Table 6 show an increase in student learning activities and student outcomes. Overall, using cooperative study strategies over mathematics lessons was one way to increase activity and outcomes on the mathematics of the grade VIII B SMP Muhammadiyah Sewon Yogyakarta academic year 2018/2019.

CONCLUSION

The conclusion is (1) There has been an increase in the student's mathematical activity learning. The increase can see the rise in student mathematical activity learning in student activity percentage during class. The visual activities experienced a rise from cycle I to cycle II. Oral activities experienced an increase from cycle I to cycle II. Writing activities took an increase from cycle I to cycle II. Activities experienced an increase from cycle I to cycle II. Activities' mental activities experienced a rise from cycle I to cycle II. The listening activities got to experience an increase from cycle I to cycle II. Activities' motor experienced an increase from cycle I to cycle II. Emotional activities experienced a rise from cycle I to cycle II. All the success indicators for the activity learning of VIII B grade SMP Muhammadiyah Sewon Yogyakarta have been achieved. (2) There has been an uptick in outcomes of student's mathematics learning. This can be seen from the I cycle test results, which acquired a 55 lowest score and an 87 highest score. The number of students who have completed studying in the I cycle is 80.65%, and the number of students who have not completed learning is 19.35%. Whereas in cycle II the lowest score is 60, and the highest score is 93. The number of students studied by 96.78% and students who have not learned by 3.22%. A standard set of minimum criteria determined this is 61.

Mathematical lessons using a cooperative script learning strategy obtained a good response from students. That meant students could follow the learning and receive good learning, and be drawn to the mathematical lesson. This is evident from student interviews that demonstrate a positive response to classroom learning.

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