

IMPROVING STUDENTS' NUMERATION RESULTS THROUGH CLEARING METHOD IN GRADE 5TH

Bhunga Anggrainy Puspitasari^{1*}, Miftahul Khoiri², Maya Rayungsari³

¹Mathematics Education Study Program, Faculty of Pedagogy and Psychology, University of PGRI
Wiranegara, Jl. Ki Hajar Dewantara 27-29 Pasuruan, Indonesia

²Mathematics Education Study Program, Faculty of Pedagogy and Psychology, University of PGRI
Wiranegara, Jl. Ki Hajar Dewantara 27-29 Pasuruan, Indonesia

³Mathematics Education Study Program, Faculty of Pedagogy and Psychology, University of PGRI
Wiranegara, Jl. Ki Hajar Dewantara 27-29 Pasuruan, Indonesia

ABSTRACT

The purpose of this study is to improve the mathematics performance of 5th grade students of SDN Kepel using a survey method and classroom survey approach. Good results in mathematics form an important foundation for successful mathematics teaching and pupils' academic development. In this study, a fifth grade mathematics teacher at SDN Kepel served as a researcher for classroom activities. Action research in the classroom occurs in multiple cycles, each including planning, implementation, observation, and reflection. During the research period, the apprenticeship method was used as a learning method. The research results showed that the final results of the first cycle assessment reached an average of 56.6% (under KKM). The results of the final evaluation of the second cycle reached an index of 92.4% (above the KKM). It can be concluded that the learning method is effective in improving the mathematics performance of fifth graders. Each cycle of research ensures continuous improvement in students' understanding of mathematical concepts and computational skills. In addition, students show greater motivation to learn mathematics. This study makes a positive contribution to learning practices at SDN Kepel by demonstrating that an action research approach can be used in the classroom to develop more effective learning methods. The Mencong Method should be integrated into the mathematics curriculum of SDN Kepel and other schools to improve students' performance in mathematics.

Keywords: Learning Methods, Learning Outcomes Mathematics, Learning Method

1. Introduction

Education is very important for children today, in the age of advanced globalization. Education in which there is a teaching and learning process that the student or teacher must follow. Teachers, as key learners, have the responsibility to provide the school's young students with a creative learning environment for the educational programs.

Educational activities are one of the efforts to achieve the national goals set out in the Preamble of the 1945 Constitution, Paragraph IV, which states: "To protect the entire Indonesian people and the entire blood of Indonesia and to promote the general welfare promote, must be educated." the life of the nation and participate in the realization of a world order based on independence, lasting peace and social justice. To

successfully achieve these national goals, the role of education must incorporate the strategic importance and centrality of leadership. Educational activities must be evaluated very well by In order to achieve the best results and be in line with the objectives set, the above statement confirms that every step of the process, from planning to evaluation to implementation, is as professional and efficient as possible is carried out (Karim, 2017).

Therefore, we hope that the improvement of Indonesians and society will be achieved through educational efforts such as improving science and technology. Therefore, Article 4 of Law No. 20 of 2003 of the Republic of Indonesia states: "National education aims at educating the life of the nation and the development of the Indonesian people as a whole is loyal and devoted, has a noble

character and has knowledge and skills. Enjoys good physical and mental health, has a stable and independent personality, and has social and national responsibilities.

Learning is the individual's activity of acquiring behaviors through the study and processing of knowledge. According to Hilgard (Ningrum, 2014), learning is the process of seeking knowledge that occurs in a person through practice, learning, etc., so that changes occur in him. Therefore, as the learning process progresses, changes are made to reflect the knowledge you have acquired and the new knowledge you have discovered. An effective learning process involves understanding that learning leads to satisfactory and accurate results that correspond to the desired outcomes (Suryaman, 2020). The only outcome of the educational process is the academic success of students. In this context, learning must be taken seriously and it should be clearly emphasized that learning outcomes are educational products (Wahyuni, 2021).

According to (Susanto, 2013), it has been established that "learning outcomes are the changes that occur in students as a result of educational activities at both cognitive, affective and psychomotor levels". In this case, learning outcomes are the result of a person's efforts to make relatively long-term changes in behavior. Changes in the way you think and act when faced with a problem are changes in your abilities that can be perceived by students. (Suprijono, 2013) states that "learning outcomes are patterns of actions, values, understanding, attitudes, appreciation and skills". Learning outcomes therefore represent a global process and not just a simple specific indicator of the development of human potential. The more we learn, the better we can understand the information available. Regarding the previous two points, learning outcomes can be characterized as progressive changes in a person's cognitive, affective and motor functions after completing a study program, the high quality of which is strongly influenced by several personal and social factors.

Mathematics education is one of the key elements for developing quality human resources. Good results in mathematics play a crucial role in ensuring that pupils have a sound understanding of mathematical concepts and mathematical skills. Mathematics instruction is now teacher-centered. For a long time, teachers were considered celibate teachers. Although there are many teaching theories, many teachers use slightly different

methods (Sumarsih, 2019). Therefore, it is very important to pay special attention to improving student performance in 5th grade mathematics.

According to (Dahar, 2006), during educational activities, students should have the opportunity to independently search or discover the meaning of everything they learn. We hope this will help them understand the concepts in their own language. They must be allowed to act as teachers who address student problems. According to (Nasution, 2008), comprehensive learning is the goal of the teaching and learning process, ideally so that students can fully master the subject matter.

Grade 5 math concepts at SDN Kepel must be applied correctly and appropriately. Many methods are used in education today, but the most common is the knowledge-based method. Pride is defined by (Marhiyanto, 2014). Hubris is a routine or in-memory calculation, only the results of the calculations/opinions are recorded. This teaching method emphasizes the point of view of counting using a divisor or uniqueness method. In addition to offering a variety of effective methods, teachers encourage their students to discover themselves through perspectives. The character and traits of each special student number are discussed in detail, including how they behave. So looking up is one of the techniques used by teachers when teaching mathematics in class. Question after question is asked in a clear and concise manner, and the answers are given in a clear and concise manner. The answer is found from rote calculations. Tools for calculating and recording are not permitted.

The effectiveness of the tilt method in mathematics programs is now widely used by researchers. Therefore, we explain how the investigation method can be applied in the context of mathematics lessons at SDN Kepel.

Through this research, we hope to make a positive contribution to efforts to improve the mathematics performance of SDN Kepel students and to provide guidance to other schools seeking to improve their students' mathematics performance through innovative approaches. We therefore hope that this discussion will encourage better and more effective learning of mathematics at the elementary level so that students are better prepared for the mathematical challenges of the future.

2. Research Methods

This type of research is called Classroom Action Research (PTK) and is based on the research modeling techniques of Kemis and McTaggart. The Mc Taggart model presented in this article consists of four different elements, namely planning, action, observation and reflection, which are carried out together. Observations were made during the learning process. The implementation of the learning method at PTK enables teachers to systematically improve students' performance in mathematics through continuous reflection and action tailored to the needs of the students. This could lead to significant improvements in the mathematical understanding and skills of Grade 5 students at SDN Kepel.

In total, the study included 26 fifth graders from SDN Kepel School. The subjects are very heterogeneous, which is reflected in the different subjects with high, low and different qualification levels. Descriptive statistics were used to analyze the research data. This study was conducted by Classroom Action Research (CAR) with many simplifications throughout the document. The research process is currently taking place in two cycles, namely Cycle I and Cycle II, with the participation of Kemis and McTaggart and includes four phases, namely planning, implementation, observation and reflection. An indicator of the importance of this type of research activity is the increase in student assessment scores exceeding the typical threshold of $\geq 80\%$ in each section. The minimum completion criterion (KKM) for mathematics subjects is 70. The theory assumes that if the proportion of students with a score ≥ 70 reaches 80%, it can be concluded that the performance of mathematics teaching in this class is conventional.

3. Results and Discussion

Cycle I

Two meetings took place in the first cycle. The researchers did not use the bias method in the earlier period but did so in the later period. Observations are carried out using observation sheets prepared as part of the ongoing educational process. This observation was made by teachers and students at the school. Scientists and other teachers act as observers. Teacher observations aim to check whether the teacher has implemented a realistic mathematical approach and implemented the learning method well in the

learning process, while student observations aim to check their activity in the learning process. The results of the analysis of teachers' and students' activities during the mathematics learning process in the first and second programs, conducted by researchers and colleagues, are as follows:

Table 1. Teacher and Student Observation Sheet

No.	Rated Aspect	Meeting 1	Meeting 2
1.	Students pay attention to the teacher's explanation	70%	85%
2.	Students actively ask questions when they are not clear about the instructions given by the teacher	50%	65%
3.	Students memorize multiplication, volume formulas for cubes and blocks	-	60%
4.	Students participate in push-ups with enthusiasm.	-	75%
5.	Students do the exercises/tests enthusiastically	60%	75%
6.	Students are able to use time effectively in learning	65%	75%
7.	Students dare to present the results of their work in front of the class	68%	73%
Average			72,6

The above table shows the percentage of development of the observation form, which covers about 72.6% of students. This means that around 80% of students are currently actively involved in the recorded success indicators, to use the terminology. The individual learning outcomes of the first cycle students can be presented in the following table.

Meeting 1				
Complete	%	Not Completed	%	Average Value
10	38,5 %	16	61,5 %	43,4%
Meeting 2				
Complete	%	Not Completed	%	Average Value
18	69,2 %	8	30,8 %	56,6%

The results of research conducted by researchers with the aim of increasing students' performance in learning mathematics using the Cycle I learning method showed that the average score of students reached 43.4% compared to the test results of Day 1 (pre-treatment). Several students had learning difficulties. During the second session (post-treatment), the number of students achieving full learning success increased by 18 students, and the average score of students reached 56.6%.

Cycle 2

In this cycle, observations are made in the teaching process using prepared observation sheets. This observation was carried out with teachers and students of the school. Scientists and other teachers act as observers. Students' observations aim to determine students' activity in the learning process, while teachers' observations aim to check whether the teacher has implemented the realistic mathematical approach in the learning process and uses the learning method well. The results of the observations show that at each meeting the activity of most students increased. In addition, students now benefit from Mencongak's more effective methodology and their learning follows pre-determined lesson plans. Below are the results of the analysis by researchers and their colleagues on the actions of teachers and students during the mathematics learning process in the first and second meetings.

Table 2. Teacher and Student Observation Sheet

No.	Rated Aspect	Meeting 1	Meeting 2
1.	Students pay attention to the teacher's explanation	80%	90%
2.	Students actively ask questions when they are not clear about the instructions given by the teacher	65%	73%
3.	Students memorize multiplication, volume formulas for cubes and blocks	70%	82%
4.	Students participate in push-ups with enthusiasm.	70%	80%
5.	Students do the exercises/tests enthusiastically	72%	83%
6.	Students are able to use time effectively in learning	73%	83%
7.	Students dare to present the results of their work in front of the class	75%	84%
Average			82,1%

The table above shows the percentage of observation sheet changes made by observers for approximately 82.1% of students. This shows that the proportion of active students has exceeded the previously set benchmark of around 80%. Whatever the academic results of the second cycle students, we can see them in the table below:

Meeting 1				
Complete	%	Not Completed	%	Average Value
15	57,7 %	11	42,3 %	80%
Meeting 2				
Complete	%	Not Completed	%	Average Value
22	84,6 %	4	15,4 %	92,4%

The results of the research conducted by the academic community with the aim of improving students' mathematical skills using the inclined method of the second degree showed that students reached the 80 percent level in the results of the 1-day test and 15 students had reached the KKM level and 11 students did not reach the KKM level. On the other hand, according to the results of the two daily tests, students reported that the overall student enrollment rate reached 92.4%, with 22, students passing the KKM and 4 students failing the KKM.

This can be demonstrated by significant performance improvements based on the results of student learning assessments in Cycles 1 and 2 and the results of active learning assessments. Therefore, it can be concluded that using this method can increase student engagement and mathematics performance of fifth grade students in SDN Kepel Pasuruan

4. Conclusions

Learning mathematics using the Mencongak method was carried out at SDN Kepel Pasuruan through planned procedures that included planning, action, observation and reflection. Student learning outcomes are represented in the results achieved in each cycle. The results of the final assessment of Cycle I showed that 18 students (69.2%) scored above the KKM and 8 students (30.8%) scored below the KKM, with an average score of 56.6% (below KKM). The results of the second evaluation phase showed that about 22 students (84.6%) achieved better results than KKM, while only 4 students (15.4%) achieved worse results than KKM, which corresponds to a rate of 92.4% (above KKM) corresponds. .This suggests that the learning method can be used to increase students' performance levels in mathematics. Student

activity and learning effectiveness increase from one meeting to the next. Student activity and learning efficiency reached 72.6% in Cycle I, while student activity and learning efficiency reached 82.1% in Cycle 2.

5. Acknowledgments (Optional)

We would like to express our sincere and deep gratitude to everyone who supported and assisted us in this research. Without the input, encouragement and support of many individuals, this research may not have been successful. In this context, we would like to thank the following topics : 5th grade students of SDN Kepel, other teachers of SDN Kepel, principals and administrative staff of SDN Kepel, parents of students, educational service providers and all other stakeholders.

This research is the result of collaboration and hard work together. Without the help of various agencies, it would not have been possible to obtain the mathematical results of the 5th grade students of SDN Kepel through the survey method. We express our sincere gratitude and hope that this research will have a positive impact on the development of mathematics education in this school and elsewhere.

6. References

- Dahar, R. W. (2006). *Theories of Learning and Learning*. PT. Primary Script Boom.
- Karim, A. (2017). The influence of the prying method on mathematics learning outcomes. JKPM: Journal of Mathematics Education Studies. *Journal of Mathematics Education Studies*, 2(2), 151–158.
- Marhiyanto, B. (2014). *Complete Dictionary Indonesian*. Media Centre.
- Nasution. (2008). Various Approaches in the Teaching and Learning Process. In *Books - Circulation*. Earth Literacy.
- Ningrum, D. S. (2014). Development of Elementary School Mathematics Learning Design. *Formative Journal*, 4 (3) : 164.
- Sumarsih. (2019). Improving Student Learning Outcomes in Grade 4 Mathematics Lesson Content through the Peer Tutor Learning Method at MIN I Yogyakarta. *Journal of Madrasah*

Education, 4(1), 87–96.
<https://doi.org/10.14421/jpm.2019.41-09>

- Suprijono, A. (2013). *Cooperative Learning Theory and Application of PAIKEM*. Learning Library.
- Suryaman, M. (2020). *Orientation to the Development of the Independent Learning Curriculum*. 13–28.
- Susanto, A. (2013). *Theory of Learning and Learning in Elementary School*. Prenada Media Group.
- Wahyuni, N. P. (2021). Application of STEM-Based Learning to Improve Science Learning Outcomes. *Journal of Education Action Research*, 5 (1), 109–117.