

**EFFORTS TO IMPROVE LEARNING OUTCOMES USING
DISCUSSION METHODS IN THE FIELD OF
MATHEMATICS STUDY MATERIAL ON ADDITIONAL
ACCUTATION OPERATIONS IN THE FORM OF
FRACTIONS AT CLASS 6 SDN 1 JATI AGUNG
AMBARAWA SUB DISTRICT**

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Abstract: The level of students' mastery of mathematics subjects varies greatly, there are those who get good grades and there are those who get less good grades. It can be seen from the evaluation results before the process of improving students' grades. Of the 20 students who have completed it, only 7 students (35%) have completed it. there were 13 students (65%) who completed it. The causes are very varied, such as teachers who make students as learning objects, teachers use the lecture method more, students only take notes on what the teacher says if suggested by the teacher, thus making students passive and lacking motivation, students still don't understand the material being explained. , lack of providing examples and practice. The aim of this remedial learning is to improve student learning outcomes in mathematics learning material on addition calculation operations in the form of fractions using the discussion method. This remedial learning is carried out in 2 cycles where each cycle is held in one meeting. The results of the research show that student learning outcomes are good by showing that the average score in cycle 1 is 76 with a completion percentage of 75% and in cycle 2 the average score is 80.5 with a completion percentage of 100%. The researcher's conclusion is that the discussion method can improve Student learning outcomes in mathematics subjects, material for arithmetic operations in the form of fractions.

Keywords: Learning outcomes, discussion method, addition calculation operations in fraction form.



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Introduction

The Indonesian government has established regulations through the Minister of National Education of the Republic of Indonesia Number 13 of 2007 concerning School Principal Standards. Creating quality school principals is one of the government's programs in managing educational institutions in Indonesia, namely in facing demands for quality improvement. Quality problems have many problems related to standards and quality measurements themselves, for this reason school principals

must have a reliable quality management concept in managing quality education (Azmi & Ridho, 2018).

Education is conscious work and has the aim of developing human qualities, therefore its implementation is a continuous process at all types and levels of education (Djamarah, 2006). Mathematics in elementary schools, to form students who have the knowledge and competencies that teachers are asked to implement professional learning tasks in designing, implementing and evaluating materials Lessons The teacher's accuracy in selecting and using approaches, methods and learning environments greatly determines the success or failure of learning, and the factors are determined based on student characteristics. (Naharir et al., 2019 , as quoted in Winoto & Prasetyo, 2020).

Due to the importance of the role of mathematics and the role of teachers as teachers in the mathematics learning process, efforts are made to improve learning outcomes. One way is to use several methods to learn mathematics. However, until now there have been many complaints from various parties regarding the low quality of teachers, especially mathematics teachers.

From the test results before improvement, the low presentation results obtained by students who were still below the KKM in mathematics lessons in class 6 at SD Negeri 1 Jati Agung regarding the operation of calculating addition in the form of fractions. This is proven by the low graduation percentage, namely 65% of students who are still below the KKM and 35% of students who are above the KKM. The learning process is said to be successful if students get a score of KKM, namely 70.

Based on the learning results that have been obtained, the reason is because the learning process that occurs is only the teacher's explanation process which makes students as learning objects. The teacher uses the lecture method more, so they prefer to wait for the teacher's explanation. Students only take notes on what the teacher says if the teacher suggests it, thus making students passive and lacking motivation , students still don't understand the material being explained, they don't provide examples and practice.

From the background of the existing problem, we use classroom action research learning improvements as an effort to improve student learning outcomes using the discussion method of mathematics learning, material on addition arithmetic operations in the form of fractions for class 6 SD Negeri 1 Jati Agung. The discussion method is a way of presenting lessons, where students face an obstacle, which can be in the form of problematic questions to be discussed and solved together (Nata 1997). Because some teachers still have difficulty using the right method to use in the learning process, this discussion method can improve student learning outcomes , make students more active and no longer passive in learning activities and encourage students to think in solving a problem. The formulation of the problem is whether the use of the discussion method can improve student learning outcomes regarding the learning of addition calculation operations in the form of fractions in class 6 students in the 2nd semester of SD Negeri 1 Jati Agung, Ambarawa Sub District, Pringsewu District. The aim is to determine the increase in student learning outcomes regarding the concept of addition calculation operations in the form of fractions through the discussion method for grade 6 students.

RESEARCH METHODS

This type of research uses Classroom Action Research (PTK). It is necessary to carry out this research because the student learning outcomes are still below the KKM. The implementation of research improvements was carried out at SD Negeri 1 Jati Agung, Ambarawa Sub District, Pringsewu District, with a total of 20 students consisting of 9 male students and 11 female students. This research was carried out over 2 cycles, namely 1 meeting in each cycle. In this research the author used several cycles of Class Action Procedures (PTK) using a design developed by Arikunto (2010: 137)

The explanation of the PTK flow is:

1. Planning, before conducting research, prepares a problem formulation, objectives and designs an action, including research instruments and teaching material modules.
2. Implementation, observing the concept of addition in fraction form which will be explained by the teacher. The teacher provides problems from the concept of addition in fraction form to be solved using the discussion method.
3. Observation, after implementation the teacher observes the results of student discussions to identify things that are the subject of problems for students.
4. Reflection, researchers study, see and consider the results or impacts based on the results of the evaluation sheets carried out by students.
5. The revised design/plan, based on the results of reflection from the researcher's observations, creates a design to be implemented in the next cycle.

The source of this research is the 6th grade students of SD Negeri 1 Jati Agung, Ambarawa Sub District, Pringsewu District. The types of data used are quantitative data and qualitative data. Quantitative data is data used to determine student learning evaluation scores which will be obtained for each assessment cycle, an assessment which is said to be successful if the student's learning outcomes reach the specified KKM, namely 70. Qualitative data is used to describe the results of observations and reflections carried out by researchers to determine the success of each cycle. Student success is said to be successful if each cycle the student improves at the end of each learning cycle.

Research Results and Discussion

A. Research result

Description of learning improvement research results

1. Description of Results Before learning improvement

Implementation of activities before improving learning in this research was carried out by collecting data included in the implementation of learning. In this pre-cycle, the method used is the lecture method. However, in this case there are obstacles that are experienced, namely students as learning objects, teachers mostly use the lecture method, students only take notes on what the teacher says,

students become passive and lack motivation, there is a lack of providing examples and practice. The data on student learning outcomes in pre-cycle activities are as follows:

Based on the data results, it can be seen that the average Mathematics score for grade 6 students at SD Negeri 1 Jati Agung out of 20 students, only 7 students (35%) scored above the KKM, while 13 students (65%) scored below the KKM. This proves that students' mathematics scores are still low and still below the specified success indicator, namely the KKM is 70. By looking at the learning outcomes in the pre-cycle, there needs to be action to improve learning to achieve success. For this reason, it is necessary to improve cycle 1 learning.

2. Cycle Description 1

Learning improvements in cycle 1 are a continuation of learning improvements from the pre-cycle. The method used in cycle 1 is the discussion method to produce active, creative and enjoyable learning but there are still things that hinder the completion of student learning outcomes.

There were also things that hampered the students' complete learning, the researcher consulted with supervisor 2. The mistake in this case was that the researcher used large discussion groups so that the learning process was still not optimal.

Based on the data results, it can be seen that the average Mathematics score for grade 6 students at SD Negeri 1 Jati Agung of the 20 students who have completed it is above the KKM for 15 students (75%) and those who have not completed it are still below the KKM for 5 students (25%). It can be concluded that students have begun to actively dare to express opinions, students' mastery of the subject matter has begun to improve, increasing student involvement in the learning process, students have begun to be motivated.

The results obtained from improving cycle 1 learning using the discussion method can make learning more interesting, motivating and students are starting to become actively involved in learning. It is necessary to improve learning in cycle 2.

3. Cycle 2 Description

The learning improvement in cycle 2 is a continuation of the learning improvement from cycle 1. The method used in cycle 2 is still the same as cycle 1, namely using the discussion method to produce more active student learning activities in learning, the teacher when explaining the material, using optimal discussion methods. In this cycle, all students are active. The thing that makes it effective is that the researcher uses small discussion groups which improves the results in the learning process.

In implementing this cycle 2 action, the learning results obtained were good, students were able to understand the material being taught because the teacher gave more varied examples and provided exercises, students have started to actively express opinions, are enthusiastic about asking questions to the teacher and are active in learning. All students' scores were above the KKM and the average rose to 80.5 with a completion percentage of 100%. The results obtained from improving learning in cycle 2 using the discussion method can improve student learning outcomes. So that in cycle 2 the

student learning outcomes were satisfactory. With this, researchers in cycle 2 have fulfilled the complete category, so researchers do not need to continue in the next cycle.

B. Learning Improvement

1. Before Learning Improvement

In learning before making improvements, namely pre-cycle. Before the remedial learning, of the 20 students who had completed the learning results, only 7 students (35%) and 13 students (65%) had not completed it, this shows that it shows failure in learning. The author found several problems that cause failure in learning, namely the methods used by teachers are less accurate, making students passive and unmotivated, lack of varied examples, students don't want to ask even though they don't understand. Therefore, it is necessary to improve cycle 1 learning.

2. Cycle 1 Learning Improvement

Improving learning in cycle 1 uses the discussion method. The assessment results obtained in cycle 1 showed that 15 students (75%) had completed it and 5 students (25%) had not completed it. This activity shows an increase in student learning outcomes as evidenced by the average score obtained, namely from 70 to 76. In cycle 1, researchers found failure in this cycle, namely that there were still some students who were still passive and did not dare to express opinions, students still lacked motivation from the teacher. This shows that the discussion method used can improve student learning outcomes but there needs to be improvements in learning to continue to cycle 2.

3. Cycle 2 Learning Improvements

After carrying out corrective actions in cycle 2 using the discussion method in small groups. Of the 20 students, all students have completed their studies with the average score increasing to 80.5 with a completion percentage of 100%. Improved learning outcomes, namely the learning outcomes obtained are good, students can understand the material being taught because the teacher provides more varied examples and provides exercises, students have begun to actively express opinions, are enthusiastic about asking questions to the teacher and are active in learning.

So after carrying out cycle 1 and cycle 2 and being able to solve the problems that exist in learning mathematics, the material for addition calculation operations in the form of fractions is so that student learning outcomes have achieved the expected goals.

C. Discussion of Research Results

The above is also the result of research conducted by Iin Sunarsih, that this research was motivated by students' low understanding of arithmetic and number operations. This research aims to increase students' understanding of arithmetic and number operations in mathematics learning for students in class I at SD Negeri Cibentar III using the discussion method. The research method used by researchers is classroom action research, with a total of 17 students. This research took place in 2 cycles, each cycle consisting of 2 actions. The techniques used in data collection are observation, tests, interviews, documentation and field notes. The research results show that the application of the

discussion method can increase students' understanding of arithmetic and number operations in mathematics learning in class I at Cibentar III Elementary School (Sunarsih, 2019).

This is necessary to achieve good control, because educational institutions really need accurate and adequate information. Then the information that has been obtained is used as a reference in implementing control and evaluation (Azmi, 2019). Teachers act as managers of the teaching and learning process, acting as facilitators who try to create an effective teaching and learning process, develop learning materials well and improve students' ability to pay attention to lessons and master the educational goals they must achieve. To be a good teacher you must have 12 components, namely: 1) skills, 2) ethics, 3) scientific discipline, 4) basic concepts, 5) students 6) social atmosphere, 7) learning, 8) pedagogy or methodology teaching, 9) process, 10) technology, 11) self-development, 12) change (Fitri at al, 2022).

Various methods are applied by teachers, teachers usually use different teaching methods to help students understand what they are learning. One alternative learning method to improve student learning outcomes is the use or application of the discussion method. There are several researchers applying the discussion method whose results show that the discussion method is very good to apply in the classroom, especially in high grades.

Mathematics is an important subject taught since entering elementary school. The aim of learning mathematics in elementary school according to Minister of National Education Regulation number 22 of 2006 is to train how to think and reason in drawing conclusions, develop creative activities, develop problem-solving abilities, and develop the ability to convey information or communicate ideas. Because in learning mathematics there needs to be motivation from the teacher so that children can develop the ability to solve problems developing the learning that has been taught and the factors that influence learning outcomes are internal and external factors. Internal factors are internal factors such as health from physical disabilities and can also include psychological factors such as intelligence, interest, range, attention, talent and others. External factors are factors that come from outside the individual or environmental factors where the individual is different, such as family, school and the surrounding environment.

Conclusion

From the data analysis in the previous discussion as well as the results of the Classroom Action Research carried out, the researcher drew the following conclusions : The application of the discussion method can improve mathematics learning outcomes regarding addition calculation operations in the form of fractions. The increase in learning outcomes can be proven by the completeness of student learning outcomes. The results of the analysis of the average value in the pre-cycle were 70, after cycle 1 the average value increased to 76, and after the learning improvements in cycle 2 were implemented it increased again to 80.5. The discussion method is able to improve student learning outcomes and student interest in learning in class. In this way, the application of the discussion method can improve mathematics learning outcomes regarding addition calculation operations in the form of fractions for students at SD Negeri 1 Jati Agung..

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