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THE ABILITY OF GRADE II ELEMENTARY SCHOOL STUDENTS IN SOLVING PLANE FIGURES PROBLEMS IN MATHEMATICS LEARNING THROUGH THE POLYA APPROACH

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ABSTRACT

The purpose of this study is to improve the learning outcomes of second-grade students of SD Negeri 5 Gelumbang on the material of plane figures using the Polya approach. This study is a type of qualitative descriptive research that aims to describe students' mathematical problem-solving abilities based on the Polya approach in solving problems on the material of plane figures of second-grade students of SD Negeri 5 Gelumbang, totaling 20 students. The method of collecting data in this study was carried out by written tests, interviews, and documentation. The written test was carried out by 6 second-grade students of SD Negeri 5 Gelumbang to be able to take research subjects. Interviews were conducted with research subjects and class teachers. Data analysis techniques used were data reduction, data presentation, and drawing conclusions. Based on the results of the research and discussion, it was found that the mathematical problem-solving abilities of students in the high category were (17.24%) able to understand the problem, able to plan solutions, able to solve problems, but had a little difficulty in checking again. The problem-solving ability in the medium category (65.52%) was able to understand the problems known and asked in the problem, less able to plan problems, although wrong in implementing the solution plan but did not make calculation errors, and not yet able to review the results of the solution. Meanwhile, the problem-solving ability of the low category (17.24%) has not been able to understand the problem, plan the solution, implement the solution plan and has not been able to re-check the results obtained. The conclusion is that the mathematical problem-solving ability of students in solving flat shapes in solving problems reviewed from the Polya approach is analyzed with three abilities, namely High, Medium and Low.

Keyword: Plane Shapes, Problem Solving, Polya, Students

INTRODUCTION

Education is something that must be owned by everyone, a nation can be seen well if seen from the quality of education of the nation. According to Rouseau A. Ahmadi & N. Uhbiyati (2011) Education is to provide us with provisions that are not there in childhood, but we need them in adulthood. Humans need education to develop the potential that exists within themselves. According to Ihsan (2013)Primary school education is education that provides knowledge and skills, requires basic attitudes needed in society, and prepares students to follow secondary education. One of the most important learning that is always related to everyday life, especially at the elementary school level, is mathematics.

Mathematics is a science that plays a vital role in shaping students' mindsets (Siagian M. D, 2016), requiring them to possess mathematical skills as a problem-solving tool. Problem-solving, as an essential aspect of mathematics learning, requires students to think creatively in solving problems, particularly in solving mathematical story problems (R . W Dahar, 2011)

According to Sugondo (Nafi'an, 2011), mathematical story problems are problems that use verbal language and are generally related to daily activities. Story problems are not as easy as when students solve problems in the form of numbers. Students are not only required to have skills in calculating, but also pay attention to the process of solving (Utami et al., 2018). It is expected that students solve story problems through stages so that teachers are able to analyze the abilities they have, especially students' understanding of the concepts used in solving the given story problems. However, in reality, students often have difficulty understanding what is meant by the problem, what is known and asked by the problem, continuing to how to solve the problem, as well as in communicating findings/results (Maman, 2011; Yulinar R., 2014). If students are unable to understand the problem, they will certainly have difficulties in the next stage which includes the ability to plan, solve, and re-check. This aligns with Polya's (1973) problem-solving stages, which state that before planning, completing, and reviewing, students must first understand the problem. This demonstrates the importance of teachers getting students used to completing practice questions in the form of story problems.

Geometry is closely related to everyday life problems. Learning geometry requires critical thinking and reasoning, as well as logical abstraction skills (Wahyudi & Dewi, 2016). The introduction of geometry in elementary schools aims to provide students with the opportunity to further analyze the world in which they live, as well as to provide an early foundation in the form of basic concepts and terminology necessary for further study. Essentially, geometry is easier for students to understand than other branches of mathematics. However, in reality, students' understanding of geometry is very low, making them less able to solve geometry problems, especially those involving plane figures (Nur'aeni, 2008). When teachers give problems involving plane figures that only apply formulas, students can easily solve them. However, when teachers give problems related to plane figures in everyday life, students experience difficulties.

However, students' ability to solve problems with plane figures requires special attention (Zahra & Dori, 2024). Difficulties that students often experience in applying formulas, understanding theories, and even the most common one is understanding problems in solving mathematical problems. According to Imamuddin et al. (2020), the difficulties that occur are usually caused by several factors: (1) Internal factors (from within oneself). (a) Physical factors, namely physical conditions or physiological factors, greatly influence the process and achievement of children's learning. Included in physical

factors are health and physical disabilities. (b) Psychological factors come from intelligence, interests, emotions, talents, maturity, and readiness. (2) External factors (from outside) (a) Family factors are factors that greatly influence children's learning processes because children interact more within the family environment. Therefore, within the family we can find out how parents educate, the relationship between family members, the home atmosphere and the family's economic situation. (b) School factors can influence a child's learning process, including the curriculum, the condition of facilities and infrastructure, school hours, learning methods, the relationship between educators and students, and the relationship between students and students. (c) The community factor around students is one of the factors that can influence a child's learning. If students are in a good environment, consisting of educated people with good character, it will also have a good influence on students so that it can be a motivation to study harder and act like people in their environment.

One of the problems that often occurs in mathematics lessons is the material on plane figures which often becomes a problem, namely the difficulty of students in distinguishing the formulas between these plane figures and others. Even though plane figures are very interesting material to learn. Interesting learning of plane figure mathematics can increase students' interest and enthusiasm to learn it. Plane figures according to Rahayu (2016) can be defined as figures that have two dimensions, namely length and width but do not have height and thickness. Plane figures viewed from their sides can be classified into two types, namely plane figures with four sides and plane figures with three sides. Plane figures with four sides are called quadrilaterals while plane figures with three sides are called triangles (Sinaga, et al., 2013). In the material of plane figures, in order for problems to be solved well, a learning method is needed that can improve student learning outcomes. According to (Djamarah S. B, 2008) "Learning Method is a way used to achieve predetermined goals". One learning method that can be used in learning story problems is the Polya method.

The Polya approach is a learning approach that involves students to be active, creative, and able to think logically, critically, and think at a high level in conveying their ideas to solve a mathematical problem faced in everyday life (Hasibuan, 2018). This is in line with the findings of research conducted at SDN 5 Gelumbang that (Studi et al., 2016)the difficulty in learning mathematics experienced by second-grade students is in the material of flat shapes. Each student certainly has different difficulties, including students making mistakes when learning to count, mistakes in learning geometry, and mistakes in solving story problems.

According to the results of observations conducted by the author, the second grade students at SDN 5 Gelumbang during the Mathematics learning of plane geometry material still have many students who experience difficulties or obstacles when working on the problems given by the teacher. Most students are still fixated on one formula when working on the plane geometry problems that have been given. This obstacle is caused by the many formulas contained in the plane geometry material, which makes students confused about which formula to use to solve the problem. So usually teachers provide an explanation of how to solve problems on the plane geometry material using the Polya approach, which makes students a little able to understand how to work on the problem.

The purpose of learning about plane figures is to show how students' activities in Mathematics learning on plane figures material at SDN 5 Gelembang in grade II in solving questions given by the teacher. And also show how the improvement of student learning outcomes in solving problems on plane figures material before and after using

the Polya approach. In addition, what obstacles are faced by students when working on problems before and after using the Polya approach.

METHOD

This research was conducted at SD Negeri 5 Gelumbang in the 2023/2024 academic year located in Karang Endah Village RT 05 RW 01, Gelumbang District, Muara Enim Regency, South Sumatra Province. The research was conducted in the Even Semester of the 2023/2024 Academic Year. The subjects of this research were 20 second-grade students of SD Negeri 5 Gelumbang in the 2023/2024 academic year. This research used a qualitative approach with a descriptive research type. Qualitative research is a research aimed at describing data, analyzing events, phenomena, social activities, attitudes, beliefs, and thoughts of a person individually or in groups. This research uses a qualitative approach so the instrument is the researcher himself. A qualitative approach requires the presence of researchers in the field because researchers, as action planners, data collectors, data analysts, and reporters of research results. This research aims to directly describe students' abilities in solving problems related to flat shapes of class II SDN 5 Gelumbang using the Polya approach.

Observations were conducted during mathematics learning on the material of plane figures with the intention of knowing the interest and motivation of students in participating in learning with a focus on the delivery of material from the teacher and students. The data collection technique in this study was a mathematical ability test, specifically on the subject of plane figures. The test was in the form of an essay and during the implementation of data collection, students were asked to collect answer sheets used to complete the test questions. This test was intended to measure the level of difficulty of students learning on the material of plane figures. By recalling the various plane figures, finding the characteristics of each plane figure, calculating the number of sides, angles, and vertices of each plane figure. Next, interviews were conducted to be able to understand the problem more deeply openly by directly meeting. Therefore, the interview stage was carried out after knowing the difficulties experienced by students in working on the test. While the documentation in this study was in the form of student assessment results on the essay test.

RESULTS AND DISCUSSION

This research was conducted in two stages, namely a written test and an interview. The first stage was a written test taken by 20 students to determine the level of problem-solving abilities of the students. The test was conducted on April 30, 2024 in the second grade classroom of SDN 5 Gelumbang with a time of 90 minutes. The written test was carried out directly during the research activities by giving students two essay questions on calculating vertices, angles, and sides of flat shapes. Students had previously received material related to this test, namely finding vertices, angles, and sides of flat shapes in class II. After the test was completed, an analysis of the test results was carried out to determine 6 randomly selected students who were categorized into three categories: high, medium, and low, and had received recommendations from the class teacher that the students could communicate well. The second stage was an interview conducted with 6 students who had been selected in each category in the school yard on May 2-3, 2024.

Analysis of the test results shows that the number of students who obtained a score <87 or in the high category was 6 students or 17.24%, those who obtained <80 or in the

medium category were 9 students or 65.52%, and those who obtained a score <65 or in the low category were 5 students or 17.24%.

Table 1. Frequency Distribution and Percentage of Problem-Solving Ability Test Results in Solving Problems on Planar Shapes

	Category	Standard Values	Number of Students	Percentage
1.	Tall	< 87	6	17.24%
2.	Currently	< 80	9	65.52%
3.	Low	< 60	5	17.24%

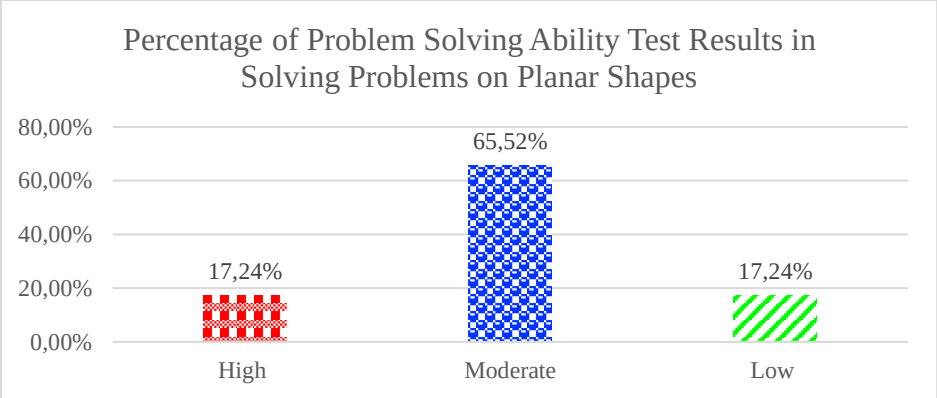

Figure 1. Test result diagram

The following presents the problem-solving abilities of students in the high, medium, and low categories from the results of tests and interviews using student name codes.

1. Students' Problem Solving Ability in the High Category

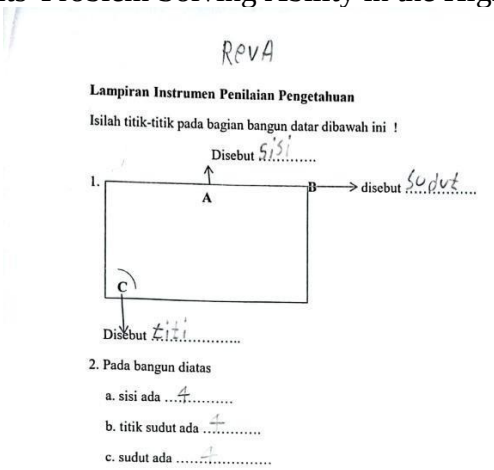

Figure 1. Students' written answers in the high category

Tranlation: Fill in the dots in the plane figure below.

1. a. Called...(side)
   b. Called...(corner)
   c. Called...(point)
2. In the shape above ...

a. nomber of side ...
b. nomber of vertices
c. nomber of angles

Based on the written test results of students with high problem-solving abilities according to the Polya stage, namely subject RMA (Reva Mia Aprilia) was able to understand the information provided and the questions asked in mathematical problems. Subject RMA can state what is known and asked in questions number 1 and 2. In writing information, the use of language by subject RMA is appropriate in question number 1 only. So it can be concluded that subject RMA is able to understand the problem. The written test results show that subject RMA is able to write and answer ways to solve problems in all questions. Subject RMA is very good at making problem-solving plans for each question number. So it can be concluded that subject R is able to compile a solution plan.

Furthermore, the written test results for all question numbers indicate that the RMA subject is able to operate, namely calculating accurately according to the problem-solving plan that has been prepared previously. The RMA subject can implement the problem-solving plan on all question numbers. So it can be concluded that the RMA subject is able to implement the problem-solving plan. Furthermore, the results of the written test at the re-checking stage, the RMA subject is able to re-check the answers according to what is asked in the question. The RMA subject provides an answer according to what is asked in question number 1 but the written answer is incomplete. The RMA subject is able to re-check on 1 number, namely number 2. This result is consistent with the findings of Sapri (2023), which showed that students with high problem-solving abilities tend to successfully complete the stages of understanding the problem, devising a plan, carrying out the plan, and looking back at the solution.

2. Students' Problem Solving Ability in the Moderate Category

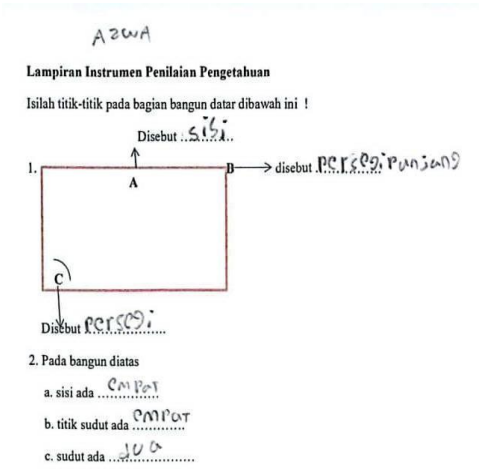

Figure 2. Students' written answers in the moderate category

Tranlation: Fill in the dots in the plane figure below.

1. a. Called...(side)
   b. Called...(corner)
   c. Called...(point)
2. In the shape above ...
   a. nomber of side ...
   b. nomber of vertices
   c. nomber of angles

Based on the written test results of students with moderate problem-solving abilities according to the Polya stage, namely subject ARA (Azwa Raya Anjani) was able to understand the problem well, namely being able to know the information provided and the questions asked in mathematical problems. Subject ARA was able to state what was asked in all questions correctly even though it was incomplete. Based on the interview results, subject ARA was able to explain what was asked in all questions. So it can be concluded that subject ARA was able to understand the problem. The written test results of subject ARA operated, namely calculating in the problem. Subject ARA was able to plan problem solving well, but the problem-solving plan was less able to help him in solving the mathematical problem in the problem. Subject ARA made a mistake in planning the problem in question number 1. So it can be concluded that subject ARA was able to formulate a solution plan.

Furthermore, the written test results showed that the ARA subject was able to implement the problem-solving plan, namely by completing all the answers. The ARA subject was able to calculate correctly according to the problem-solving plan that had been prepared previously. The ARA subject was not confident in answering problem-solving questions in numbers 1 and 2 and was less precise in answering the questions. So it can be concluded that the ARA subject was less able to implement the problem-solving plan. Furthermore, the results of the written test at the re-checking stage, the ARA subject was less able to re-check the answers with what was asked in the questions. The ARA subject gave answers that did not match what was asked in questions number 1 and 2, the answers written were incomplete. The RMA subject was less able to re-check 2 numbers, namely numbers 1 and 2. This result is consistent with the findings of (Alawiyah et al., 2024), which indicated that students in the moderate category were able to understand the information provided in the problem but still showed weaknesses in implementing solution strategies and in the looking back stage of Polya's problem-solving process.

3. Students' Problem Solving Ability in the Low Category

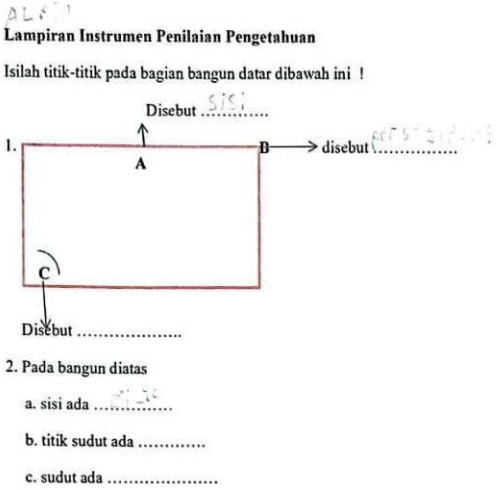

Figure 3. Students' written answers in the low category

Tranlation: Fill in the dots in the plane figure below.

1. a. Called...(side)
   b. Called...(corner)
   c. Called...(point)
2. In the shape above ...
   a. nomber of side ...
   b. nomber of vertices
   c. nomber of angles

Based on the written test results of students with low problem-solving abilities according to the Polya stage, namely subject ARH (Alpin Riziq Husein) can state what is known in the question although sometimes incomplete and less detailed. Subject ARH does not mention what is asked according to the information provided in the question. Subject ARH is less able to understand the problem in all question numbers although incomplete in providing information, especially on what is instructed in the question. So it can be concluded that subject ARH is less able to understand the problem. The written test results show that subject ARH is less able to plan problem solving well. In questions 1 and 2, subject ARH is unable to make a plan to solve the problem. So it can be concluded that subject ARH is not able to formulate a solution plan.

Furthermore, the written test results showed that the ARH subject was less able to implement the problem-solving plan. The ARH subject was unable to carry out the calculation series in questions 1 and 2 incorrectly because the problem-solving plan used was not in accordance with the problem-solving questions. Therefore, it can be concluded that the ARH subject was unable to implement the solution plan. Furthermore, the written test results on the ARH subject's answer sheet were less able to re-check the answers, as evidenced by the ARH subject not providing confirmation or writing answers according

to the results of the calculations that had been done. The ARH subject wrote the answer according to question number 1 but the answer was wrong. Therefore, it can be concluded that the ARH subject was unable to check or re-interpret (Alawiyah et al., 2024)

Referring to the results of the problem-solving ability test obtained from the data analysis regarding mathematical problem-solving abilities based on Polya's stages in solving problems on the material of plane figures, they can be grouped into three categories: high, medium, and low. The results of the analysis described based on the category of students' problem-solving abilities can be discussed further as follows.

Students' problem-solving abilities are in the high category at the stage of understanding the problem, the subjects ST, RMA have been able to understand the problem well. At this stage, both subjects can state the information provided from the problem by identifying what is known in the problem completely and correctly. Then, both subjects can identify what is asked or what will be sought from the problem correctly. Based on the problem-solving stages according to Polya in the first stage, namely understanding the problem, students are likely to be able to understand the problem given in the problem, namely by determining what is known and what is asked in the problem.

This step is the initial step used in solving a problem in the question. At the planning stage of solving the RMA subject, he can determine the answer or how to solve the problem completely and correctly. The strategy chosen by RMA can help him in solving the problem in the question. Meanwhile, the ST subject is quite capable of compiling a problem-solving plan according to the procedure. Based on the problem-solving stage according to Polya, in the second stage, namely planning the solution, students must be able to create a mathematical model and be able to determine the strategy or method used in solving the problem or solving the question and write the answer correctly and precisely. Understanding the problem given in the question is by determining what is known and what is asked in the question (Firda et al., 2023)

At the stage of implementing the problem-solving plan, subjects ST asnd RMA were able to implement the problem-solving plan well. At this stage, both subjects were able to carry out calculations correctly according to the procedures used. Subjects ST and RMA were able to use what had previously been planned and were able to operate it appropriately to obtain correct results. Based on the problem-solving stages according to Polya, in the third stage, namely implementing the problem-solving plan, students are required to carry out the plan that had been determined in the previous stage, namely the problem-solving planning stage. Students who can understand the substance of the material and are skilled in calculating can help them in solving problems in the questions. In addition to subjects ST and RMA, there are several other students who can carry out the problem-solving stage, including: ISP, JS, DAA, and RK. This finding is in line with (Yuwono et al., 2018) who stated that students at the carrying out the plan stage are able to apply the selected strategy and perform calculations systematically to obtain the correct solution.

The steps taken by students in the high category fulfill the third indicator in problem solving according to Polya. Rechecking is the final stage of problem solving according to Polya. Subject ST checks the calculation results. In addition to checking the calculations, RMA is able to pass this stage well. Based on problem solving according to Polya in the final stage, namely rechecking, students must recheck the results of the calculations that have been carried out. In addition to subjects ST and RMA, several other students can carry out the problem solving stage, including: ISP, JS, DAA, and RK. The steps taken by students in the high category are able to fulfill four indicators in problem solving according to Polya.

Students' problem-solving abilities are in the moderate category at the problem understanding stage, ARA and APP subjects are already able to understand the problem quite well. In the second stage, ARA subjects can mention the information provided from the problem by identifying what is known in the problem correctly but incompletely. Meanwhile, APP subjects can mention the information provided from the problem by identifying what is known in the problem incorrectly and incompletely. Then, both subjects can identify what is asked or what is sought from the problem correctly.

Based on Polya's problem-solving stages, the first stage, understanding the problem, requires students to be able to understand the problem presented in the question by determining what is known and what is being asked in the question. This step is the initial step used in solving a problem. In planning a solution, ARA and APP subjects were quite capable of developing a problem-solving plan according to the procedure. This finding is in line with Novitasari et al. (2022), who stated that students with moderate problem-solving abilities are generally able to formulate solution plans and determine appropriate steps for solving mathematical problems. At this stage, both subjects were able to determine the correct way to solve the problem. The strategies chosen by both subjects were quite helpful in solving the problem.

Based on the problem-solving stages according to Polya, in the second stage, namely planning a solution, students must be able to create a mathematical model and be able to determine the strategy or method used in solving the problem or solving the problem. Understanding the problem given in the problem, namely by determining what is known and what is asked in the problem. The solution plan, ARA subjects are able to perform calculations correctly according to the procedures used. ARA subjects can use what has been previously planned and can operate it correctly to obtain correct results. Meanwhile, APP subjects are quite capable of determining and performing calculations or operating them correctly.

Based on the problem-solving stages according to Polya, in the third stage, namely carrying out a problem-solving plan, students are required to carry out the plan that has been determined in the previous stage, namely the problem-solving planning stage. Students who can understand the substance of the material and are skilled in calculation can help them in solving problems in the questions. Re-checking, ARA subjects have been able to pass this stage well. Re-checking is the final stage of problem-solving according to Polya. ARA subjects check the results of the calculations. In addition to checking the calculations. This result is consistent with (Firda et al., 2023), who explained

that the looking back stage requires students to review the procedures and verify the correctness of the obtained answers.

At this stage, the APP subject is less able to check the truth. Based on the problem-solving stage according to Polya, in the final stage, namely re-checking, students must re-check the results of the calculations that have been done. In addition to the ARA and APP subjects, several other students can carry out the problem understanding stage, including: EA, ARB, AKJ, ACP, OI, RG, SM. The steps taken by students in the moderate category are able to fulfill four indicators in problem solving according to Polya.

Students with low problem-solving skills at the problem-understanding stage in ARH and WAS subjects were less able to understand the problem well. At this stage, ARH subjects were unable to correctly identify the information provided in the problem, but their understanding was incomplete. Both subjects were able to correctly identify the question or what was being asked in the problem. Meanwhile, WAS subjects were able to correctly articulate the information provided and the question posed in the math problem.

Based on Polya's problem-solving stages, the first stage, understanding the problem, requires students to be able to understand the problem presented in the question by determining what is known and what is being asked in the question. This step is the initial step used in solving a problem. In planning the solution, ARH and WAS subjects were unable to formulate a problem-solving plan according to procedures. At this stage, ARH and WAS subjects were unable to determine the correct way to solve the problem.

The strategies chosen by both subjects were quite helpful in solving the problems in the questions. Meanwhile, the WAS subjects were less able to determine the method or solution to the problem. Based on the problem-solving stages according to Polya, in the second stage, namely planning the solution, students must be able to create a mathematical model and be able to determine the strategy or method used in solving the problem or solving the problem. Understanding the problem given in the question means determining what is known and what is asked in the question. In the stage of implementing the problem-solving plan, the ARH and WAS subjects were less able to implement the problem-solving plan well. This finding is consistent with Taneo and Taneo & Kusumah (2021), who found that difficulties in understanding the problem and planning the solution can affect students' ability to carry out the selected strategy correctly.

At this stage, both subjects were unable to perform calculations correctly. Subjects ARH and WAS were able to use what had previously been planned but were unable to explain the results of the problem. Subjects ARH and WAS were able to operate what they used to solve the problem. This finding is in line with (Novitasari et al., 2022), who found that students with low problem-solving abilities often experienced difficulties in carrying out the planned solution correctly and made errors in the implementation stage Based on the problem-solving stages according to Polya, in the third stage, namely implementing the problem-solving plan, students are required to carry out the plan that had been determined in the previous stage, namely the problem-solving planning stage.

Students who can understand the substance of the material and are skilled in calculating can help them in solving problems in the questions.

Subjects ARH and WAS were unable to successfully complete the re-examination stage. Re-examination is the final stage of Polya's problem-solving process. Subjects ARH and WAS were unable to verify their calculation results. Based on Polya's problem-solving stage, the final stage, re-examination, requires students to re-check their calculations.

Based on the results of the data analysis, it can be seen that the problem-solving abilities of students with a high category have been able to go through all the stages of problem solving according to Polya well. Students are able to understand the problem by correctly identifying what is known and what is asked. In the planning stage, students with a high category are able to create a problem-solving plan or determine what is correct according to the problem in the question. Students with a high category are able to complete calculations according to the problem-solving plan that has been made previously based on the problem-solving stages according to Polya at the stage of implementing the problem plan. The final stage is re-checking the answers, students are able to re-check the calculations that have been done. In addition to being able to meet all problem-solving indicators, students with a high category can also communicate the results of their work well and correctly after being interviewed regarding the answers (Taneo & Kusumah, 2021).

Teacher and Student Responses

1. Teacher Response

   Based on teacher interviews formulated by the researcher, teachers responded that the researcher taught the material on plane figures using the Polya approach very well and was enjoyable according to the stages and time allocation. In addition, the researcher was very creative and very suitable to use the Polya approach on plane figures. Moreover, during the implementation, students looked very active, creative and fun in determining the learning they did. The researcher was very clear and oriented students to everyday problems connected to relevant conceptual events. Students felt enthusiastic when following the material on plane figures using the Polya approach, because kinesthetically they could move and play during lessons that are usually done only sitting. Student grades also looked better and on average they got satisfactory grades, although basically the difficulty of the questions on plane figures, but they were able to work on them well. This was because the learning model used by the researcher was very meaningful, relevant and conceptual, so that it could be accepted and understood logically by students very well. This is what caused student grades to increase. These findings are in line with the research conducted by (Fitriani et al., 2026), which states that the application of the Polya model can improve students' mathematical problem-solving abilities because it helps students understand problems, plan solutions, carry out strategies, and re-examine the results obtained, thereby contributing to improved learning outcomes.
2. Student Response

   According to (Fitriani et al., 2026), the Polya learning model encourages

students to become more active participants in learning and helps improve their mathematical problem-solving abilities through meaningful and systematic learning experiences. This finding is reflected in the results of the student response questionnaire in the present study.To determine student responses, the researcher used a questionnaire to students who were treated as respondents. From the questionnaires distributed during class, the researcher found that students were very happy to receive the material on plane figures because this material was very easy to understand and very relevant and conceptual. In addition, the teacher's very simple explanations and teaching methods made students play an active role and made it more enjoyable. And students could enjoy drawing conclusions in their own words. In this case, students said that the researcher provided a lot of free space so that students could explore what was assigned by the teacher. Initially, students thought this was not a math lesson because they had the opinion that math is difficult, especially the material on plane figures that they had just learned. However, apart from that, the researcher was very good at conveying the material with games that made students feel more enjoyable and certainly easier to understand the material. In response, students hoped that other subjects could also use the learning method used by the researcher. Because they felt that what the researcher did was very enjoyable and made students play an active role in learning, although not all students agreed because there were some students who just followed along without doing anything. To address students who simply follow along, researchers provide space for them to explain what their group has learned from the answers made by their group mates so that everyone plays an active role. In addition, the purpose of the material using the Polya approach learning model is for students to be able to solve problems on the material of plane figures even though it does not appear in the student questionnaire, but with questions using plane figure indicators, researchers conclude that students are able to follow the learning very well. This is proven by the results of students who get an average score that is very good. Researchers are very confident from the results of the student questionnaire, that students are more prepared and happier when learning involves games.

Solving Plane Problems Using Polya's Approach

Polya's theory is a systematic approach used to solve mathematical problems and other problems. In understanding the material on plane figures through the application of the Polya approach, second-grade students of SDN 5 Gelumbang must understand the problem carefully, carefully read all the information provided in the problem statement and identify what is requested in the given problem, in order to find the correct solution. By mastering the concept of mathematical problem solving, it is hoped that second-grade students of SDN 5 Gelumbang can improve their ability to solve mathematical problems.

In the results of research on grade II students of SDN 5 Gelumbang showed that from 20 students, 6 students were taken from the test results showing that the number of students who obtained a score <87 or in the high category was 6 students or 17.24%, who obtained <80 or in the medium category was 9 students or 65.52%, and who obtained a score <65 or in the low category was 5 students or 17.24%. The selection of this subject was taken by 2 subjects each as representatives of the three levels of students. 6 students

(75%) had mastered the concept and understood and identified the flat shape questions in finding the shrinkage point, angle and side. Meanwhile (25%) 14 students were not yet correct in understanding the concept of the flat shape questions given using the application of Polya's theory.

Planning

Based on the data analysis conducted by the researcher, namely the results of interviews, observation results, research questionnaires and documentation, the following points were obtained. The results of interviews conducted with class II teachers, said that the cause of students experiencing obstacles in understanding the material/learning difficulties, namely not being able to distinguish various types of flat shapes and their elements and calculating vertices, angles and sides. The results of observations that have been observed by researchers that when learning takes place the class conditions look conducive, students pay attention to every explanation from the teacher.

Implementation

In implementing the work on flat shapes using Polya's theory, students in grade II of SDN 5 Gelumbang must implement the implementation by finding the right solution and finding the right answer by involving calculations in mathematics, using appropriate mathematical formulas.

The results showed that 6 (75%) of the 20 students were able to answer the questions correctly using the formula. Meanwhile, 14 (25%) of the other students worked on the math problems on plane figures using incorrect formulas and were even less careful in placing the formulas that should have been used.

Evaluation

In problem solving, one must re-check whether the steps that have been taken are correct and ensure that the results obtained are correct or not. The results of the study show that there are still many second-grade students of SDN 5 Gelumbang who do not re-check the questions that have been worked on. In this case, there are 6 students (75%) who re-check their answers whether they are appropriate or not in carrying out the steps based on Polya's theory. While the other 14 students (25%) do not re-check the answers they have done, so there are errors in the final work.

From the explanation above, it can be seen that students' ability to solve problems on the material of plane figures between students with high, medium, and low abilities has differences. This difference can be seen from the results of task-based answers and when the subject presents arguments for each step of the solution that has been done, where each solution refers to the problem-solving indicators according to Polya (1973: 5), namely understanding the problem, developing a strategy, implementing the strategy, and re-checking. Thus, a teacher should pay attention to the differences that each student has. By providing teaching and treatment that are appropriate to the existing differences. A good teacher is a teacher who understands and pays attention to the differences that exist in their students. The results of this study are in line with the results of research conducted

by (2013) whose research results obtained that students with different abilities will produce differences in students in solving mathematical problems. In addition, the results of this study are in accordance with the results of Kattou's research (Hanifah, 2013) showing that the six students who differ in their mathematical abilities, reflect three categories of students who also vary in their mathematical problem-solving abilities. Data obtained shows that students with low abilities are included in the category of being unable to achieve all problem-solving indicators, this is in line with the findings (Hasanah, 2018) subjects with low abilities have difficulty in solving problems correctly and do not re-check the results of their work. This research is in line with previous research conducted by (Utami et al., 2018) Students are not only required to have skills in calculating, but also pay attention to the solution process. For this purpose, it can be assumed that problem-solving ability is one of the components that contribute to the development of mathematical abilities. Thus, students' ability to solve problems is very important for students to have. Therefore, teachers must provide guidance and continuously train their students to solve problems, especially non-routine problems during learning.

CONCLUSION

Mathematical problem solving ability can be seen from the process of solving and the results of solving problems in the questions. Subjects who have mathematical problem solving ability are subjects who are able to apply complete problem solving indicators according to Polya's theory, namely understanding the problem, making a plan/strategy, implementing the plan/strategy and re-checking. Based on the results of the analysis, the mathematical problem solving ability on the material of flat shapes for 20 students of grade II SDN 5 Gelumbang that the mathematical problem solving ability on the material of flat shapes of students is very diverse, namely, as follows. Students with problem solving ability that meets the problem solving indicators or problem solving ability in the high category are 6 students or 17.24%. Students with problem solving ability that one indicator is not met or problem solving ability in the medium category are 9 students or 65.52%. Students with problem solving ability that two or three indicators that do not meet or problem solving ability in the low category are 17.24% or 5 students. Implications: based on the results of the study, it is known that the ability to solve mathematical problems on the material of flat shapes of students is very diverse so that it can be used as a reference to improve the ability to solve mathematical problems with various strategies and learning methods that will be used so that learning objectives are achieved and each student has high mathematical problem solving abilities. The benefits of solving mathematical problems for students are developing mathematical knowledge based on their own knowledge, interesting and fun efforts for students in learning the material, gaining a deep understanding of the material, and being able to develop skills in various fields. Based on the results of the analysis of mathematical problem solving abilities on the material of flat shapes, researchers put forward several suggestions that are put forward to: Educators are expected to pay attention to students' abilities in solving problems gradually and routinely so that students are able to develop their knowledge and educators in providing practice questions are expected to be varied and creative related to everyday life and problem-based so that students are able to develop critical thinking

patterns. Students are expected to read more and practice solving problems, so that problem solving concepts can be embedded in students.

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