Analogy-Based Selective Problem Solving Learning on the Skill to Solve Word Problems
[Pembelajaran Selective Problem Solving Berbasis Analogi Terhadap Kemampuan Menyelesaikan Word Problem]

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Abstract. *This study aims to determine the application of selective problem solving learning in problem solving skills. Selective problem solving learning is to develop creative thinking and problem solving skills through the use of analogy thinking. The research method used is an experimental quantitative approach. Regarding the ability to solve the problem of mathematics students before and after being given treatment in the form of selective problem solving learning. The test was given to students through a math problem solving instrument. To measure students' abilities, researchers use scoring based on Polya's solve the problem steps. The subjects of this study were fifth grade students of SDN 188 Gresik. Data collection techniques using tests, and data analysis using the t test. The results of selective problem solving learning on problem solving skills obtained* $t_{table} > t_{count}$*, namely 4.102> 2.0930. This shows that selective problem solving learning has an impact on the ability of elementary school students in solving math problems. Selective problem solving in learning mathematics is very realistic, because it is used as a source or starting point for learning and developing mathematical learning concepts. In understanding the problem selective problem solving is done by solving problems and selecting information that is needed and not needed. Selective problem solving is also needed by students in building combinations of relevant mathematical elements.*

Keywords **-** Selective problem solving, analogy, problem-solving skill

I. INTRODUCTION

Word problems are the most critical part of learning math in elementary school [1]. Word problems play an important role because they provide problems in everyday situations. Thus, it can help students to analyze mathematical problem-solving related to everyday life [2]. In addition, word problems can improve the quality of problem-solving skills in elementary school students (Kribbs & Rogowsky, 2016; Jupri & Drijvers, 2016). However, word problem competency is influenced by students' reading comprehension. Attention to relevant word problems helps students improve their word problem skills. As word problems become more semantically complex students will progress in their education [5]. So word problems in learning mathematics become important because this story problem can be related to everyday life [6].

Word problems can take mathematical thinking beyond computational thinking, boost students' confidence when they understand the basics, and inspire elementary school students to acquire and develop methods to develop information. An important aspect of word problems is that they are standardized steps for students to solve many problems. One way to solve these problems is by using the word problems method because students are trained to think by using the word problems method. Word problems are often considered the most challenging problems for students in mathematics education [7].

Similarly, with the help of analogy learning, students can develop teaching and learning activities directly or indirectly to create a compelling and creative learning process [8]. The analogy learning process is an effort between teachers and students to develop and process information. The analogy is one of the ways to think in building and solving problems. The analogy is an essential feature of human intelligence in developing knowledge of information from various sciences [9]. The use of analogy has been proposed as one way to strengthen teaching analogy thinking skills in constructivist lessons. The analogy can help students understand that it is difficult to understand all new information and experience if it is not related to existing knowledge and expertise, so tools are needed to facilitate the transfer of understanding [10].

Analogy thinking is the cognitive basis for understanding and perceiving similarities in context. The analogy can challenge students who often must convey what is emphasized in class [11]. The analogy is a type or similarity

where the same system of relationships applies to different elements. Analogy can be divided into two, namely, inductive analogy and declarative analogy. An inductive analogy is an analogy taken from similarity through case analogy. Students are trained to see how far they understand the concept of analogy and the case. Therefore, students can monitor their understanding of something being learned [12]. The analogy can process the understanding of similarities between two events and use it to infer the similarities. This shows that analogy is suitable for use in learning because students can more easily understand concepts based on previous lessons [13]. A good understanding of concepts is expected to strengthen students' reasoning skills. The analogy learning process can help ease understanding. To understand new concepts in everyday life and relate them to the concept of [14]. The analogy is a powerful cognitive mechanism that allows this to happen and conveys information about one situation or context from another. Analogy thinking facilitates understanding and inference and makes conceptual shifts [15].

As a significant component of a student's school education that profoundly affects their development, mathematics is the subject that most emphasizes and cultivates selective problem solving [16]. Selective problem solving in learning is the most effective concept to realize knowledge transfer in meaningful mathematics learning. The selective problem solving model uses a learning activity model by training students to face various problems, individually or in groups, to be solved alone or together [17]. The skill to learn selective problem solving, students will gain experience, knowledge and skills owned to make decisions. Individual success will be determined by the skill to do selective problem solving. This shows that it is crucial to develop the skill of learning selective problem solving [18].

The teacher's role in revealing some of the characteristics of students in demonstrating successful selective problem solving is demonstrated not only by their exceptional speed or sincerity in solving demanding problems, but also by their exceptional precision in their approach to problem solving [19]. Selective problem solving aims to develop each student's skill to use and apply demanding problem-solving mathematical knowledge in real-life situations. Selective problem solving in mathematics learning is very realistic because it is a source or starting point for learning and developing the concept of demanding problem-solving mathematics learning [20].

In understanding the problem selective problem solving can be done by selecting the necessary and unnecessary information. Selective problem solving is also needed by students in building combinations of relevant mathematical elements. In addition, it can help students find the right solution in solving math problems. The basic characteristics of the selective problem solving learning model are to develop creative thinking and problem-solving skills through deep and selective analogy thinking to enrich individual knowledge, so that it can be transferred to different situations. The selective problem solving learning model is a learning model that involves students actively and utilizes the perceptions possessed by students. The selective problem solving is suitable for improving the skill to solve mathematical problems, because the selective problem solving learning model focuses on teaching and problem-solving skills followed by strengthening skills [21].

Teachers can use selective problem solving to teach in the learning process. This model can stimulate students in thinking starting from concluding. Thus, students can take meaning from the selective problem solving learning process. The learning process students use all their thoughts, have a solution strategy, and process until they find a solution to a problem from selective problem solving learning [22].

According to previous research, related to the application of the word problems learning model to mathematical problem solving skills. The word problems learning model has a large level of influence on the problem solving ability of elementary school students [23]. In previous studies, the aspects studied focused more on students' experiences that had been studied before. This article discusses selective problem solving in solving problems in everyday life. Selective problem solving learning in learning is the most effective concept to realize in transferring meaningful mathematics learning knowledge. The selective problem solving model is the use of a model of learning activities by training students to face various problems, be it individual or group problems to be solved alone or together, so it is necessary to apply selective problem solving for solving student problems in everyday life.

The application of selective problem solving develops critical and creative thinking skills in solving word problems to teach students to solve solving problems effectively and efficiently. In addition, this learning aims to shape students' mindset. The use of selective problem solving method in learning can train students to deal with various problems both individual and group problems and develop thinking skills, especially in finding cause and effect in the purpose of a problems. This research is to find out the description of selective problem solving skills in mathematics. There are several stages in selective problem solving, namely: understanding the problem, planning problem solving, implementing problem solving and looking back. In this method, we will find out the learning completeness of students taught with the selective problem solving learning model so that we will get an overview of students' mathematics problem solving skills in the selective problem solving learning model.

Literatur review

Selective Problem Solving Learning

The selective problem solving learning model is a learning model that focuses on teaching and skills in solving problems followed by strengthening the skills themselves. The problem solving learning model emphasizes the active learning process and invites students to take part in finding solutions to solve problems that will be faced.

With problem solving students can develop critical thinking, creative, and problem-solving skills, so that they can become more independent in learning. Problem solving learning has a positive impact on developing students' competence in solving problems. The application of the problem solving learning model is an alternative solution to improve the ability to solve solving problems. This is because problem solving learning can solve problems, the advantages of problem solving, namely, can make educators in schools more relevant in life, can accustom students to face and solve problems skillfully, stimulate the development of students' willingness to think creatively and thoroughly. Problem solving is not planned to help teachers provide as much information as possible to students, but rather to help students develop thinking abilities, solving problems, and intellectual skills learn various roles through real experiences and become independent learners. The problem solving learning model is expected to help students' mindset to pay attention and be able to analyze a problem that can then be solved properly. Problem solving is considered suitable for problem solving learning because it can train thinking and reasoning in drawing conclusions, developing the ability to solve problems by conveying information [24].

Teachers are expected to know how to use the right method that is suitable for learning. The existence of the problem solving learning method aims to discuss problems to find solutions or answers. This method really helps students improve scientific attitudes with this method, students must learn to think freely and independently according to the character and abilities of each student because it encourages logical, critical, caring, creative and disciplined attitudes and can help students develop self-confidence and try to understand students' ideas about mathematics in problem solving. In the learning process, students must focus on exploring and developing the greatest potential in themselves with learning that prioritizes children in problem solving learning. This learning method encourages creativity, is effective in achieving goals and quality, and is fun, allowing students to understand the material as a whole. So that the teacher does not completely leave students in learning. Students must be guided in building knowledge so that students do not experience misunderstandings about the concept of problem solving. Under the guidance of the teacher, students can be guided to achieve satisfactory learning goals (journal). Problem solving is the use of methods in learning activities by training students to face various problems, both personal or individual problems and group problems to be solved together. The problem solving method is also known as the brainstorming method, because it is a method that stimulates and uses insight without seeing the quality of the opinions conveyed by students. Teachers are advised not to be oriented to the method, but teachers only see the way of thoughts conveyed by students, students' opinions, and motivate students to express their opinions, and occasionally teachers should not disrespect students' opinions, even if the student's opinion is wrong according to the teacher.

Analogy-Based Learning

The analogy-based learning approach is a way of providing insight to convey a message so that a concept or definition becomes easier or simpler to understand. Analogy can discuss two things that are different but have similarities that can be compared with the aim of recognizing a problem and then analyzing the relationship so that it can learn concepts that are still unfamiliar. Learning and studying concepts that are often still unknown by analogy what is already known, that is, using analogy really helps increase knowledge and understanding. For example, in the context of learning such as transferring information from teacher to student. Learning with an analogy approach is a way of delivering messages in such a way that a concept or definition is simpler for the better. Analogy helps students in understanding the material, so all new knowledge and experience becomes difficult if it is not about existing knowledge and experience, hence the need for knowledge transfer. Analogy is the similarity in thinking about two different concepts. The first concept is a known concept while the second is a different concept. Analogy has the appeal to explain a new teaching material that learning is not an activity of collecting facts, interaction with objects, experiences, and their environment. It is a progression of thinking to create a new framework of understanding that is preceded by matching old knowledge. Analogy is an important case in inductive reasoning based on structured comparison and mental health. More specifically in the argumentation process students compare two situations, the source problem and the target problem. The source problem is a problem that thinking understands better than the target problem. In this case students use analogy in mathematics. Students need new information as information to facilitate conclusions about the target problem. Thinking of analogy can also help with transferring knowledge, students must understand the object problem that is not known before. Thus, analogy can help students solve problems therefore, students must be able to recognize similarities in the source problem [25].

Analogy ability as the core of cognitive development consists of placing the structure of an element to other structures with appropriate relationships. Analogy ability is drawing conclusions based on the similarity of a given process. The essence of using analogy in learning mathematics is to solve problems by students applying known knowledge to solve new problem solving. In general, analogy is the process of drawing temporary conclusions by comparing the similarity of processes between an idea or concept that is already known with an idea or concept that is not yet known. The development of analogy skills involves source problems and target problems. In using analogy skills, students must recognize the target concept and be able to review analog concepts. The usefulness of the analog concept is as information in terms of linking and comparing with the target problem so that it can apply the structure of the source problem to the target problem [26]. The ability of students in analyzing mathematical problems is one

of the important indicators in teaching in elementary schools, especially in measuring the level of students' mathematical analogy abilities must be reviewed from internal and external factors. Where internal factors originating from students, the difficulty of students comparing and connecting a problem to the target problem, and external factors from outside the student, for example the learning model used by the teacher in delivering learning materials and application.

Improving the quality of education requires rethinking to form the basis for further training. Improving the quality of teaching is achieved through learning. Currently, there is still a learning process that only focuses on the teacher and less on students. Therefore, in teaching and learning activities more emphasis is placed on teaching than learning. Teaching tends to prioritize the interests of the teacher, while learning tends to prioritize the interests of students. In order for the learning process to run effectively, the teacher must be able to carry out his duties as a teacher correctly. One of the steps applied is to use the creative learning model of word problems. The word problem model is learning that focuses on teaching and problem solving skills. Followed by increased competence, when presented with a problem students can use word problems skills to select and develop their answers. Because of students' ability to solve math test questions.

Word problems

Learning mathematics in elementary school is not only suggested to improve students' ability in counting, but also suggested to improve students' ability in word problems, both mathematical problems and other problems that contextually use mathematics to solve them. From the objectives of mathematics in elementary school, it appears that word problems have an important focus in learning mathematics so that it is clearly stated in the mathematics curriculum. The implementation of learning word problems in elementary school is not as easy as thought, there are factors that hinder the optimal implementation of learning word problems, not only teacher factors, but curriculum guidance factors that make teachers with limited time so that they do not focus on the ability of word problems. Students' success in solving word problems can be considered as an important source to reduce the difficulty of word problems so that students' success in solving word problems increases. The use of mathematical representation can reduce the difficulty and help students' success in solving word problems [27].

The word problems learning model can be characterized by the use of real-world problems to help students learn. By using the word problems model, students are expected to acquire skills more than knowledge. Starting with word problem solving skills, critical thinking, teamwork skills. Word problems encourage students to learn and work cooperatively in getting solutions, and critically. Word problems are a way of learning by confronting students with a problem to be solved or solved conceptually in learning. To improve student learning outcomes, teachers apply learning word problems so that students easily understand reasoning, especially regarding the concept of mathematical calculations and problem solving. However, field facts show that the learning strategies applied by teachers have not been able to improve student learning outcomes where this can be seen students who tend to be less enthusiastic in participating in teaching and learning activities in mathematics because they feel difficult, do not understand the lesson, are not confident, and tend to be passive in class. Some other problems found are that students are still slow in thinking, often lagging behind in understanding math learning so that they cannot keep up with other friends who already understand. This will cause inequality of students in achieving learning goals. Thus it can be said that the word problems strategy used by the teacher has not been able to realize to achieve learning goals for all students. The ability in word problems needs to be developed because by solving word problems students will be trained to understand a problem well, reason well, analyze, have the right strategy in solving problems, evaluate what has been taught. In teaching word problems students must pay attention to four steps, namely: understanding the problem, planning the solution, solving the problem according to the plan, and checking back. Because basically the ultimate goal of learning is to produce students who have knowledge and skills in word problems faced in everyday life. In general, there are factors that cause failure in the word problems learning model, the teacher's ability to understand or apply the model in learning and the incompatibility of model selection with the characteristics of the material.

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II METHOD

Research design

Figure 1: Research method

Adopted Tjandra, 2023 [28]

This research uses quantitative methods with experimental types. The quantitative approach is used to research and produce data based on numbers that are carried out objectively. In obtaining data and aims to determine students' ability to solve problems. The data obtained comes from the test questions that have been given.

Research subject

The subjects of this study were fifth grade elementary school students of SDN 188 Gresik, using saturated sampling. The research subjects consisted of 25 students. Researchers use this technique because researchers want to make generalizations with very small errors.

Instrument and indicator

This research instrument uses tests, because it measures students' ability in problem solving. Written tests are used as written data on student work on selective problem solving test questions, written tests in the form of 5 question items.

Table 1. Problem-solving Skill Test

No	Problems
1.	Siti bought 2 pencils, 3 notebooks, 1 eraser, and 1 ruler. If the price of 1 pencil is Rp1,500. The price of 1 book is Rp1,000.00 more than the price of a pencil. The price of 1 eraser is Rp1,000. The price of 1 ruler is the same as 1 book. Siti paid with 2 ten thousand notes, then the refund is?
2.	Ratna bought 4 pencils, 2 ballpoint pens, 2 erasers, 2 rulers, and some notebooks. The price of each pencil is Rp2,000.00, the ballpoint pen is Rp3,000.00, and the eraser is Rp2,000.00 cheaper than the ballpoint pen. The ruler costs Rp1,000.00 more than the pencil and each notebook costs Rp2,000.00. Ratna paid with two twenty-thousandth notes and got Rp4,000 back. How many notebooks did she buy?
3.	Mr. Salam has 2 material stores in material 1 there are 290 packs of ceramics, Mr. Salam plans to move all the ceramics to material store 2, then Mr. Salam's men bring 100 packs of ceramics to move to material store 2. How many more have not been moved?
4.	Five chicken eggs cost Rp6,000. What is the price of 15 chicken eggs?
5.	Two kg of shallots costs Rp5,000, find the price of 4 kg of shallots!

Regarding the ability to solve the problem of mathematics students before and after being given treatment in the form of selective problem solving learning. The test was given to students through a math problem solving instrument. To measure students' ability, researchers used scoring based on Polya's solve the problem steps in table 1.1. Furthermore, to interpret the problem solving ability, researchers converted the total student score to the value interval 0-100.

Table 1. Problem-solving skill scoring rules

Aspects	Reaction to problems	Score

Understanding the problem	– Does not understand the problem/no answer	0
	– Not observing the problem conditions/interpretation of the problem is not correct	1
	– Not wrong answer	2
Planning the solution	– No solution strategy plan	0
	– Strategy is not relevant	1
	– Using one particular strategy but cannot proceed/missteps	2
	– Using one particular strategy but leads to the wrong answer	3
	– Using several correct strategies that lead to the correct answer	4
Implement settlement	– No solution at all	0
	– There is a solution, but the procedure is not clear	1
	– Using one specific procedure that leads to the correct answer	2
	– Using one particular procedure that is correct but incorrect in the calculation	3
	– Using a specific correct procedure and the correct result	4
Rechecking the answer	– Not checking of answers	0
	– Checking only on the answer (calculation)	1
	– Checking only on the process	3
	– Checking both the process and the answer	4

Adopted [23]

From table 2 with a value interval of 0-100, the researcher can classify the level of problem solving ability based on the score obtained by students in solving the problem in table 3.

Table 2. Problem-solving skill level

Score Intervals	Skill Levels
$69 < L \leq 100$	Able
$40 < L \leq 69$	Quite capable
$0 \leq L \leq 40$	Not capable

Description:
L = Problem-solving skill level
Research procedure

This research procedure follows the steps of data collection by giving tests. The first step is that the researcher provides an explanation of the test word problems. The second step is giving the test to all students then answering the word problems test questions that have been given.

Data analysis

Before analyzing the hypothesis test data to determine whether or not there is an effect after being given treatment in the form of selective problem solving learning on problem solving skills, researchers will conduct a pre-requisite test, namely the data normality test to determine whether the population where the problem solving ability data is taken is normally distributed. Hypothesis testing used by researchers using the t-test formula. Selective problem solving learning is said to have an effect on problem solving ability if $t_{count} > t_{table}$ at a significant level of 5%, otherwise if $t_{count} < t_{table}$ at a significant level of 5% then selective problem solving learning is said to have no effect on solving ability. To determine the level of ability of selective problem solving learning on problem solving ability. Convert the price of t to the category of influence level.

III. RESULT AND DISCUSSION

Result

Based on the results of student work obtained from 25 students, 4 students scored 24, 3 students scored 40, 1 student scored 52, 2 students scored 64, 13 students scored 68 and 2 students scored 72.

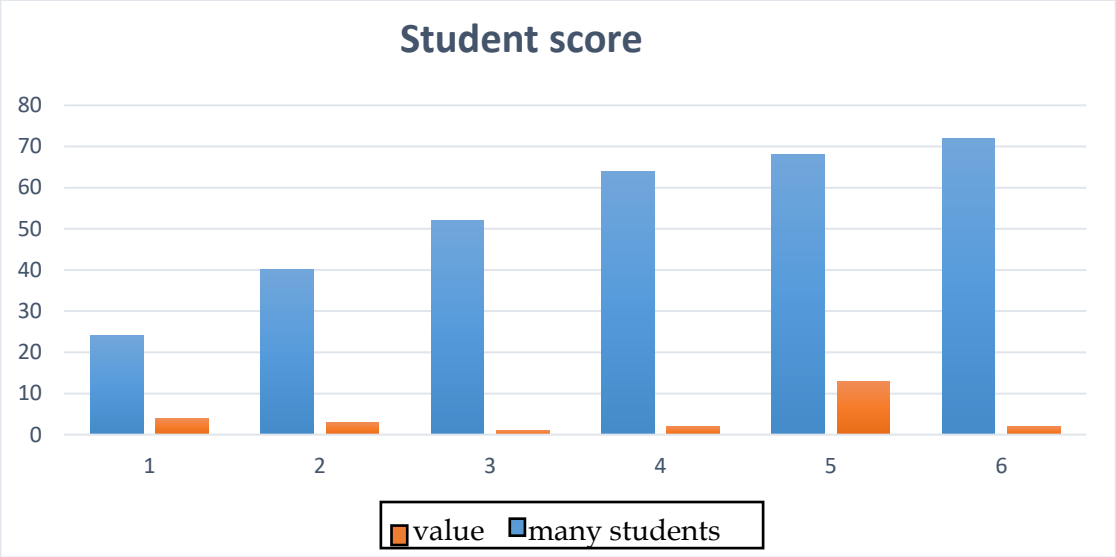

Figure 2. Student score result

The results of data analysis to determine whether or not there is an effect of selective problem solving learning can be seen in Table 4.

Table 4. Selective problem solving learning on the skill to solve word problems

Description	**Postest**	**t_{count}**	**t_{table}**
Totally score	1620	4.102	2,0930
Average score	68,9		
Level	Able		

In Table 4, the average posttest score of students is 68.9, meaning that students' average problem-solving skill is at a capable level before being given treatment in the form of selective problem solving learning. This can interpret that there is an increase in students' abilities after being given treatment in the form of selective problem solving learning.

The results of the calculation of the t-test formula obtained t count of 4.102, while the ttable value at a significant level of 5% is 2.0930. t_{table} at a significant level of 5% is 2.0930, it can be concluded that $t_{count} > t_{table}$ which means selective problem solving learning has an effect on student abilities.

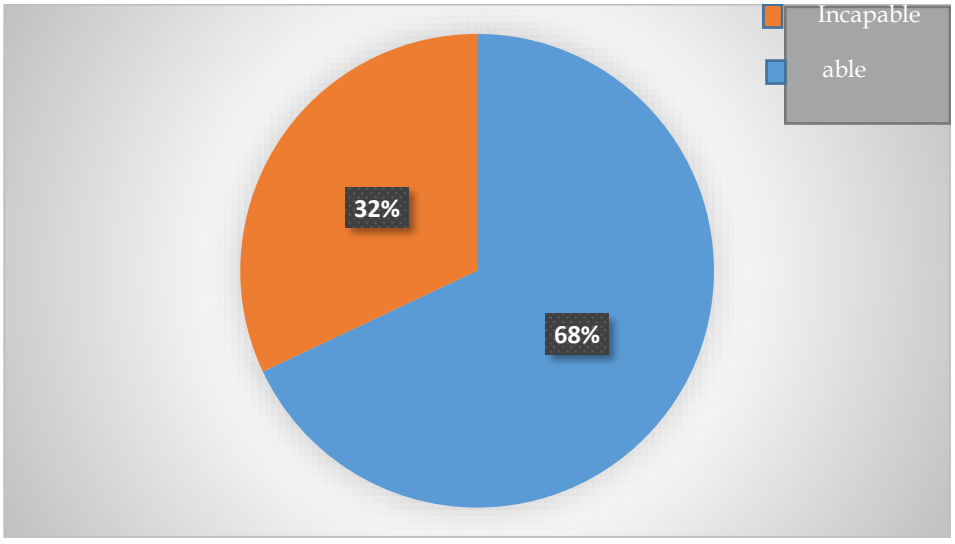

Figure 3. Student work

According to research that has been conducted from 25 students, 68% of students were able to solve posttest questions and 32% of students were unable to solve selective problem solving posttest questions. Students who are able to solve problems by understanding word problems that have been given by researchers and can answer according to the instructions that have been given. Students who are unable to have difficulty in understanding the word problems given, so that students cannot solve the instructions given by the researcher.

Table 5. Recapitulate Problem-solving skill

		P1	P2	P3	P4	P4	Total
P1	Pearson Correlation	1	.042	-.502*	-.179	-.255	-.060
	Sig. (2-tailed)		.843	.011	.391	.218	.775
	N	25	25	25	25	25	25
P2	Pearson Correlation	.042	1	.303	.179	.510**	.625**
	Sig. (2-tailed)	.843		.141	.391	.009	.001
	N	25	25	25	25	25	25
P3	Pearson Correlation	-.502*	.303	1	.289	.390	.642**
	Sig. (2-tailed)	.011	.141		.161	.054	.001
	N	25	25	25	25	25	25
P4	Pearson Correlation	-.179	.179	.289	1	.000	.724**
	Sig. (2-tailed)	.391	.391	.161		1.000	.000
	N	25	25	25	25	25	25
P5	Pearson Correlation	-.255	.510**	.390	.000	1	.461*
	Sig. (2-tailed)	.218	.009	.054	1.000		.020
	N	25	25	25	25	25	25
Total	Pearson Correlation	-.060	.625**	.642**	.724**	.461*	1
	Sig. (2-tailed)	.775	.001	.001	.000	.020	
	N	25	25	25	25	25	25

*. Correlation is significant at the 0.05 level (2-tailed). P1-P5 = Problem 1 – Problem 5

**. Correlation is significant at the 0.01 level (2-tailed).

The total column indicates the validity of each item. Based on the r table, the minimum Pearson Correlation value is 724 because it uses 25 respondents (N) with a limit of 0.05. It can be seen that all Pearson correlation values for each item are above 724. This is indicated by the ' or " sign in the Total column in the output table. So that these 5 post-test items are valid, these results show the validity of the data results.

Discussion

Learning is done with a selective problem solving model can be seen from the learning objectives of mathematics in elementary school. In connection with students' selective problem solving smathematics ability, the role of the teacher is very important to form students who have good problem solving skills, so as to obtain satisfactory learning results and the learning objectives set can be achieved. Teachers as facilitators need to design a learning process that can develop skills in selective problem solving. The purpose of the selective problem solving learning model is to develop creative thinking and problem solving skills through the use of analogical, deep, and selective thinking to enrich individual knowledge so that it can be transferred to different problem situations. The selective problem solving learning model requires students to solve problems by linking the knowledge they already have so that it makes students' memories strong and learning transfer is easily achieved, so that the process of linking new information with relevant and appropriate concepts makes students strong to learn easily [29].

The ability test on selective problem solving in mathematics was conducted on Wednesday, May 17, 2023 by using the ability test questions in selective problem solving to class V students of SDN 188 Gresik as many as 25 students. Giving a math problem solving ability test to determine the completeness of student mathematics learning taught with a selective problem solving learning model and also used as a consideration in choosing research subjects. Mathematical problem solving ability can develop if students have a good understanding of concepts, are able to orient the knowledge gained previously with new information so as to develop mathematical problem solving ability.

Students can understand the problem well which is indicated by being able to solve problems on the selective problem solving ability test questions with the guidance that has been given and being able to know the problem correctly. At the selective problem solving stage, students can solve the problem solving ability test questions. This is influenced by students' understanding of the problems given and being able to solve problems according to the complete and correct formula.

VII. CONCLUSION

Based on data analysis and discussion, it can be concluded as learning using selective problem solving model, to improve the ability of grade V students of SDN 188 Gresik and help students to solve their mathematics. Meanwhile, selective problem solving learning has a great level of influence on the problem-solving skills of elementary school students. Selective problem solving learning model can achieve learning completeness, the ability to solve students' math word problems obtained from learning outcomes can carry out word problems, but not yet able to see as a whole, selective problem solving ability in students is able to understand the problem.

Selective problem solving learning model is practical in improving students' concept mastery. This is evidenced by the implementation of the selective problem solving learning model has very good criteria and the attractiveness of the selective problem solving learning model has a positive response from students. The application of the selective problem solving learning model is effective in improving mastery of the material because this is evidenced by the teacher's ability to manage learning, relevant student activities during learning which have very good criteria. The application of selective problem solving learning method is good because students can be confident in solving test questions and selective problem solving learning is more active to improve students' abilities. The following are the goals of having problem solving skills including: Training individuals to be able to face problems properly, training individuals to be able to find what are the best steps that can be taken to be a solution to the problem at hand, training individuals to be able to act on new situations appropriately and adaptively, training individuals to be more courageous in making decisions that are considered the most appropriate and training individuals to be more precise in researching and analyzing a problem by looking at all the possibilities and perspectives that exist.

Suggestions that can be contributed related to the results of this study for further research are, it is necessary to cultivate teaching to develop elementary school selective problem solving skills, teachers need to pay attention to the difficulties faced by students in elective problem solving in mathematics so that they can remind students not to make the same mistakes when solving problems, students need to get guidance from teachers regarding their accuracy in solving problems, and students need to get attention or guidance so that students continue to try to improve their selective problem solving skills in mathematics by giving feedback and providing exercises on various types of selective problem solving problems regularly.

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The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.