INCREASING MATHEMATICS LEARNING OUTCOMES THROUGH CONCRETE LEARNING MEDIA ON CONSTRUCTION NETWORKS IN CLASS V STUDENTS ROOM

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ABSTRACT

This study aims to improve student learning outcomes of mathematics content through concrete learning media on the material of building nets for class V MI Bani Hasyim Lengkong Cerme Gresik. This type of research is Classroom Action Research using a research design from Kemmis and Tagart which consists of two cycles with each cycle consisting of one meeting. The subjects of this study were students of class V MI Bani Hasyim Lengkong Cerme Gresik, totaling 14 students consisting of 4 male students and 10 female students. Data collection techniques used are structured interviews, tests (pre-test and post-test), and documentation. The data analysis technique used is qualitative. The results of the Classroom Action Research showed that there was an increase in the actions of cycle I and cycle II. The learning outcomes of fifth graders experienced an increase in the content of mathematics after using concrete learning media. This is indicated by an increase in the percentage of complete learning outcomes and the average learning outcomes of the fifth grade students of MI Bani Hasyim.

A. Introduction

Education is a very important right and obligation for every citizen to improve and develop their potential and the knowledge they already have. Education is one thing that needs to be developed by a country starting from basic education to higher education. Education is very important in all aspects of human life, because with education a person can better understand the surrounding environment and respect other people and be more useful to others around him. Every human being must take education by learning. At the elementary or elementary school level, students study various subjects which are currently combined into thematic ones. One of the subjects in it is mathematics. Mathematics is one of the subjects that is very important to learn because in every aspect of human life requires calculations contained in mathematics, such as people who are going to buy something, these people need calculations using basic mathematics.

According to Ruseffendi in (Rahayu and Hidayati, 2018) states that mathematics is a deductive science, the language of art, the queen of science, the science of organized structures, and the science of patterns and their relationships. Mathematics is a scientific discipline in which there is addition, subtraction, division, multiplication, and also geometry such as geometric shapes and flat shapes in which there are complex formulas (Juliawati and Rahmatunnisa, 2019). Mathematics subjects in high grade students, namely grades 4, 5, and 6 are not combined thematically. In mathematics subjects in elementary school, especially grade 5, there is material for building spaces. In this material, there are several sub-materials, namely various types of shapes, spatial properties, wake-up webs and volume formulas. Ideally, grade 5 students already know and understand the material. However, in reality, students do not understand the material, especially in the sub-material of geometrical nets.

Muhassanah et.al in (Rahayu and Hidayati, 2018) revealed that in studying geometric material, students need concepts that are mature enough so that students are able to apply their geometry skills, such as visualizing, recognizing flat shapes and building spaces, and also describing images. However, there are still many students who have not mastered these skills. This can make student learning outcomes low. In addition, teachers rarely use learning media in the learning process so that students find it difficult to accept the material. Learning media is very important in learning activities, especially in mathematics. Sujana

and Rivai in (Rahayu and Hidayati, 2018) state that the media has a function as a teaching aid.

Learning media can facilitate students in learning, attract students' attention, provide concrete experiences, students become more active. The teacher must determine the learning media used in the learning process according to the material and characteristics of students, so that the role of learning media as a tool or messenger can play as much as possible. In the high class, namely grades 4, 5, and 6 at the elementary school level, students have a high curiosity. So we need learning media that can increase students' curiosity and also make students more active. Learning media that can make abstract things concrete make it easy for students to understand a material. According to Rahmanelli in (Rahayu and Hidayati, 2018) revealed that if students are directly involved and experience themselves and participate in learning activities, student learning outcomes can be better. In addition, learning activities are more meaningful because they will be absorbed in students' memories for a long time.

Based on the results of interviews with fifth grade mathematics teachers at MI Bani Hasyim, many fifth grade students feel bored and are still not interested in learning mathematics activities. Students feel that mathematics is a difficult subject so that many students are less motivated to learn mathematics. At the time of learning activities teachers rarely use learning media in accordance with the characteristics of students. So that the role of learning media cannot play a maximum role. The existence of interesting and concrete learning media can make students more interested, not bored quickly, and more active because they can participate in the use of these learning media.

Based on the description of the background, researchers are interested in conducting Classroom Action Research or CAR with the title "Improving Student Learning Outcomes of Mathematics Content Through Concrete Learning Media in the Material of Building Networks for Class V MI Bani Hasyim Lengkong Cerme Gresik" to solve the problems that occur, namely increasing student learning outcomes in mathematics subjects using concrete learning media.

B. Method

The research design used by researchers in this study is Classroom Action Research (CAR). According to Nazir in (Siti and Wahyu, 2018) revealed that classroom action research is one type of action research that has specific objectives related to the classroom. In this study, the researcher used a research

design from Kemmis and Tagart (Widjayanto, 2014) which had the following components of classroom action research, planning (planning), implementation/action (acting), observation (observing), and reflection (reflecting). Data collection techniques used are interviews, tests, and documentation. The collected data was analyzed using qualitative data analysis techniques which consisted of three data reduction pathways, data presentation, and conclusion drawing (Helaluddin, 2019)

C. Result and Discussion

This Classroom Action Research or CAR was conducted in two cycles, with each cycle having a research component, namely planning, implementing action, observing, and reflecting. This research was conducted to improve the learning outcomes of fifth grade students through the use of concrete learning media on the mathematical content of the spatial grid material.

Based on the results of the activities that have been carried out by researchers for two cycles, namely in the first cycle the researchers did not use learning media in learning activities and in the second cycle the researchers used concrete learning media in learning activities to run well. In each cycle, improvements are made so that the next cycle can be more optimal in its implementation. The use of instructional media can help increase students' interest, motivation, and learning outcomes in learning activities, especially in mathematics subjects with spatial grids.

In the first cycle, the students' learning completeness presentation was <75%, namely 46.15% with an average of 63.08. In this first cycle there are 7 students who still do not meet the KKM so that there is a need for action in order to improve student learning outcomes so that they can meet the KKM. In cycle I, there are still many students who do not understand the material so that student learning outcomes tend to be low. Learning without using media makes students only imagine the shape of the space in an abstract way, so that students are not able to mention examples of the shape of the space around them. Motivation in students also tends to be low because it is embedded in students' minds that mathematics is a scary subject so that students' interest in mathematics is very low. Therefore, it is necessary to make improvements in cycle II in order to improve student learning outcomes.

In the second cycle, the students' learning mastery presentation increased >75%, namely 76.92% with an average of 76.92. In this second cycle, as many as 3 students have not met the KK, while most of the class V MI Bani Hasyim students have met the KKM, meaning that the learning outcomes of class V students are quite improved. In cycle II, students are presented with concrete objects so that students can see directly the shape of the space and its nets. Some students have been able to name examples of objects in the space around them. With the learning media, the material can be conveyed properly which makes students better understand the material and learning activities are not monotonous.

The increase in the percentage of student learning outcomes of class V MI Bani Hasyim in cycle I and cycle II is as follows.
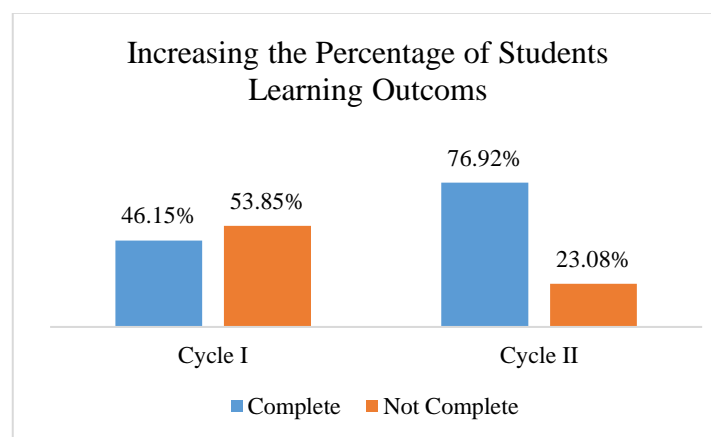
Diagram 1. Peningkatan Presentase Hasil Belajar Siswa

The average increase in student learning outcomes for class V MI Bani Hasyim in cycle I and cycle II is as follows:
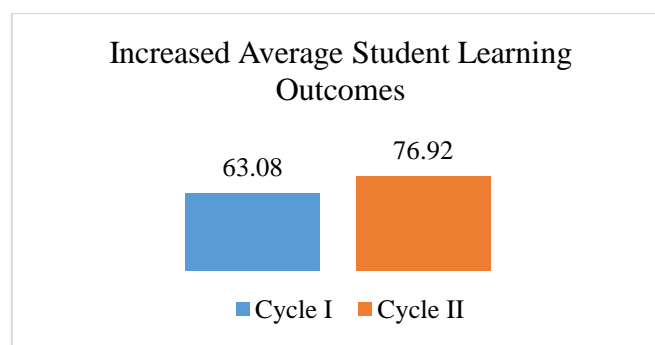
Diagram 2. Increased Average Student Learning Outcomes

Based on the diagram above, there is an increase in the percentage of student learning outcomes and the average student learning outcomes of class V

MI Bani Hasyim Lengkong Cerme Gresik in cycle I and cycle II. Thus, it can be proven that the use of concrete learning media can improve student learning outcomes in mathematics subjects with flat nets in class V MI Bani Hasyim Lengkong Cerme Gresik.

D. Conclusion

The use of concrete learning media can improve student learning outcomes in the mathematics subject matter of spatial nets. This can be seen from the results of the first and second cycles of action, namely the results of the pre-test and post-test of the fifth grade students of MI Bani Hasyim Lengkong Cerme Gresik. The results of the percentage of student learning completeness in the first cycle is 46.15% with an average student learning outcome of 63.08 while the percentage of student learning completeness in the second cycle is 76.92% with an average learning outcome of 76.92. Based on these data, it can be concluded that in the second cycle has reached the KKM so there is no need for further action and by using concrete learning media in mathematics learning, especially in the material of building space nets, it can improve the learning outcomes of fifth grade students of MI Bani Hasyim Lengkong Cerme Gresik.

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