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The Analysis of Problem-Solving Ability in Model-Eliciting Activities Problem Solving Skill (MEAs-PSS) Learning Model

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Abstract: ***The COVID-19 pandemic has constrained all prior habits, not only the way we communicate but also the way we travel, work and study. Therefore, building a learning model that can develop problem-solving skills in learning in the new normal era is essential. The type of research was research & development and experimental research. Development research is developing a mathematical learning model to develop a problem-solving program called Model-Eliciting Activities Problem Solving Skill (MEAs-PSS). Furthermore, experimental research was carried out to investigate the ability to solve mathematical problems with a pre-experimental research setting of one pretest-posttest group. The subject of the study was a class VIII student of SMPN 6 Makassar. The experimental units provided to the research subjects include (1) providing problem-solving ability tests to students before being given the MEAs-PSS Learning Model treatment and (2) providing problem-solving ability tests to students after being given the MEAs-PSS Learning Model treatment. The results of descriptive statistical analysis of problem-solving skills for all indicators Identify the problem (A), Devise a Plan (B), Carry Out the Plan (C), and Looking Back (D) observed an increase in the average value from pretest to post-test. The results of inferential statistical analysis obtained problem-solving skills for all indicators Understand the Problem, Devise a Plan, Carry Out the Plan, and Looking Back statistically significantly there is a difference between the pretest result and the post-test result. When paying attention to the average score for all indicators, a significant improvement was achieved from pretest to post-test, stimulated by learning the MEAs-PSS. These results show that using the MEAs-PSS could effectively improve problem-solving skills for all indicators.***

Keywords: MEAs-PSS, Problem Solving Skill, and Learning Model

1. Introduction

Since 2000th, Indonesia has participated in the PISA test, but the results obtained are still far from satisfactory. Based on the assessment of PISA in 2012, the skill of Indonesian students aged 15 years in the field of mathematics, science, and reading is still deficient if it is compared to students from other countries. In 2014, Indonesia ranked 64 out of 65 countries participating in the PISA test [1]. Furthermore, in 2015 Indonesia was ranked 69th out of 76 countries [2]. Despite an increase from PISA 2012 results to PISA 2015, the results obtained are still relatively low compared to the average score of PISA results. Based on the Ministry of Education and Culture data, the average score of students' skills in mathematics increased from 375 in 2012 to 386 in 2015th. Significant improvements occurred in students' skills in the field of science, from an average score of 382 in 2012, increasing to 403 in 2015. However, the skill of reading did not experience significant improvement, from an average score of 396 in 2012 to 397 in 2015 [3]. The results show that the problem-solving ability of 15-year-old students is still low.

The teaching and learning process in schools still uses an institution or teacher-centred learning pattern, where a teacher teach students classically using teaching materials outlined in the lesson plans or translated by the teacher personally from the existing syllabus. Learning in class are held at a predetermined time as stated in the learning schedule. In contrast, the instructional method or how to present learning content to students is generally still expository, face-to-face or lecture. The teaching and learning process often does not pay attention to students' differences, such as learning methods, intelligence, motivation, interests and difficulties they may face. In short, the learning pattern implemented in this school is centred on the institution or teacher, not the students. The COVID-19 pandemic has undeniably affected many things in our lives. It is not only about how we interact but also how we move, work and learn. So that requires creating a learning model in the conditions of the pandemic era, which called the new normal learning era. Several research studies in the field of education are the current trend, namely how to find the best way to deploy a learning system during a pandemic. The point is to find the ideal education system in the New Normal era, which will become the learning trend of the modern century. The problem studied is that students' problem-solving ability is still low, due the implementation of mathematics learning using conventional learning methods, which are repetitive, unattractive, and increasingly distance students' interest in learning mathematics. Under these conditions, renewal, innovation or a movement needs to change the mindset towards achieving educational goals by developing learning models. Mathematics learning should be more varied in models, methods and strategies to optimize students' potential. The teacher's efforts in regulating and empowering various learning variables are essential to students' success in achieving the planned goals. Therefore, selecting methods, strategies and approaches in designing is very important.

One of the things that are also an obstacle for students in learning mathematics is the approach and way of organizing learning materials in schools due to the teacher's point of view. In general, errors in the learning process that cause difficulties for students in one subject in learning mathematics are caused by several things, namely: 1) the process of learning mathematics is still abstract without linking math problems with everyday life, 2) students' interest in learning mathematics is still weak because of their ignorance of the goals and benefits of studying mathematics, 3) students are only result-oriented without paying attention to the process, 4) teachers are still dominant in the learning process. The results of observations by researchers illustrated that learning still needs to provide strategies and increase student problem-solving abilities. Apart from this, there are still other essential things that must be possessed by students, such as a good attitude, morals, discipline, and a spirit of the character. The not-yet-optimal learning process in schools is thought to be caused by the need for variations in the application of models or learning approaches teachers use in learning. Therefore, it is time for renewal, innovation or a movement to change the mindset toward achieving educational goals. Mathematics learning should be more varied in models, methods and strategies to optimize students' potential.

The teacher's efforts in regulating and empowering various learning variables are essential to students' success in achieving the planned goals. Therefore, the selection of methods, strategies and approaches in designing learning models to achieve an active and meaningful learning climate is a demand that teachers must meet. In the current development of education, especially the learning model, several learning models have developed, such as the Eliciting Activities Model (MEAs). The concept of Model-Eliciting Activities (MEAs) [4], [5], [6], [7], [8], [9], [10], [11], [12]. states MEAs learning through the stages of thinking processes that are related to the real world and can be used to improve students' problem-solving abilities. Model Eliciting Activities (MEAs) are learning to understand, explain and communicate the concepts contained in a problem through the stages of the mathematical modeling process [11]. In line with that explained that MEAs learning was based on students' real-life situations, working in small groups, and presenting a mathematical model as a solution [12].

In English, eliciting comes from the word elicit, which means to bring in, get or obtain [4]. so it can be said that MEAs is an approach that supports student activities in bringing, getting or obtaining solutions to problems given through students' thinking processes to create a model. Math as the solution. MEAs learning have six design principles [5] namely: (1) the personal meaningfulness principle, (2) the model construction principle, (3) the self-evaluation principle, (4) the model documentation principle, (5) the simple prototype principle, and (6) the model generalization principle. Furthermore, [11]. states the primary stages in the mathematical modelling process in MEAs, namely: (1) Identifying and simplifying (simplification) real-world problem situations, (2) Building mathematical models, (3) Transforming and solving models, (4) Interpreting models. Problem solving abilities [13], [14], [15], [16], [17], [18], [19], [20], [21]. state that the ability of students to carry out the stages of the process steps for solving or solving problems. A mathematical problem is a situation with a clear goal [18]. However, it is faced with obstacles due to the lack of a known algorithm to decipher it to obtain a solution. describes mathematical problems in two types: problems to find and problems to prove [13].

The search problem is a problem that aims to find, determine, or get the value of a particular object that is not known in the problem and gives the appropriate conditions. At the same time, the problem of proving is a problem with a procedure to determine whether a statement is true or not. defines, problem-solving is an attempt to find a way out of a difficulty [13]. The results of his research revealed that the problem-solving process is one of the crucial elements in combining real-life problems [19]. This study uses a problem-solving stage [13]. which includes: (a) understanding the problem, (b) devising a plan, (c) carrying out the plan, and (d) looking back. As a result, students are more skilled in solving mathematical problems, namely in carrying out procedures in solving problems quickly and carefully [21]. In addition, Polya state that the problem-solving stage is also widely used in mathematics curricula worldwide and precise problem-solving stage [18]. The importance of problem-solving skills for a prospective mathematics teacher and other abilities, namely reasoning and proof, communication, connections, and mathematical representation, is evident from the determination of standards for these abilities in [22]. A prospective mathematics teacher must know, understand, and be able to apply the process of solving mathematical problems. Moreover, it is not enough for a prospective mathematics teacher to have problem-solving skills because guiding students to solve mathematical problems requires more adequate skills. Therefore, it is important to renew and innovate the development of learning models in schools. Therefore, the authors develop a mathematical learning model to develop problem-solving skills in learning the new normal era.

2. Methods

The research type was Research & Development and experimental research. Development research is developing a mathematical learning model to develop problem-solving skills called Model-Eliciting Activities Problem Solving Skill (MEAs-PSS). Furthermore, experimental research was carried out to analyze mathematical problem-solving abilities with pre-experimental research settings in one group Pretest-Posttest. The research was conducted at the State Junior High School 6 Makassar. The research subjects were students of class VIII SMPN 6 Makassar. The experimental unit given to the research subjects was (1) giving students problem-solving ability tests before being given the MEAs-PSS Learning Model treatment and (2) giving problem-solving ability tests to students after being given the MEAs-PSS Learning Model treatment. Instruments used to collect data were observations, interviews, and scales. Scales were used to measure the value of problem-solving skills for all indicators, i. e. understand the Problem, Devise a Plan, Carry Out the Plan, dan Looking Back before and after treatment. Observations were conducted to record the students' and teachers' responses to the learning model that had been developed.

The effectiveness of the MEAs-PSS Learning Model through pre-experimental research design performing the following steps: (1) conducting pretest, having learning processes in the experimental groups; (2) conducting posttest; and (3) analyzing the results of the experiments. The independent variable of the research was the MEAs-PSS learning model. In contrast, the dependent variables were the early indicator of problem-solving ability: Understand the Problem, Devise a Plan, Carry Out the Plan, and Looking Back. The pretest and posttest data were analyzed using descriptive and inferential statistics on the IBM SPSS statistic application. Descriptive statistics used to obtain the data's mean, mode, median, maximum value, and minimum value. Meanwhile, the inferential statistics were used in the t-test paired sample test to see the influence of the learning Model MEAs-PSS. However, before the t-test was administered, the normality test was conducted on the data.

3. Results

A. *Development of Model-Eliciting Activities Problem Solving Skill* (MEAs-PSS)

Description of Model MEAs – PSS is described as follows:

1) Syntax Learning Model

Table 1: Syntax of Model MEAs-PSS

Phase	Description
Phase 1	Delivering Learning Objectives and Apperception
Phase 2	Learning Representation with MEAs
Phase 3	Guidance in the Development of Group Work Results
Phase 4	Review and Discussion of Solutions for Problem Solving Ability
Phase 5	Plenary & Presentation for Analysis and Evaluation of Learning Process and Outcomes

2) Social System

The social system includes three primary meanings, namely:

a) Description of the various roles of teachers and students.
b) Description of teachers' and students' hierarchical relationship/authority.
c) Description of various rules to encourage students.

3) Principle of Reaction Management

The Principle of Reaction is the teacher's reaction to student activities. The Model is based on learning theories and learning theories that emphasize learning centred on student activities so that teachers function as facilitators, consultants, and mediators in learning.

4) Support System

Teachers must make learning plans accompanied by other support systems, such as lesson plans, teaching materials, learning media, LKPD, assessment instruments and other supporting documents.

5) Instructional Impact andAccompaniment

The instructional impact to be achieved is to increase student learning outcomes. The accompaniment impact is that students have good mathematical problem-solving skills.

B. Analysis of Problem-Solving Ability in MEAs-PSS Learning Model

The results of the descriptive statistical analysis on the pretest of understanding the problem showed that:

Table 2: The Results of the Statistic Descriptive on the Pretest and Post test of Indicator PSS

Statistics	A1	A2	B1	B2	C1	C2	D1	D2
Mean	64, 62	80, 31	60, 15	79, 38	58, 92	77, 54	72, 92	86, 31
Median	64	80	60	80	60	76	72	86
Mode	64	84	52	80	60	76	76	84
Standard Deviation	10, 77	6, 97	6, 35	7, 73	4, 46	5, 32	6, 02	4, 69
Variance	116, 09	48, 54	40, 30	59, 77	19, 91	28, 26	36, 23	21, 98
Skewness	0, 44	0, 41	0, 13	- 0, 05	- 0, 35	0, 10	- 0, 20	- 0, 04
Kurtosis	0, 65	- 0, 23	- 1, 27	- 0, 67	0, 38	- 0, 66	- 0, 12	- 0, 19
Range	48	28	20	28	20	20	24	20
Minimum	44	68	52	64	48	68	60	76
Maximum	92	96	72	92	68	88	84	96

Source: SPSS Data Analysis Results
Information:
A1: Understand the problem pretest A2: Understand the problem posttest
B1: Devise a plan pretest B2: Devise a plan posttest
C1: Carry out the plan pretest C2: Carry out the plan posttest
D1: Looking back pretest D2: Looking back posttest

The results of the descriptive statistical analysis on the pretest of understanding the problem showed that: (1) the mean scorewas64.62, (2) the median score was 64, (3) the mode score was 64, (4) the deviation standard score was 10.77, (5) the variance score was 116.09, (6) the skewness score was 0.44, (7) the kurtosis score was 0.65, (8) the range score was 48, (9) the minimum score was 44, and (10) the maximum score was 92. The results of the descriptive statistical analysis on the posttest of understanding the problem showed that: (1) the mean score was 80.31, (2) the median score was 80, (3) the mode score was 84, (4) the deviation standard score was 6.97, (5) the variance score was 48.54, (6) the skewness score was 0.41, (7) the kurtosis score was-0.23, (8) the range score was 28, (9) the minimum score was 68, and (10) the maximum score was 96.

The results of the descriptive statistical analysis on the pretest of devising a plan showed that: (1) the mean scorewas60.15, (2) the median score was 60, (3) the mode score was 52, (4) the deviation standard score was 6.35, (5) the variance score was 40.30, (6) the skewness score was 0.13, (7) the kurtosis score was-1.27, (8) the range score was 20, (9) the minimum score was 52, and (10) the maximum score was 72. The results of the descriptive statistical analysis on the posttest of devising a plan showed that: (1) the mean score was79.38, (2) the median score was 80, (3) the mode score was 80, (4) the deviation standard score was 7.73, (5) the variance score was 59.77, (6) the skewness score was-0.05, (7) the kurtosis score was-0.67, (8) the range score was 28, (9) the minimum score was 64, and (10) the maximum score was 92.

The results of the descriptive statistical analysis on the pretest of carrying out the plan showed that: (1) the mean score was 58.92, (2) the median score was 60, (3) the mode score was 60, (4) the deviation standard score was 4.46, (5) the variance score was 19.91, (6) the skewness score was-0.35, (7) the kurtosis score was 0.38, (8) the range score was 20, (9) the minimum score was 48, and (10) the maximum score was 68. The results of the descriptive statistical analysis on the posttest of carrying out the plan showed that: (1) the mean scorewas77.54, (2) the median score was 76, (3) the mode score was 76, (4) the deviation standard score was 5.32, (5) the variance score was 28.26, (6) the skewness score was 0.10, (7) the kurtosis score was-0.66, (8) the range score was 20, (9) the minimum score was 68, and (10) the maximum score was 88.

The results of the descriptive statistical analysis on the pretest of looking back showed that: (1) the mean scorewas72.92, (2) the median score was 72, (3) the mode score was 76, (4) the deviation standard score was 6.02, (5) the variance score was 36.23, (6) the skewness score was-0.20, (7) the kurtosis score was-0.12, (8) the range score was 24, (9) the minimum score was 60, and (10) the maximum score was 84. The results of the descriptive statistical analysis on the posttest looking back showed that: (1) the mean score was 86.31, (2) the median score was 86, (3) the mode score was 84, (4) the deviation standard score was 4.69, (5) the variance score was 21.98, (6) the skewness score was-0.04, (7) the kurtosis score was-0.19, (8) the range score was 20, (9) the minimum score was76, and (10) the maximum score was 96.

The histogram of the average value of the problem-solving skill pretest and posttest indicators is as follows:

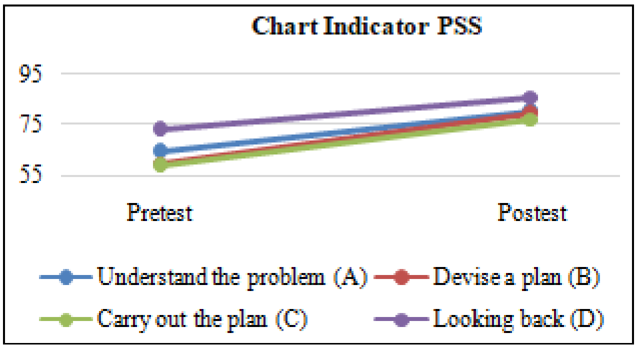

Figure 1: PSS Indicator Histogram Chart

The results of the analysis obtained: indicator understand the problem average pretest 64.62 increased to posttest 80.31; division indicator a plan average pretest 60.15 increased to posttest 79.38; the indicator carry out the plan average pretest 58.92 increased to posttest 77.54, and indicator looking back average pretest 72.92 increased to posttest 86.31. These results indicate an increase in the average for all indicators of problem-solving skills so that the MEAs-PSS learning model can improve problem-solving skills.

If the problem-solving skill indicator values are made in the form of categorization, then the categories are presented in the following table:

Indicator A: Understand the Problem

Table 2: The Results of the Categorization of the Pretest and Posttest of Understand the Problem

No.	Interval	Category	Pretest		Posttest	
			Frequency	Percent	Frequency	Percent
1	0-20	Very Low	0	0%	0	0%
2	21-40	Low	0	0%	0	0%
3	41-60	Moderate	10	38%	0	0%
4	61-80	High	14	54%	15	58%
5	81-100	Very High	2	8%	11	42%
Total			26	100%	26	100%

Furthermore, the category table above is made in the form of a histogram as follows:

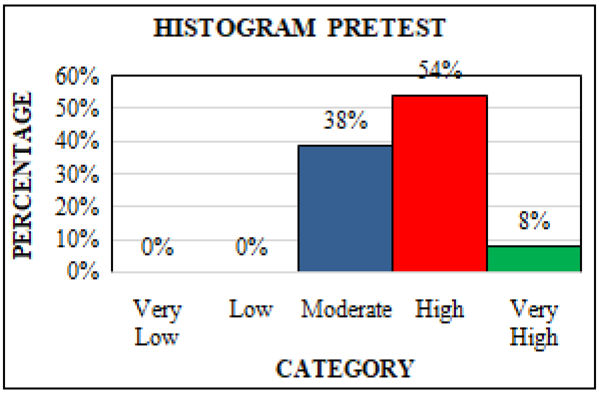

Figure 2: Histogram Pretest Understand the Problem

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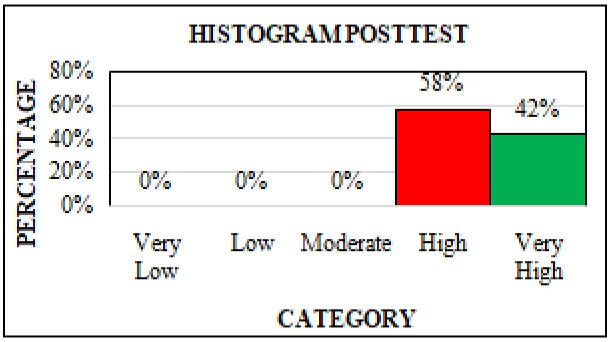

Figure 3: Histogram Posttest Understand the Problem

The analysis showed that the deficient category did not exist, the low category did not exist, the medium category 38% pretest became 0% posttest, and the high category 54% pretest became 58% posttest. The very high category 8% pretest became 42% posttest. These results indicate that the MEAs-PSS Model can improve problem-solving skills for indicators of understanding the problem.

Indicator B: Devise a Plan

Table 3: The Results of the Categorization on the Pretest and Posttest of Devise a Plan

No.	Interval	Category	Pretest		Posttest	
			Frequency	Percent	Frequency	Percent
1	0-20	Very Low	0	0%	0	0%
2	21-40	Low	0	0%	0	0%
3	41-60	Moderate	15	58%	0	0%
4	61-80	High	11	42%	16	62%
5	81-100	Very High	0	0%	10	38%
Total			26	100%	26	100%

Furthermore, the above category table is made in the form of a histogram as follows:

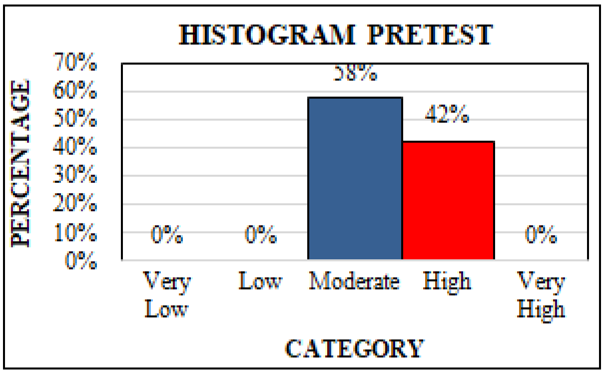

Figure 4: Histogram Pretest Devise a Plan

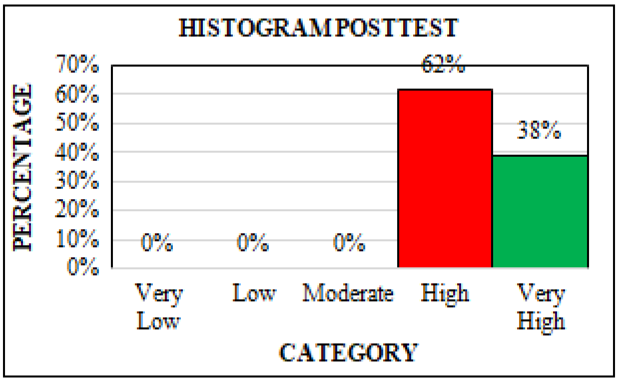

Figure 5: Histogram Posttest Devise a Plan

The analysis showed that the deficient category did not exist, the low category did not exist, the medium category 58% pretest became 0% posttest, and the high category 42% pretest became 62% posttest. The very high category 0% pretest became 38% posttest. These results indicate that the MEAs-PSS Model can improve problem-solving skills for developing plan indicators.

Indicator C: Carry Out the Plan

Table 4: The Results of the Categorization on the Pretest and Posttest of Carry Out the Plan

No.	Interval	Category	Pretest		Posttest	
			Frequency	Percent	Frequency	Percent
1	0-20	Very Low	0	0%	0	0%
2	21-40	Low	0	0%	0	0%
3	41-60	Moderate	20	77%	0	0%
4	61-80	High	6	23%	19	73%
5	81-100	Very High	0	0%	7	27%
Total			26	100%	26	100%

Furthermore, the above category table is made in the form of a histogram as follows:

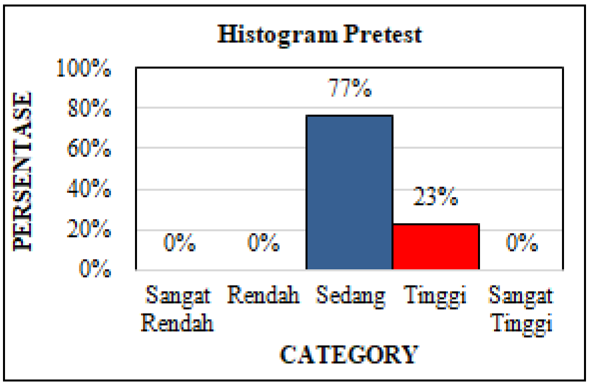

Figure 6: Histogram Pretest Carry Out the Plan

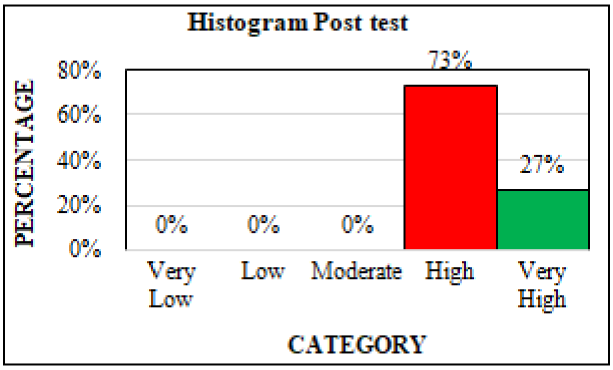

Figure 7: Histogram Post test Carry Out the Plan

The analysis showed that the deficient category did not exist, the low category did not exist, the medium category 77% pretest became 0% posttest, and the high category 23% pretest became 73% posttest. Finally, the exceptionally high category 0% pretest became 27% posttest. These results indicate that the MEAs-PSS Model can improve problem-solving skills for indicators of carrying out the plan.

Indicator D: Looking Back

Table 5: The Results of the Categorization on the Pretest and Post test of Looking Back

No.	Interval	Category	Pretest		Posttest	
			Frequency	Percent	Frequency	Percent
1	0-20	Very Low	0	0%	0	0%
2	21-40	Low	0	0%	0	0%
3	41-60	Moderate	1	4%	0	0%
4	61-80	High	23	88%	4	15%
5	81-100	Very High	2	8%	22	85%
Total			26	100%	26	100%

Furthermore, the above category table is made in the form of a histogram as follows:

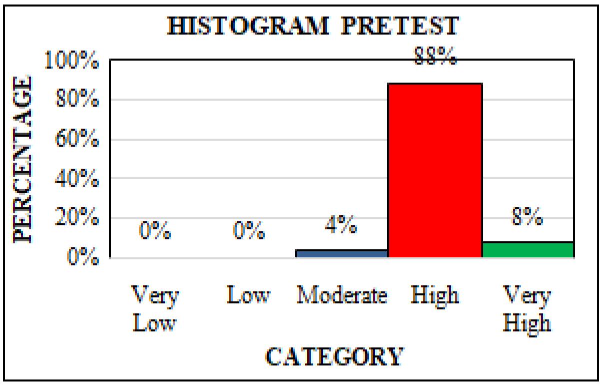

Figure 8: Histogram Pretest Looking Back

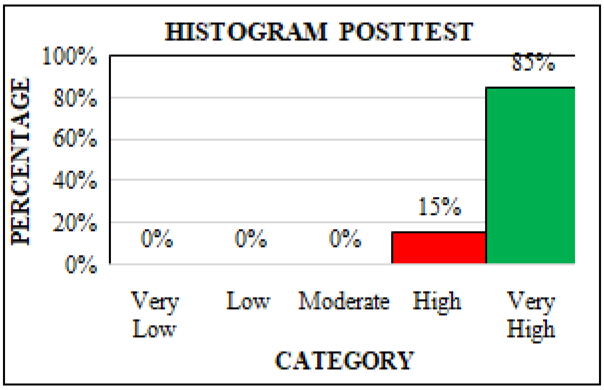

Figure 9: Histogram Posttest Looking Back

The analysis showed that the deficient category did not exist, the low category did not exist, the medium category 4% pretest became 0% posttest, and the high category 88% pretest became 15% posttest. Finally, the exceptionally high category 8% pretest became 85% posttest. These results indicate that the MEAs-PSS Model can improve problem-solving skills for indicators looking back.

Results of the Inferential Statistic Analysis: t-Test

Result of the data analysis t-Test of value per indicator Problem-Solving Skill as follows:

Table 6: The Result of the Data Analysis t-Test of Problem-Solving Skill Score per indicator

	Paired Samples Test				
	Mean	Variance	t	df	Sig. (2-tailed)
Understand the Problem (A)					
PSS Posttest (A1)	80, 31	48, 54	7, 961	25	0, 000
PSS Pretest (A2)	64, 62	116, 09			
Devise a Plan (B)					
PSS Postest (B1)	79, 38	59, 77	11, 378	25	0, 000
PSS Pretest (B2)	60, 15	40, 30			
Carry Out the Plan (C)					
PSS Posttest (C1)	77, 54	28, 26	17, 516	25	0, 000
PSS Pretest (C2)	58, 92	19, 91			
Looking Back (D)					
PSS Posttest (D1)	86, 31	21, 98	11, 621	25	0, 000
PSS Pretest (D2)	72, 93	36, 23			

Source: SPSS Data Analysis Results

The results of the analysis of the t-test data for the Understand the Problem indicator obtained a t-count value of 7.961 with an opportunity value (significance) of 0.000, which is smaller than the 0.05 alpha value, which means that there is a statistically significant difference in the average value between the pretest and posttest. If you pay attention to the average value, it is obtained that the pretest is 64.62, which has an increase in the posttest of 80.31. It shows that the MEAs-PSS Model can improve problem-solving skills for the Understand the Problem indicator.

Furthermore, the results of the analysis of the t-test data for the Foreign Exchange a Plan indicator obtained a t-count value of 11.378 with an opportunity value of 0.000, which is smaller than the alpha value of 0.05, which means that there is a statistically significant difference in the average value between the pretest and posttest. If you pay attention to the average value, it is obtained that the pretest is 60.15, which has an increase in the posttest of 79.38. It shows that the MEAs-PSS Model can improve problem-solving skills for the Foreign Exchange a Plan indicator.

Furthermore, the results of the analysis of the t-test data for the Carry Out the Plan indicator obtained a t-count value of 17.516 with an opportunity value of 0.000, which is smaller than the alpha value of 0.05 which means that there is a statistically significant difference in the average value between the pretest and posttest. If you pay attention to the average value, it is obtained that the pretest is 58.92, which has an increase in the posttest of 77.54. It shows that the MEAs-PSS Model can improve problem-solving skills for the Carry Out the Plan indicator.

Furthermore, the results of the analysis of the t-test data for the Looking Back indicator obtained a t-count value of 11.621 with an opportunity value of 0.000, which is smaller than the alpha value of 0.05, which means that there is a statistically significant difference in the average value between the pretest and posttest. If you pay attention to the average value, it is obtained that the pretest is 72.93, which has an increase in the posttest of 86.31. It shows that the MEAs-PSS Model can improve problem-solving skills for the Looking Back indicator.

Based on the analysis of problem-solving skills per indicator and the description above, it can be said that the MEAs-PSS Model can effectively improve problem-solving skills.

4. Discussion

The results of descriptive statistical analysis of problem-solving skills for all indicators Understand the Problem, Devise a Plan, Carry Out the Plan, and Looking Back experienced an increase in the average value from pretest to posttest, as well as median and mode scores increased from pretest to posttest. In addition, it shows an increase in the mean, median, and mode scores from pretest to posttest in applying the MEAs-PSS Model learning. The results of categorizing problem-solving skills for all indicators Understand the Problem, Devise a Plan, Carry Out the Plan, and Looking Back experienced a better category change from pretest to posttest. It can be seen from the high and very high categories where the number of frequencies increases from pretest to posttest. The results of inferential statistical analysis showed that problem-solving skills for all indicators Understand the Problem, Devise a Plan, Carry Out the Plan, and Looking Back were statistically significant. In addition, there was a statistically significant difference between the pretest and posttest scores. When considering the average value for all indicators, a significant increase was obtained from pretest to posttest. This significant difference was caused by the application of the MEAs-PSS learning model. These results indicate that the effective MEAs-PSS Learning Modelcan improve problem-solving skills for all indicators Understand the Problem, Foreign Exchange a Plan, Carry Out the Plan and Looking Back.

The results of observations in implementing the MEAs-PSS Learning Model obtained an overview of changes in student attitudes, namely changes in character tendencies, good manners, and good discipline for students from each meeting. The results of this study are in line with research findings [23], [5], [24], [25], [26], [27], [28], [29], [30]. which also examine the relationship between Model-Eliciting Activities (MEA), problem solving skills, and learning outcomes. Found that the development of MEA is related to the problem-solving process [23]. Concluded that MEA has the potential to develop and identify problem-solving abilities. [5]. This is in line with the findings of previous studies, which stated that Model-Eliciting Activities (MEA) had an impact on increasing problem-solving abilities and learning outcomes [24], [25], [26], [27], [28], [29], [30].

5. Conclusion

This study concludes that the MEAs-PSS Model can effectively improve problem-solving skills for all indicators. Understand the Problem, Devise a Plan, Carry Out the Plan, and Looking Back. In addition, MEAs-PSS Learning Model can also shape character values such as good attitudes, character, manners, and discipline for students.

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