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Improving Student Learning Outcomes in Determining the Area and Perimeter of Flat Shapes Through the Use of Drill Method

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ABSTRACT

Interaction between students, teachers, and learning materials in a classroom setting constitutes the process of learning. The system that makes up the learning environment is made up of teachers, students, learning materials, strategies, and tools. Therefore, the following is the goal of increasing learning: Increasing student learning outcomes in the area of area and perimeter of flat buildings through the implementation of the drill method in the mathematics learning process. There were twenty pupils in class IV at SD Cita Hati Surabaya, nine of them were male and eleven of whom were female, working on the repairs. The examination and discussion of the aforementioned challenges yielded results that demonstrate how teachers implement the learning improvement program in order to enhance students' learning outcomes in the topic of mathematics. Using the drill approach can improve students' learning objectives of "Area and Perimeter of Flat Shapes" in mathematics class. Student learning outcomes after using the drill method show an increase in significance towards their learning objectives.

Key Word *Flat Shape, Space, Training Techniques, Learning Objectives, Facilities*
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INTRODUCTION

The 21st century, sometimes referred to as the "era of globalization," is a time of great change. Aspects of education are experiencing rapid changes, including this one. The education sector is also experiencing rapid transformation. Therefore, it is time for educators to start considering and making various breakthroughs to achieve quality learning. The application of learning not only includes material-based retention and memorization components, but also reasoning and skill use components. To facilitate learning, teachers need to have a variety of skills, including mastery of content and

mastery of educational knowledge. The most important thing to remember is to help children understand what it is.

Students depend on teachers for information and attitudes. It cannot be denied that a person's education has a significant influence on his behavior and way of thinking. Preparing reliable instructors in the classroom is very important to produce students with extraordinary personalities and knowledge (Suyanto and Jihad, 2013).

One can not only learn and understand mathematics in secondary and higher education, but starting in elementary school. To equip students with critical, objective, logical and careful thinking skills from an early age, even Kindergartens and PAUD have started guiding students to get closer to mathematics through the learning process at school (Maulana, 2017, Ulfa, M., 2019; Maskar, et al. 2020). Considering that mathematics is an abstract and challenging subject to master, students are usually helped to study this subject from a young age, until college. This assumption means that mathematics will always be scary, making students less interested and quickly bored with the subject.

Based on the evaluation results in class IV of SDN Buntuan Kuala 12 OKI, only 10 out of 20 students met the Minimum Completeness Criteria (KKM), which shows a low level of mastery of subject matter in the mathematics subject of "Area and Perimeter of Flat Buildings". " at the first meeting. The mathematics completeness score at the same time was 72.

The evaluation results above show that learning still needs to be improved. The findings of this analysis make it clear that improving the learning environment and student characteristics is critical to improving learning outcomes in mathematics.

The author improves learning by referring to Classroom Action Research (PTK) in an effort to improve student learning outcomes on the given topic. The author's observations and experiences regarding the implementation of mathematics learning for class IV students at SDN Buntuan Kuala 12 OKI show several obstacles or problems that can hinder the achievement of learning objectives, including the inability of students to focus during teacher-led explanations. mathematics concepts because they are busy playing with stationery or talking with friends, the lecture method used by teachers in conveying these concepts to students, and students' lack of motivation in studying mathematics because they consider it a challenging and unpleasant subject.

Many points of view are presented regarding mathematics. Johnson and Rising (1972) stated that mathematics is a way of thinking and organizing

logical proof; that mathematics is a language that uses carefully defined, accurate terms, and representations with symbols and conciseness, more in terms of meaning than sound; that mathematics is knowledge about organized structures, properties, or theories that are developed deductively based on axioms, properties, or theories that have been proven true; that mathematics is the science of patterns, regularities, patterns, or ideas; and that mathematics is an art form whose beauty lies in its harmony and order. Reys (1984) defines mathematics as the study of correlations and patterns as well as methods or styles of thinking, art, language, and Kline (1973), on the other hand, emphasized that "mathematics is not a separate knowledge that can be perfect by itself, but its existence is to help humans understand and master social, economic and natural problems" (Ruseffendi, 1988, as quoted in Karso, 2021, p.1.39 -1.40).

The author intends to improve student learning outcomes by trying to apply the drill method in class IV mathematics at SDN Buntuan Kuala 12 OKI on the topic of plane shapes, area and perimeter. An alternative that can be applied in classroom management is to use the right method. Therefore, before determining the type of learning a child may experience, a teacher must carefully assess appropriate learning practices Apart from that, teachers must focus on the effectiveness of student learning in order to facilitate students' conceptual understanding (Arni, et al,2022).

All obstacles related to challenges and difficulties that require answers in order to adequately complete the desired results are referred to as problems. "How to improve the learning outcomes of 4th grade elementary school students on the topic of area and perimeter of flat shapes using practice methods?" is the problem formulation that researchers use.

The aim of this learning improvement research is to improve student learning outcomes in the mathematics learning process in the material "Area and Perimeter of Flat Buildings" based on the problem formulation developed. For this reason, training methods will be applied, and improvements in student achievement or learning outcomes will be analyzed after the training methods are implemented. As stated by Prajakusuma et al (2016), "The training method is a method that uses practice continuously or repeatedly until the child acquires skills and habits in doing something" (p. two). Mardiana et al. (2015) added that "The training method or practice method is a good teaching method for instilling certain habits, apart from that as a means of acquiring dexterity, precision, opportunities and skills" (p. three).

RESEARCH METHOD

One research methodology is the classroom action research method. According to Lesmana et al. (2014), action research is an organized examination of initiatives aimed at enhancing how well a group of teachers carry out instructional methods by engaging in active learning. The goal of this research is to provide solutions for real-world issues that arise during classroom instruction. Instead of using statistics, this action research is dynamic—that is, it looks at how the thing under study has changed for the better. In order for this change to be implemented, the old system must be improved upon, or in this instance, improved learning outcomes for the students must be achieved. In order to enable the intended goals, repairs are made by doing out.

Classroom action research procedures are carried out through several stages which are explained in several cycles. The classroom action research model used is a model developed by Kemmis and Taggart with a spiral or in-depth system cycle assessment format. The stages of the Kemmis and Taggart model cycle—planning, action, observation, and reflection—which will be completed in this research are as follows.

RESULTS AND DISCUSSION

A flat figure that lies entirely on a flat plane (surface) is called flat. Two-dimensional shapes are another name for flat shapes. The number of units of area that can cover all flat objects is the area. Square or a (are) is a unit of area. Two-dimensional shapes (2 D) are another name for flat shapes (Soenarjo, 2008, p. 103).

Furthermore, according to Hudoyo's theory (quoted in Susanah, 2014), "relationships, ideas and structures that are arranged logically are the essence of mathematics." Therefore, abstract concepts become the focus of mathematics. Logical reasoning leads to the development of mathematical truths. But mathematical work involves observation, inference, testing hypotheses, searching for similarities, and, as mentioned previously, constructing theorems from undefined elements and assumptions. This is just a mental effort (p. 1.4).

During the implementation of the changes, it was found that learning in cycle 1. Student learning outcomes from the previous score (pre-cycle) may have increased.

Based on the findings of the pre-cycle evaluation, many students' scores have not reached the desired KKM, namely 72. If the percentage of students who reach the KKM is 55%, then 9 out of 20 students have good KKM scores. got a score below the KKM. After there was an increase in learning in cycle 1, the number of students who had not yet reached the KKM increased to 8+. if

60% of students successfully complete the KKM. Therefore, there was an increase of 5% from the pre-cycle evaluation score to cycle 1. This shows that student scores in cycle 1 and pre-cycle have increased. Results of training points.

Table 1.
Obtain Pre-Cycle and Cycle 1 Training Values

Serial number	Previous Cycle Value	Value Cycle 1
1.	47	66
2.	78	53
3.	44	53
4.	53	72
5.	92	100
6.	36	53
7.	97	66
8.	56	100
9.	89	72
10.	72	78
11.	83	75
12.	50	72
13.	100	78
14.	100	84
15.	100	62
16.	100	72
17.	19	75
18.	8	53
19.	50	62
20.	100	84
Average	**68,7**	**71,5**
Amount Above KKM	**11 child (55%)**	**12 child (60%)**
Worth Less Than KKM	**9 child (45%)**	**8 child (40%)**

Keep in mind KKM = 72

Following the increase in cycle 1 learning activities, the implementation of cycle 2 underwent refinement of plans so that improvements could occur. This is shown by comparing the training results from cycles one and two. The following table shows the training scores from cycle 1 compared to cycle 2:

Table 2.
Get Training Values in Cycles 1 and 2

Serial Number	Value Cycle 1	Values Cycle 2
1.	66	92
2.	53	83
3.	53	67
4.	72	92
5.	100	100
6.	53	92
7.	66	92
8.	100	75
9.	72	92
10.	78	92
11.	75	92
12.	72	92
13.	78	75
14.	84	100
15.	62	100
16.	72	100
17.	75	83
18.	53	92
19.	62	92
20.	84	75
Average	**71,5**	**87,2**
Amount Above KKM	**12 child (60%)**	**1 child (5%)**
Word Less Than KKM	**8 child (40%)**	**19 child (95%)**
Keep in mind: KKM = 72		

Of the 20 children or 40%, the results of cycle 1 showed that 8 children had not reached the KKM. Twelve students or 60% of the total students have reached the KKM. Students' training scores increased after cycle 2. Of the 20 children, 1 child or 5% of them had not yet reached the KKM. Nineteen students or ninety-five percent have reached the KKM. Thus, there was an increase in training scores of 55% from cycle 1 to cycle 2. The following table shows a comparison of training scores from cycle 1, cycle 2, and pre-cycle.

Table 3.
Recapitulation of Pre-Cycle, Cycle 1 and Cycle 2 Training Values

Serial Number	Previous Cycle Value	Value Cycle 1	Value Cycle 2
1.	47	66	92
2.	78	53	83
3.	44	53	67
4.	53	72	92
5.	92	100	100
6.	36	53	92
7.	97	66	92
8.	56	100	75
9.	89	72	92
10.	72	78	92
11.	83	75	92
12.	50	72	92
13.	100	78	75
14.	100	84	100
15.	100	62	100
16.	100	72	100
17.	19	75	83
18.	8	53	92
19.	50	62	92
20.	100	84	75
Average	**68,7**	**71,5**	**87,2**
Amount Above KKM	**11 child (55%)**	**12 child (60%)**	**1 child (5%)**
Word Less Than KKM	**9 child (45%)**	**8 child (40%)**	**19 child (95%)**

Keep in mind: KKM = 72

The training score graph starting from pre-cycle to cycles 1 and 2 is presented as follows:

Continuous Education : Journal of Science and Research
Volume 5 Issue 1 March 2024
Page 62-71

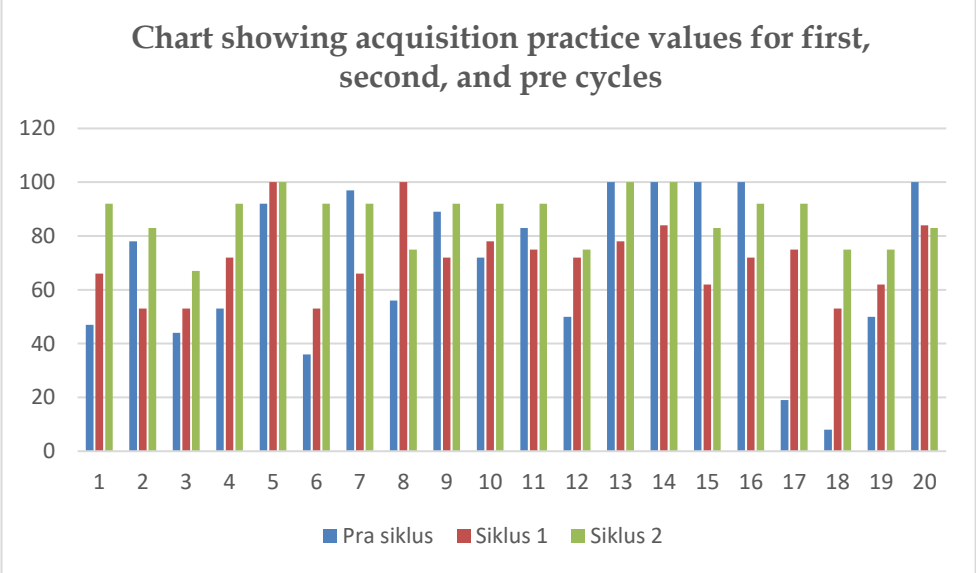

Figure 1.
Chart showing acquisition practice values for first, second, and pre cycles

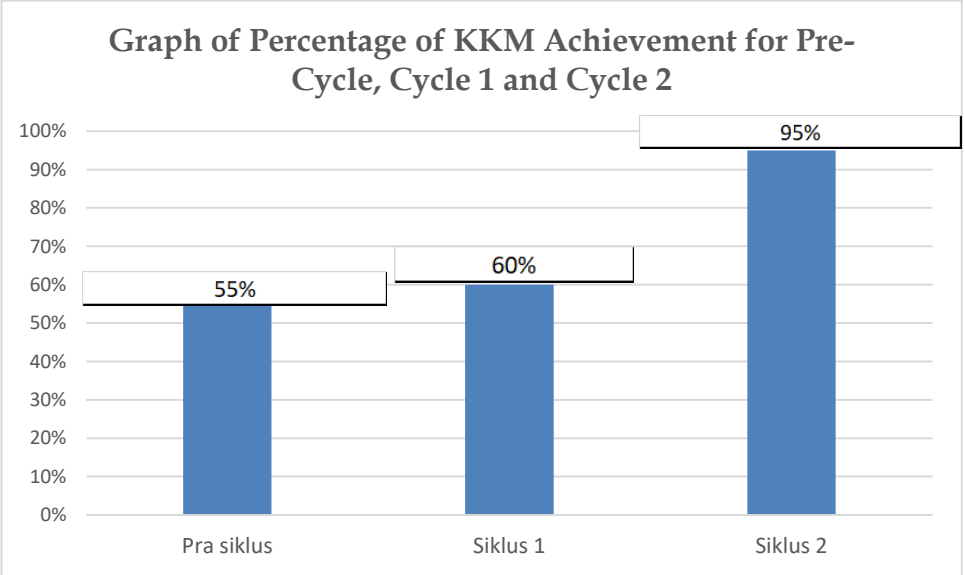

Figure 2.
Graph of Percentage of KKM Achievement for Pre-Cycle, Cycle 1 and Cycle 2

There are two cycles carried out in implementing learning improvements, namely cycle 1 and cycle 2. To improve class IV students' understanding of the area and perimeter of mathematical flat shapes at SDN Buntuan Kuala 12 OKI using the practice method.

Using the guidelines and principles of classroom action research, the authors and researchers conducted research on improving learning. Classroom

Action Research, according to Schmuck (1997), is an organized and methodical research process that instructors use to improve learning in their own classes.

Supervisor 2's explanation regarding the improvement in learning carried out resulted in findings showing an increase in students' training scores starting in the pre-cycle and continuing through cycles 1 and 2. Of the twenty students who carried out the KKM, eleven of them were winners of the pre-cycle training. cycle. There were twelve students who reached the KKM in cycle 1. There were 19 students who reached the KKM in cycle 2. Certain learning outcomes received the greatest benefit from the learning process itself as many as 19 children.

The learning outcomes of class IV students at SDN Buntuan Kuala 12 OKI can be improved by applying the drill method in the mathematics learning process about the area and perimeter of flat shapes. A teacher's method is the way they teach their students.

The teacher's job in the classroom is to help students understand the value of their mathematical strengths—their tenacity, tenacity, interest, knowledge, and inventiveness or creativity. Therefore, educators must be qualified and professional. This is where educators must be responsive and based on what is possible in organizing and implementing mathematics teaching. Learning is developed or enhanced through insight.

CONCLUSION

When teaching fourth grade students at SDN Buntuan Kuala 12 OKI about the area and perimeter of flat objects, the drill approach can help them learn more effectively. The training results of students who get higher scores from the pre-cycle KKM show this; of them there were 11 children (55%), 12 children (60%), and 19 children (95%), in cycle 1.

Each student receives teaching or learning in different ways depending on their individual needs. Because successful interaction and learning processes occur in learning and produce quite large improvements, researchers who are also teachers should apply the drill teaching approach. The students' practice scores starting from Pre-Cycle, Cycle 1, and ending with Cycle 2 show this.

REFERENCES

Anderha, R. R., & Maskar, S. (2021). Pengaruh kemampuan numerasi dalam menyelesaikan masalah matematika terhadap prestasi belajar mahasiswa pendidikanmatematika. *Jurnal Ilmiah Matematika Realistik*, *2*(1), 1-10.

Arni, Y., Gofur,H.A., Mudjiadi.,& Al Fitre, A.L. (2022). Implication of The Influence of Parental attention and learning facilitieson online learning in primary school. Qalamuna,14 (1), 613-628

Chandra, T. D., Karso, H., Muhsetyo, G., Priatna, N., Suyadi, G., & Widagdo, D. (2021).*Pendidikan matematika 1* (edisi 2). Tangerang. Penerbitan Universitas Terbuka**.**

Kusrini., Manoy, J. T., Susanah., & Wijayanti, P. (2014). Strategi pembelajaran matematika (edisi 2). Tangerang. Penerbitan Universitas Terbuka.

Lesmana, F., Kusman, M., Ariyano., & Karo Karo, U. (2014). Metode latihan (drill) untukmeningkatkan hasil belajar peserta didik dalam menggambar autocad. *Journal of Mechanical Engineering Education*, *1*(2), 246-254.

Mardiana, E., Margiati, K. Y., & Halidjah, S. (2015). Penerapan metode latihan terbimbinguntuk meningkatkan kemampuan membaca pemahaman siswa kelas VI sekolah dasar. *Jurnal Pendidikan dan Pembelajaran Untan*, *4*(12), 1-10.

Mulyono, B. & Hapizah. (2018). Pemahaman konsep dalam pembelajaran matematika. *Kalamatika Jurnal Pendidikan Matematika*, *3*(20), 103-122.

Prajakusuma, M., Kurniah, N., & Delrefi, D. (2016). Penerapan metode latihan (drill) berbantuan audio visual untuk meningkatkan ketepatan gerakan shalat. *JurnalIlmiah Potensia*, *1*(2), 67-71.

Schmuck, R. A. (1997). *Practical action research for change*. Chicago. Arlington Height: Skylight Professional Development.

Soenarjo, R. J. (2008). *Matematika 5*. Jakarta. Pusat Perbukuan Departemen PendidikanNasional.

Sutikno, S. (2021). *Strategi pembelajaran*. Indramayu. Adanu Abimata.

Suyanto., & Jihad, A. (2013). *Menjadi guru profesional: Strategi meningkatkan kualifikasidan kualitas guru di era global*. Jakarta. Erlangga.