

THE USE OF DIENES BLOCK TOOLS TO INCREASE ACTIVITIES OF STUDENT LEARNING OUTCOMES IN MATHEMATICS LEARNING OPERATING MATERIALS CALCULATING DISABILITY

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ABSTRACT

Based on the results of preliminary observations made on learning the operating material count number, it was seen that the use of instructional media was less precise, so that students' activities and learning outcomes were not optimal, whereas, student learning activities and results that involved active roles of students could provide a more meaningful learning experience. Based on these problems, the purpose of this study was to improve students' mathematics learning outcomes in the addition of chopped numbers through the use of dienes teaching aids in class 2 SDN 226 Arcamanik Endah Kec. Arcamanik. The research model used by researchers is based on Kurt Lewin's model in each cycle there are four stages, namely planning, implementing (action), observation and reflection. The method used is descriptive method. This means that after getting the data needed, the author analyzes the data by describing the findings of the data, discusses and draws conclusions. From the analysis of this study it can be seen that the students' mathematics learning outcomes in the sum of the number without the use of teaching aids obtain an average value 67.30 increased in cycle 1 after using dienes block props to be 77, 57 and after undergoing improvement in cycle 2 it increased again to 78.65.

Keywords: "Dienes Block Props, Activities and Learning Outcomes

INTRODUCTION

Mathematics is a very important lesson. Because mathematics has an important role in all life. Mathematics taught at elementary school aims to develop numeracy skills. As we have seen that counting is a tool of everyday life in shaping a logical attitude, critical, careful and disciplined, and can develop basic mathematical knowledge as a provision for the next education.

Teaching mathematics in elementary school does not only require full attention and guidance from us as teachers, but also must be supported by very high skills from the teacher. And the lack of student achievement in learning outcomes (when evaluating) is used as a benchmark that teachers have failed in carrying out learning.

We do not deny that this is also a teacher's failure. How not when during the learning takes place the teacher is very monotonous causing the course of learning to be very boring for students. Finally the situation made students less enthusiastic during study. This causes the transfer of children's attention to negative things like joking and playing in the classroom while studying. And such conditions are the main reason why learning goals are not achieved very well.

Based on the author's experience as a math teacher, many students still face great difficulties in learning to count on mathematics. It was evident from the evaluation results that I gave or when I gave an oral question about the addition of positive counts to students. For example $6 + 5 = 11$. Students who get 65 and above score only 30% of the total number of students. So from this case there needs to be an effort to improve the quality of learning through existing teaching aids. I used the dienes block as a calculating tool in the addition of positive chapters in class 2 SDN 226 Arcamanik Endah. It turned out that they were very excited and active during the learning process. They were also very active when I gave oral questions.

From this experience, I think that children are very motivated to learn when there are teaching aids that support it. And finally I chose the props for the "Dienes Block" in giving material on the sum of the number of chunks in class 2 at Arcamanik State Elementary School 226.

Finally, the author decided to take the title "The Use of Dienes Block Props To Improve Student Learning Outcomes Activities in Mathematics Learning Operational Materials Calculate Chapters in Class 2 SDN 226 Arcamanik Endah Using Teaching Aids" Dienes Block ".

Thinking Framework

Mathematics learning is the process of interaction between students and teachers as well as learning resources to help students learn well. One of the objectives of learning mathematics in elementary school is to understand mathematical concepts, explain the interrelationships between concepts and apply concepts or algorithms, flexibly, accurately, efficiently, and precisely in problem solving. Understanding of the concept is very important because if students master the concept of prerequisite material, students will be easy to master the next material.

But at this time the problem faced by teachers is that students still experience difficulties in understanding mathematical concepts. To improve students' understanding of mathematics subjects, the teacher must create an optimal atmosphere by applying various applications of learning that are in accordance with the material taught because they see the condition of students who have different characteristics from one another in receiving the material presented by the teacher in the classroom. There are students who have a fast absorption capacity there are also students who have a long absorption in receiving material. In mathematics learning, teachers still tend to use learning methods that make students less active and motivated to learn. The learning process is still teacher-centered, as a result students do not understand the material being studied.

In addressing this, the researcher assesses the need to use a realistic approach to mathematics learning. Realistic approach is a mathematics learning approach that utilizes students' knowledge as a bridge to understanding mathematical concepts.

With this approach students are not only easy to master the concept of the subject matter but also do not quickly forget what they have obtained.

Following is the scheme of thought framework in research

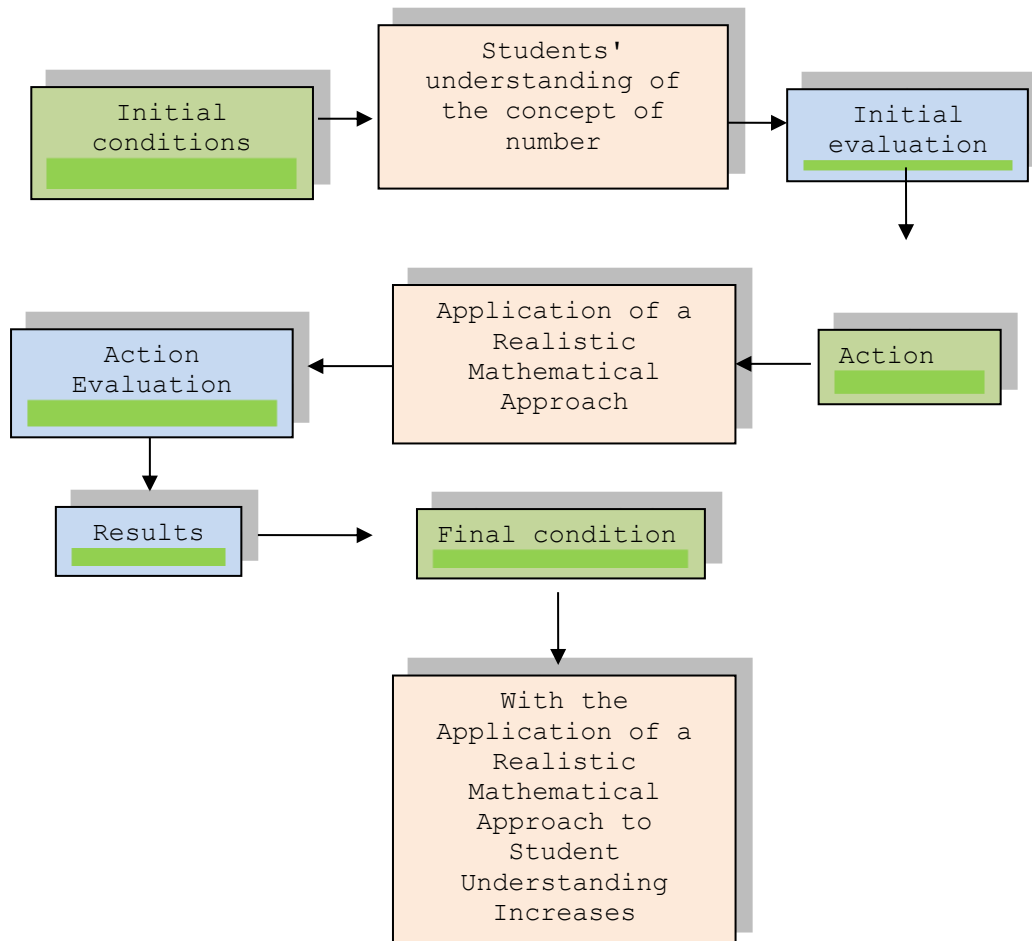


Figure 1.

Framework Scheme for Thinking of Implementing a Realistic Approach in Learning Numbers

METHOD

The research method is the method used by researchers in collecting research data (Arikunto, 1997: 136). Based on this method the researcher uses descriptive method. This method is used to make systematic descriptions, drawings or paintings factual and accurate about the facts, the fiber properties of the relationship between the phenomena being investigated (Nazir, 1999: 63).

In accordance with its mass formulation, this study uses Classroom Action Research. This research was conducted in accordance with the schedule of learning activities. classroom action research is one of the efforts to improve the quality of education that directly touches the field problem, namely the problems that exist in the classroom. Classroom action research offers a new way to improve and enhance students' abilities and teaching and learning activities in the classroom. Classroom action research is a series of steps. Each step consists

of four stages according to Kurt Lewin's model, namely Planning, action, observation and reflection. In accordance with the problems to be studied, namely about the ongoing contextual context about the actions of the subject being examined using the discoveri method, observation, interviews and giving questions. The author tries to research using the process model in each step.

LEARNING OUTCOMES

Discussion of Research Results

Evaluation results from pre-cycle learning activities show that:

1. Preparedness and planning of learning that has been prepared has not run as expected
2. Learning is done with classical methods without the presence of teaching aids
3. Student's enthusiasm and learning ability are lacking
4. The evaluation results obtained are still lacking

The evaluation results obtained from cycle 1 and 2 activities are

- 1) Understanding of the preparation and implementation of learning for grade 2 students of SDN 226 Arcamanik Endah, Arcamanik Sub-district experienced very significant progress
- 2) The use of dienes block props in learning makes students' enthusiasm increase
- 3) the results of the evaluation obtained showed very significant progress, namely when the pre-cycle the ability to do the problem only reached an average value of 67.30. Increased in cycle 1 with an average value of 77.57 and reached its peak in cycle 2 with an average score of 78.65.

If the average acquisition value of each cycle is observed both in the pre cycle, cycle 1, and cycle 2 it turns out that the results achieved by grade 2 students of SDN 226 Arcamanik Endah are quite encouraging. This is because researchers and fellow teachers collaborated with the learning method of using dienes block props. For more details can be seen from the following bar diagram

Diagram of Pre-Cycle, Cycle 1 and Cycle 2 Evaluation Results:

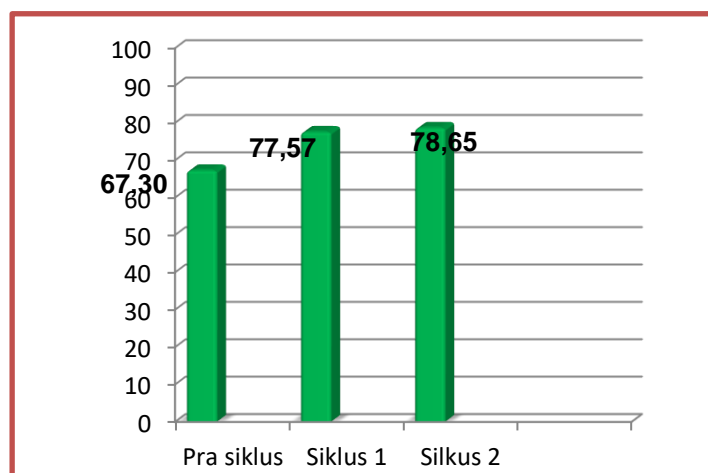


Figure 2. Pre-Cycle, Cycle 1 and Cycle 2 Evaluation

SCIENCE LEARNING IN BASIC SCHOOL

Smaller places, such as places and places that are suitable according to Dr. Nana Sujana (2004: 28), learning is a process that is shown by attention to one's self. Learning is an active process, which can only be done with individuals. Which in the process of learning is directed to the goal, the process of doing various experiences. the process of learning and the process of seeing, observing and understanding something. Writing or words learning about learning, also we also talk about changing someone's behavior.

This is called learning, with a different process, in the process or interaction of learning in students. The process of changing the behavior of students through sharing their experiences. According to Bloom's Taxonomy in the Malang IKP Lecturer Team (120: 2003), this study evaluates the forms of cognitive, affective and psychomotor abilities.

Learning and teaching are two concepts that cannot pass each other. Learning to choose what should be done as a subject receiving a lesson (student). While teaching refers to what the teacher must do as a teacher. The material used to study the learning process that does not occur so that, but allows the process and implementation to reach the goal. According to the National Education System (7: 2003) national education of the ability and performance of dignified national character and civilization in order to educate the potential of students to become faithful and fearful people to God Almighty, noble, healthy, knowledgeable, capable, creative, independent and become a democratic and responsible citizen.

From the above, the goal in the learning process is a component that can be used as an indicator of success. And this goal is basically the formulation of behavior and abilities that must be followed and possessed by students after conspiracy of learning activities in the process and the purpose for learning is expected learning outcomes.

RESULTS AND DISCUSSION

RESEARCH RESULT

General Research Description

The researcher will explain about the implementation of the research that has been done, which is about the implementation of learning on the material of summing the number of chopped numbers by using the props of dienes blocks in class 2 SDN 226 Arcamanik Endah, Arcamanik Subdistrict, Bandung City.

This classroom action research is adjusted to the learning plan that has been prepared previously. In the implementation the researcher is assisted by the class teacher.

The stages of this research action are as follows:

a. Pre cycle

Planning

- 1) Designing learning preparation that aims to make learning successful
- 2) Before carrying out the learning, the researcher compiled an RPP that was guided by Curriculum 13 about the addition of the number of the number using the dienes block props.
- 3) Observing the initial condition of grade 2 students at SDN 226 Arcamanik Endah, Kec. Arcamanik, Bandung City.

Action

- 1) Before the researcher gives a lesson about the sum of counts, the teacher gives an apperception first.
- 2) The teacher submits the sum of the chopped numbers by classical learning

Observation

1) From the observations of the researcher it can be seen that with the classical learning method many children are less enthusiastic in attending the lesson.

Reflection

1) After giving the sum of the chopped number material with classical learning method, the teacher gives an evaluation in the form of filling questions and giving an assessment.

Based on the table above can be analyzed about student test results in the pre cycle are as follows

a. The highest value is 80 with a total of 5 students or 24.32%.

b. The lowest value is 50 with 4 students or 16.21%.

c. Students who get grades 60 to 70 are 15 people or 59.47%.

d. The average value obtained is 67.30.

e. The evaluation results of students who were able to get grades above 65 turned out to be only 13 people or around 35.13% of 24 students.

DISCUSSION

The evaluation results obtained from cycle 1 and 2 activities are

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CONCLUSION

Based on the results of the study as described in the previous chapter, about the mathematics learning outcomes of grade 2 students of SDN 226 Arcamanik Endah, Arcamanik Subdistrict, Bandung City, the authors concluded that there was an increase in students' mathematics learning outcomes in grade 2 of SDN 226 Arcamanik on the sum of chopped numbers using props dienes bloc.

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