Application of the Drill Method to Improve the Learning Outcomes of Class V Elementary School Students in Mathematics Subjects

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ABSTRACT

Based on the phenomenon that often occurs in the fifth grade of elementary school in mathematics, there are students' difficulties in understanding these subjects. In the study, there were several problems that students tended to be passive, only a small number of students were active in participating in learning. The process of learning mathematics in class V SD Negeri 015906 Lubuk Palas tends to be not optimal. This is because students do not understand the material and some students are not able to work on various questions so that student learning outcomes are still low. The purpose of this study was to improve the learning outcomes of fifth grade students in mathematics.

The results of the study by applying the drill method to the fifth grade mathematics subject in the first cycle, obtained 43.47% of students who completed. In the second cycle the student learning outcomes who completed as much as 65.21% completeness learning outcomes have increased by 21.74% and have met the KKM standard 70 reaching 65.21% at the end of the cycle. From the results of this study, it can be seen that student learning outcomes have increased, it can be concluded that learning by optimizing the drill method can improve student learning outcomes in mathematics for fifth grade students at SD Negeri 015906 Lubuk Palas.

Keywords: Strategy, Learning Outcomes, Drill Method

1. INTRODUCTION

Education is something that is very important for human life, because education can affect the quality of life. Moreover, currently technological developments are happening so quickly, forcing us all to be able to keep up with the times if we don't want to be left behind. Not all of the education received at school is well received by students. Because not all students have the same opinions, thoughts and understanding of the lesson material conveyed by the teacher. Therefore, teachers who are communicators in the learning process in the classroom must be able to master the class. A teacher must be able to create conditions or processes that are able to direct students to carry out learning activities.

So a teacher must be able to grow and motivate his students. Mc. Donald in Sardiman said that "motivation is a change in energy within a person which is marked by the emergence of "feelings" and is preceded by a response to a goal." To study well you also need good motivation. Students who take lessons without motivation will not get good results from the teaching and learning process. Therefore, it can be said that motivation is the driving force within students to be able to learn, which can ensure the continuity of the teaching and learning process and provide direction to learning activities, so that the goals to be achieved in the
learning process can be realized. The use of media in the learning process is one way that can be used to raise students’ learning motivation. Because media is an absolute thing in the learning process.

Therefore, as much as possible teachers must be able to use learning media in the learning process. Gerlach and Ely in Hamdani say that "media, when understood in broad terms, is humans, materials, or events that create conditions that enable students to acquire knowledge, skills, or attitudes."

Interesting media will influence learning motivation, when students judge that what the teacher displays is interesting then they will be encouraged or feel challenged to find out what the teacher will convey so that the learning process will be more enjoyable. But on the other hand, if students think that what the teacher displays is not interesting, then students will just be flat in following the learning process. From the description above, it can be concluded that learning media can influence students’ learning motivation, because choosing varied media requires a teacher to be more skilled in choosing learning media that is appropriate to the material and learning methods that will be used in teaching. so that the learning process can be enjoyable and students feel motivated to take part in Indonesian language lessons. However, in reality, there are still some teachers who carry out the learning process without using learning media such as visual media, audio media or audio-visual media. So that during the learning process, many students are playing around, telling stories with their friends, so they lose concentration so that the learning objectives are not achieved as well as expected.

According to Djamarah, "the word media comes from Latin and is the plural form of the word "medium" which literally means intermediary or introduction." Thus, media are all the tools used by teachers in the learning process. So, media can make it easier for a teacher to teach, besides that the use of media can raise students' learning motivation. Sadiman, in Haling stated that "the word "media" comes from Latin which literally means "intermediary" or introduction". Gagne and Briggs in Arsyad stated implicitly that learning media includes tools that are physically used to convey the content of teaching material, which consists of, among other things, books, tape recorders, films, slides, (picture frames), photos, drawings, graphics, television, and computer. In other words,

Gerlach and P. Ely in Haling also stated that media in a broad sense and in a narrow sense, in a broad sense, media are people, materials, or events that can create conditions that enable students to acquire new knowledge, skills, or attitudes. In this sense, students, books and the school environment are media. Meanwhile, in the narrow sense, what is meant by media are graphics, portraits, images, mechanical and electronic devices used to capture, process and convey visual or verbal information, each medium is a tool to achieve a goal. From the expert opinions above, it can be concluded that media is one of the alternatives used by a teacher in presenting material in front of the class.

2. METHODS

Drill

The drill method is a way of teaching by giving lots of practice to what students are learning so that they have a skill. Training is an activity that is carried out repeatedly between learning situations and situations in everyday life, there are drill activities or exercises, the results of the student's work will be perfect. The drill or practice method is a learning method that emphasizes the amount or frequency of practice working on problems or solving mathematical problems. The drill method is a method of education and teaching by training children on the learning materials that have been provided. Based on the explanation above, the drill method in general is learning by giving repeated exercises to students in the form of questions or exercises according to the material provided.

Operational Variables

Operational definitions are definitions formulated by researchers regarding the terms that exist in the researcher's problem with the aim of equalizing perceptions between researchers and people related to the research.
Dependent variable
A dependent variable is a variable that is influenced or is a result of the existence of an independent variable. This variable is symbolized by the variable ”y” . So, the dependent variable in this research is mathematics learning outcomes. The learning outcomes in this research are the test results obtained by students after following the learning process using the drill method which is shown by the scores obtained by students after being given the test each cycle. Indicators of competency achievement in mathematics subjects regarding spatial nets are as follows:
Understanding nets in spatial shapes
Draw a cube mesh model from existing spatial shapes
Forming spatial nets that are different from existing spatial nets

Independent Variable
An independent variable is a variable that influences or is the cause of the change or emergence of the dependent variable. This variable is usually symbolized by the variable ”X”. So, the independent variable in this research is the drill method.

Object of research
The object of the research was class V students at SD Negeri 015906 Lubuk Palas, consisting of 23 students with 11 male students and 12 female students.

Observation
Observation is defined "as the systematic observation and recording of symptoms that appear in the research object.” Based on this definition, observation can be interpreted as a method of collecting data by systematically observing and recording the symptoms being investigated. Observation is used to record events and activities during learning actions that use the drill method. This method is used as the main method in the author's classroom action research (PTK).

Documentation
Documentation is a data collection technique by studying notes regarding respondents' personal data. Documentation is a method used to obtain information from written sources or documents, whether in the form of books, magazines, regulations, meeting minutes, daily notes and so on. Based on this research, documentation is a method used to collect the necessary data through written notes. This documentation method was used to obtain data regarding the MID Semester Mathematics class V regarding the number of teachers and employees as well as the number of students at SD Negeri 015906 Lubuk Palas.

Test
A test is "a series of questions or exercises as well as other tools used to measure skills, knowledge, intelligence, abilities or talents possessed by individuals or groups.” This technique will be used by researchers to measure student learning outcomes based on the subjects that students have studied with standard results, study in accordance with the Minimum Completeness Criteria (KKM) in mathematics subjects. The tests given are an initial test (pretest) and a final test (posttest) in each cycle.

Research Instrument
Instruments are tools used by researchers to collect data according to existing problems. The instrument used in this research was learning outcomes test questions. Data collection instrument test to measure students' abilities in cognitive aspects, or level of mastery of learning material.
Quantitative Analysis

Analysis was carried out to see students' learning activities during the learning process using the drill method. Meanwhile, data collected from observation sheets were analyzed in the form of percentages (%).

\[ P = \frac{f}{N} \times 100\% \]

Keterangan:
\[ \begin{align*}
    P & = \text{persentase} \\
    f & = \text{jumlah siswa yang nilai } \geq 70 \\
    N & = \text{jumlah siswa}
\end{align*} \]

3. RESULTS AND DISCUSSION

Cycle I Student Learning Activity Data

Table 1. Defense Activity Data

<table>
<thead>
<tr>
<th>No</th>
<th>Aspek Yang Diamati</th>
<th>Pertemuan I</th>
<th>Pertemuan II</th>
<th>Rata-Rata</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Memperhatikan penjelasan guru</td>
<td>25,21%</td>
<td>61,73%</td>
<td>43,47%</td>
</tr>
<tr>
<td>2</td>
<td>Partisipasi dan keaktifan siswa dalam proses pembelajaran</td>
<td>28,69%</td>
<td>60,86%</td>
<td>44,77%</td>
</tr>
<tr>
<td>3</td>
<td>Bekerjasama dengan kelompok</td>
<td>26,95%</td>
<td>61,73%</td>
<td>44,34%</td>
</tr>
<tr>
<td>4</td>
<td>Bertanya kepada guru</td>
<td>26,95%</td>
<td>58,23%</td>
<td>42,59%</td>
</tr>
<tr>
<td>5</td>
<td>Mengerjakan tugas/soal</td>
<td>26,08%</td>
<td>65,21%</td>
<td>45,64%</td>
</tr>
<tr>
<td></td>
<td>Jumlah</td>
<td>133,88</td>
<td>307,76</td>
<td>220,81</td>
</tr>
<tr>
<td></td>
<td>Persentase</td>
<td>26,77%</td>
<td>61,55%</td>
<td>44,162%</td>
</tr>
</tbody>
</table>

Based on the above, it can be seen that student learning activities in cycle I have increased if seen from the percentage of the first meeting from 26.77% to 61.55%. The average increase in each aspect observed in cycle I is quite good, but improvements need to be made so that student activity is maximum in the learning process.

Cycle II Student Learning Activity Data
Based on the above, it can be seen that student learning activities in cycle II have increased if seen from the percentage of the first meeting from 61.73% to 74.82% in the second meeting.

Based on the first cycle learning result data, it is known that in the pre-test the student average was 54.78, it is known that the number ∑ The total number of student test scores is 1710 and the number of students is 23. To find the class average score, use the formula:

\[ x = \frac{\sum X}{N} \]

Keterangan:
- \( x \) = nilai rata-rata kelas
- \( N \) = jumlah siswa yang mengikuti tes
- \( \sum X \) = jumlah nilai tes siswa

### Increase in Average Student Learning Activities in Cycles I and II

<table>
<thead>
<tr>
<th>No</th>
<th>Aspek Yang Diamati</th>
<th>Pertemuan I</th>
<th>Pertemuan II</th>
<th>Rata-Rata</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Memperhatikan penjelasan guru</td>
<td>60,86%</td>
<td>76,75%</td>
<td>68,80%</td>
</tr>
<tr>
<td>2</td>
<td>Partisipasi dan keaktifan siswa dalam proses pembelajaran</td>
<td>62,60%</td>
<td>75,65%</td>
<td>69,12%</td>
</tr>
<tr>
<td>3</td>
<td>Bekerjasama dengan kelompok</td>
<td>61,73%</td>
<td>71,30%</td>
<td>66,51%</td>
</tr>
<tr>
<td>4</td>
<td>Bertanya kepada guru</td>
<td>61,73%</td>
<td>73,01%</td>
<td>67,37%</td>
</tr>
<tr>
<td>5</td>
<td>Mengerjakan tugas/soal</td>
<td>61,73%</td>
<td>77,39%</td>
<td>69,56%</td>
</tr>
<tr>
<td></td>
<td>Jumlah</td>
<td>308,65</td>
<td>374,1</td>
<td>341,36</td>
</tr>
<tr>
<td></td>
<td>Persentase</td>
<td>61,73%</td>
<td>74,82%</td>
<td>68,27%</td>
</tr>
</tbody>
</table>

### Table 2. Cycle II Student Learning Activity Data Table

### Table 3. Increase in Average Learning Activities

<table>
<thead>
<tr>
<th>No</th>
<th>Aspek Yang Diamati</th>
<th>Siklus I</th>
<th>Siklus II</th>
<th>Rata-Rata</th>
<th>Peningkatan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Memperhatikan penjelasan guru</td>
<td>43,47%</td>
<td>68,80%</td>
<td>56,13%</td>
<td>25,33%</td>
</tr>
<tr>
<td>2</td>
<td>Partisipasi dan keaktifan siswa dalam proses pembelajaran</td>
<td>44,77%</td>
<td>69,12%</td>
<td>56,94%</td>
<td>24,35%</td>
</tr>
<tr>
<td>3</td>
<td>Bekerjasama dengan kelompok</td>
<td>44,34%</td>
<td>66,51%</td>
<td>55,42%</td>
<td>22,17%</td>
</tr>
<tr>
<td>4</td>
<td>Bertanya kepada guru</td>
<td>42,59%</td>
<td>67,37%</td>
<td>54,98%</td>
<td>24,78%</td>
</tr>
<tr>
<td>5</td>
<td>Mengerjakan tugas/soal</td>
<td>45,64%</td>
<td>69,56%</td>
<td>57,6%</td>
<td>23,92%</td>
</tr>
<tr>
<td></td>
<td>Jumlah</td>
<td>220,81</td>
<td>341,26</td>
<td>281,085</td>
<td>120,55</td>
</tr>
<tr>
<td></td>
<td>Persentase</td>
<td>44,16%</td>
<td>68,27%</td>
<td>56,215%</td>
<td>24,12%</td>
</tr>
</tbody>
</table>
**Figure 1.** The average increase in learning activities using the drill method in cycle I and cycle II can be seen in the following figure.

![Graph showing average increase in learning activities](image)

**Improvement of Student Learning Outcomes in Cycles I and II**

**Table 4. Improvement of Student Learning Outcomes in Cycles I and II**

<table>
<thead>
<tr>
<th>No</th>
<th>Indikator</th>
<th>Siklus I</th>
<th>Siklus II</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rata-rata</td>
<td>38.26</td>
<td>54.34</td>
</tr>
<tr>
<td>2</td>
<td>Nilai Tertinggi</td>
<td>60</td>
<td>75</td>
</tr>
<tr>
<td>3</td>
<td>Nilai terendah</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>Tingkat Ketuntasan</td>
<td>0 %</td>
<td>43.47%</td>
</tr>
</tbody>
</table>

Improvement of student learning outcomes in cycle I and cycle II in learning mathematics material about nets in geometric shapes by applying the drill method, class V students at SD Negeri 015906 Lubuk Palas.

**Figure 2.** Graph of Improvement in Student Learning Outcomes in Cycle I d

![Graph of Improvement in Student Learning Outcomes](image)

Based on the picture, it is known that student learning outcomes after being given action have increased each cycle.

Data on student learning outcomes obtained in cycle I pre-test results had a 0% completion level because the test was given before teaching started and the teacher had not explained the material about nets in geometric shapes so that students did not understand the material about nets in geometric shapes, with an average of 34.34 and the post test results have increased with a completion rate of 43.47%, this is because the teacher has implemented the drill method and explained the material so that students have begun to understand. In the second cycle of the pre-test, the completion level was 47.82%, an increase because some students already understood the
material about nets in geometric shapes with an average of 54.34, in the post-test the completion level was 65.

Thus, the level of student completion from cycle I was 43.47% to 65.21% in cycle II, an increase of 21.74%. This can be seen from the increase in post test scores in cycle I, namely Tiurma getting a score of 35 to 80 in the cycle II. Rifki scored 45 in the first cycle post test to 80 in the second cycle post test. Based on the data above, it can be seen that the achievement of complete learning outcomes for students with a score ≥ 70 reached 65.21% at the end of the cycle. Optimizing the drill method can improve student learning outcomes in fifth grade mathematics at SD Negeri 015906 Lubuk Palas.

The Influence of the Drill Method in Learning

Optimizing the drill method can be used in mathematics learning, because the drill method can train students and help students understand the material presented by the teacher in class. By repeating the material students will get used to working on questions. This was discovered in research in cycle I and cycle II that student learning outcomes increased after using the drill method in the learning process in the classroom.

The names of the students who completed the first cycle of the post test were Hani, Sila, Juanda, Meri, Ziyah, Rahmat, Fikri, Furqon, Imam, Rifki, Atika, and the second cycle of the pre test were Seri Manti, Nurdin, Muda, Tandang, Sofii, Oky, April, Subhan, Arifin, Sugito, post test namely Imam, Kirul, Muhammad Nadin, Zakariya, Panerangan, Ganda, Mutmainah, Putri, Balqis, Zidan, Urwah, Gebi Rani, Tiurma, Fahmi, and Eka Hayana. The use of the drill method in the learning process of delivering material in class can attract students’ attention in participating in the learning process. In this way, learning activities in class can be more interactive and students can receive the messages conveyed in each material taught at each meeting.

4. CONCLUSION

As a conclusion from the Classroom Action Research (PTK) and the discussions carried out, it can be concluded that optimizing the drill method can improve the Mathematics learning outcomes of fifth grade students at SD Negeri 015906 Lubuk Palas, it was obtained that 43.47% of students completed the first cycle, while in the second cycle The student's learning outcomes were 65.21%, meaning that the completeness of the learning outcomes had increased by 21.74% and had met the KKM ≥70 standard, reaching 65.21% at the end of the cycle.

It is hoped that this drill method will be used as an alternative that can be used as a contribution of thought and information, especially for class teachers, in improving learning outcomes especially in mathematics subjects, because by implementing this drill method students can become interactive and can attract students’ attention so that it can help students' understanding of the network material. nets on spatial structures. It is hoped that the school principal will provide more motivation to teachers in mathematics subjects who will apply learning using the drill method in the teaching and learning process. It is hoped that students will be more interested in understanding the material through their own efforts in the hope of improving student learning outcomes.

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