

APPLICATION OF THE PROBLEM POSING MODEL TO IMPROVE THE ABILITY OF FIFTH GRADE STUDENTS TO SOLVE MATHEMATICAL STORY PROBLEMS AT THE UPT SPF SD INPRES KARUNRUNG, MAKASSAR CITY

Nurul Azizah¹, Rahmawati Patta², Andi Dewi Riang Tati³

Universitas Negeri Makassar, Makassar, Indonesia

azizahlyoko41@gmail.com

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Abstract

This study originated from the lack of involvement of fifth-grade students in learning and their low ability to solve mathematical story problems, which did not meet the Learning Objective Criteria (KKTP). To address this issue, this study aims to examine the improvement of mathematics learning through the application of the Problem Posing model. Using the Classroom Action Research (CAR) method with a qualitative approach, this study was conducted in two cycles. Each cycle included planning, implementation, observation, and reflection. The research subjects were teachers and 25 fifth-grade students at UPT SPF SD Inpres Karunrung (7 male students and 18 female students). In Cycle I, observations showed that the learning process (both from the teacher and student perspectives) and learning outcomes were at a satisfactory level. After improvements were implemented, Cycle II showed a significant improvement, with all aspects of the learning process from the teacher's side, the learning process from the students' side, and learning outcomes improving to a good level. The conclusion of this study is that the Problem Posing model is a successful approach in improving the ability of fifth-grade students at UPT SPF SD Inpres Karunrung in Makassar City to solve math story problems.

Keywords: Problem Posing Model, Ability to solve story problems

INTRODUCTION

Mathematics is a field of study that can improve thinking skills and contribute to solving everyday problems, as well as supporting the development of science (Susanto, 2021). According to Bahar (Khasanah, 2025), mathematics is an abstract science that is interconnected. In education, mathematics plays a crucial role because it trains logical, critical, and analytical thinking skills. These competencies are very important for solving problems in various aspects of life. Mathematics teaching is in line with national education policy In Law of the Republic of Indonesia No. 3 of

2014 Chapter III paragraph 1, it is stated that mathematics must be taught starting from elementary school in order to equip students with essential skills such as logical, analytical, systematic, and critical thinking, accompanied by the development of innovative and creative traits, as well as the ability to work together. The goal is to equip students with logical, systematic, critical, and creative thinking skills, as well as to foster the ability to work together. Mathematics learning in elementary schools is directed at the achievement of basic competency standards by students. According to Dewi (2022), mathematics competency standards refer to a set of standardized abilities that must be realized by students as the final result of the

mathematics learning process. Hariyanto et al. (2021) explain that mathematical concepts are sequential structures in which existing concepts are logical continuations of previous concepts and form the basis for subsequent concepts. Therefore, initial understanding is crucial. According to Setiawan (2020), teaching mathematics requires creative teaching, creative learning, creative friends, and creative mathematics. Harefa (2020) states that a teacher must be able to design activities that stimulate imagination, create relevant learning experiences, and optimize the use of available resources. Hayati (2024) also defines mathematics as a systematic reasoning skill. This includes the use of procedures and facts as tools to formulate, apply, and interpret an event or phenomenon.

Unaenah (2020) argues that through mathematics learning, students are expected to develop competencies in using mathematics to solve problems. In addition, they must also be able to convey (communicate) ideas or thoughts using symbols, diagrams, tables, and other supporting media. According to Kamila and Abduh (2022), mathematics education in schools should produce students who are able to not only understand concepts and reason, but also solve problems and appreciate the usefulness of this knowledge in real life. In addition, students are also trained to communicate mathematical ideas with the help of symbols, tables, and the like. Based on Rahaju's view (in Unaenah, 2020), a flat shape can be defined as a shape that only has length and width (two dimensions). Its distinctive feature is the absence of height and thickness. According to Tunu (2022), the ability to solve mathematical word problems includes the ability to think about solving everyday problems through

mathematics. The solution process involves four main steps: understanding the problem, developing a plan, implementing the plan, and reevaluating the answer. In line with this view, Wahyudi & Ihsan (in Tunu, 2022) argue that word problems are a form of question that tests students' ability to read, reason, analyze, and find solutions. Therefore, students are required to master these various skills in order to solve mathematical word problems well.

Insani (2023) Mathematics learning in elementary school plays an important role in shaping students' skills, thinking logically, and developing students' abilities in solving story problems. Fatimatuzzahro (2025) defines mathematics learning as a process in which mathematical problems are solved by utilizing everyday situations or real life contexts to verify the correctness of the answers. Learning activities do not only involve receiving information from teachers, but also processing information as input to improve abilities. Teachers have been teaching mathematics using only the method of explaining on the blackboard and have not used varied teaching methods, so students are less able to understand the lessons well. In mathematics learning, students can certainly understand the material well through direct experience and can find their own solutions to problems using their knowledge and experience in everyday life. Srigar (2025) argues that the focus of mathematics learning should not only be on mastering concepts and solving problems. More than that, mathematics should function as a strategic tool to improve students' skills in solving various problems.

Field evidence shows that students' understanding of flat shapes is still relatively low. There are still students who do not understand how to solve problems involving flat shapes correctly. Based on the results of the 2015 Trends in International Mathematics and Science Study (TIMSS) survey conducted by the International Association for the Evaluation of Educational Achievement (IEA), Indonesian

students' abilities in mathematics and science are still a cause for concern. Indonesia ranks 45th out of 50 countries in mathematics and 45th out of 48 countries in science. These figures reflect that Indonesian students are still weak in solving mathematical problems that require effective reasoning, analysis, communication, and interpretation skills in various situations. These results are in line with the findings of Susanti & Syam (in Hayati, 2024).

Based on the initial observations conducted by researchers from January 16, 2025 to January 18, 2025 in class V of the UPT SPF SD Inpres Karunrung, Makassar City, it was revealed that students' ability to solve math story problems was still low. Learning is still teacher-centered, where in mathematics learning activities, students only listen to the teacher's explanations, take notes, and then continue by working on the problems in the book according to the teacher's instructions. This can be seen from the results of the score list given by the teacher in mathematics, where 10 students obtained scores above 70 and 15 students did not pass with scores below 70. This reality shows that students' abilities in mathematics are low because the average score obtained by students has not reached the Learning Objective Achievement Criteria (KKTP) set by the school, which is 70. This data was obtained from documentation and interviews with fifth-grade teachers at UPT SPF SD Inpres Karunrung, Makassar City.

The researcher's observations show that, from the students' perspective, their ability to solve math story problems is still unsatisfactory. This is supported by findings on the teachers' perspective, where: First, the learning models applied are not varied and interesting enough; Second, learning tends to be teacher-centered with few interactive or group activities;

and Third, there is a lack of encouragement from teachers for students to ask questions or express ideas. Meanwhile, from the students' perspective, among other things: First, students are less active in the learning process because they are less involved in groups; Second, students lack the ability to solve mathematical word problems; and Third, students are not given the opportunity to express their opinions and think critically. Previous studies have proven the effectiveness of the Problem Posing learning model. Mutingah's (2011) study, for example, found that this model improved the ability of students at MI Negeri Purwokerto to solve story problems. The study also noted an increase in learning participation, as seen in the enthusiasm of students when answering teachers' questions and when collaborating in groups. Similar findings were also found by Riana (2023), who concluded that the Problem Posing model had a positive effect on the mathematical problem-solving abilities of students at SMP Negeri 2 Waway Karya. In addition, Misrawati (2019) also found that the application of this model effectively improved the conceptual understanding of MTsN students. The results of these studies reinforce the argument that the Problem Posing model is an effective approach to improving various aspects of students' mathematical abilities.

There are differences between the three studies described above. Muntingah's study discusses improving the ability to solve mathematical story problems, Riana's study discusses the influence of mathematical problem-solving skills, and Misrawati's study discusses improving students' conceptual understanding. Muntingah's study focuses on high school students, while Riana and Misrawati's studies focus on junior high school students. Meanwhile, the three studies have similarities in that they all discuss the problem posing model. Although there have been many studies, none have specifically examined the application of the problem posing model in mathematics at the

elementary school level with fifth-grade students. The researchers decided to continue the study at the elementary school level using flat shape material and applying it using the problem posing model.

To overcome students' lack of ability in solving mathematical story problems, the Problem Posing model can be an appropriate solution. This model specifically activates students in problem solving, making it an effective alternative to improve the quality of learning. The success of this model can be seen from the high participation of students, where they do not only rely on material from the teacher, but also explore information independently to understand and solve problems.

This study aims to examine problem-solving skills using the problem posing model as an alternative solution to conventional learning methods that are ineffective. This study focuses on efforts to improve students' ability to understand, analyze, and solve math word problems. It is not merely a matter of measuring results, but also understanding the process behind the improvement. The direction of this research is to produce findings that not only have a strong theoretical basis but can also be implemented directly in the classroom to improve learning practices. Based on the problems described above, the researcher is interested in examining the effectiveness of applying the Problem Posing model in improving the ability of fifth-grade students at UPT SPF SD Inpres Karunrung, Makassar City, in solving mathematical story problems.

METHOD

The approach chosen in this study is a qualitative approach. This approach is known for its emphasis on in-depth observation. A number of experts have defined it, including Fadli (2021), who states that qualitative

research is a study conducted in a scientific setting with the aim of interpreting a phenomenon through various available methods. Similarly, Fatmawati et al. (2021) explain that this approach includes methods for exploring and understanding the meanings that arise from a group of individuals regarding a social or humanitarian issue.

The type of research used is Classroom Action Research (CAR). Sari et al. (2024) explain that CAR is research that emphasizes practical actions in the classroom, where teachers are actively involved in improving the quality of teaching and student learning outcomes. Similarly, Arikunto (cited by Yasmin, 2022) defines it as deliberate observation of various activities in the classroom.

In general, PTK is carried out in several structured cycle stages, including pre-action, planning, action, observation, and reflection. These cycle stages refer to the framework developed by Suharsimi Arikunto, Suhardjono, & Supardi (2017) (as found in Elma, 2021).

Pre-action – Cycle I (Planning – Implementation – Observation – Reflection) – Cycle II (Planning – Implementation – Observation – Reflection) – Successful.

Data collection in this study was conducted in two main ways: observation and testing. Observation sheets were used to record the learning process and the application of the Problem Posing model in the classroom, both from the perspective of the teacher and the students. Meanwhile, the essay-format cycle test aimed to evaluate students' ability to solve mathematical story problems.

The data analysis technique in this study included qualitative analysis. Qualitative data was obtained through data reduction obtained through direct observation of the learning process, including teacher and student activities and cycle tests. Data presentation was based on student learning outcomes analyzed from teacher and student activities and

cycle tests, and conclusions on the learning process were drawn by calculating the percentage of implementation aspects using a formula.

$$\text{Nilai} = \frac{\text{skor perolehan}}{\text{skor maksimal}} \times 100\%$$

This study determines success

based on process and outcome aspects. Success in the process aspect is demonstrated by the activities of teachers and students, which have mostly met the established assessment criteria. These indicators of success are recorded in detail in the observation sheet. To evaluate progress, the results of each cycle of learning activities will be compared with the previous cycle.

Table 1 Success Indicators

Success Rate	Category
76% - 100%	Good (B)
60% - 75%	Sufficient (C)
0% - 59%	Less (K)

Source: Djamarah and Zain (2014)

The success criteria for the ability to solve story problems is considered successful if, after participating in the learning process, 19 out of 25 students achieve the minimum success level, which is a score of 70 or above on the Learning Objective Achievement Criteria (KKTP) test.

May 24, 2025, for meeting IV.

a. Cycle I Planning

The Cycle I planning stage was carried out through a series of detailed steps. Substantively, these steps included:

- 1) **Determining Materials and Roles:** Teachers and researchers discussed the materials to be taught, namely the Area and Perimeter of Parallelograms and Triangles. They also divide roles, with the researcher acting as the implementer and the classroom teacher as the observer.
- 2) **Preparation of Tools:** Teaching modules are prepared in accordance with the learning objectives, Student Worksheets (LKPD) for group activities, and evaluation instruments in the form of 5 cycle test questions and observation sheets to monitor teacher and student activities.
- 3) **Media and Logistics Preparation:** In addition, the researchers prepared presentation media (PPT), laptops containing flat shape materials, and classroom equipment such as whiteboards, markers, and documentation tools (such as smartphones).

With this careful planning, it is hoped that the implementation of actions in cycle I can run optimally, while also providing an initial picture of the of applying the problem posing model in improving the ability of fifth-grade students to solve mathematical story problems.

RESULTS OF RESEARCH AND DISCUSSION

This classroom action research was conducted in two cycles. The data collected included teacher and student activities, as well as students' ability to solve math story problems, which was measured by learning completeness and problem comprehension indicators. This data was obtained through observation and tests, then analyzed to see the progress that occurred from Cycle I to Cycle II. Overall, the results of this study showed a significant increase in the implementation of learning and students' ability to solve mathematical story problems.

Cycle I was implemented on Wednesday, May 14, 2025, for meeting I and Saturday, May 17, 2025, for meeting II. Meanwhile, Cycle II was implemented on Wednesday, May 21, 2025, for meeting III and Saturday,

Table 2 Percentage of Success of Teacher Teaching Activities Cycle I

Cycle I	Indicator			Sum	Success Indicator(%)	Category
	B	C	K			
Meeting I	-	12		12	66,6%	Enough
Meeting II	3	10	-	13	72,2%	Enough

Source: Research Data

The percentage of teaching activities based on the researcher's observations applied the problem-posing model. In the first meeting, the five aspects implemented by the teacher were categorized as sufficient because each aspect only had two indicators implemented, resulting in a total of 12 indicators implemented. In this meeting, no aspect was categorized as insufficient. The percentage of success indicators in the first meeting was categorized as sufficient with a score of 66.6%.

In the second meeting, there was a slight increase because one aspect implemented by the teacher was categorized as good because three indicators had been implemented, resulting in three indicators. Furthermore, there were five aspects that were categorized as adequate because only two indicators were implemented in each aspect, resulting in eight indicators being implemented. In this meeting, there were no aspects that were categorized as poor. The success percentage in the second

meeting was categorized as adequate with a score of 72.2%. Based on this data, the overall percentage of teacher teaching activities for meetings I and II in cycle I was 70%. Therefore, it can be concluded that the results of the observation of teacher teaching activities in cycle I were still in the satisfactory category and had not yet reached the predetermined success indicators.

The observation sheet for student activities obtained a score of 289 out of 450 in meeting I, with an achievement percentage in the sufficient (C) category of 64%, which did not meet the success indicator. Meanwhile, in meeting II, the score obtained was 324 out of 450 and the percentage in the sufficient (C) category was 72%, a slight increase from meeting I but still not reaching the success indicator. Based on this data, the overall student activity percentage for meetings I and II in cycle I was 68%. Therefore, it can be concluded that the results of the teacher's teaching activity observations in cycle I were still in the sufficient category and did not meet the set success indicator of 76%-100%.

Table 3 Distribution of Frequency and Percentage of Test Scores for Solving Students' Mathematical Story Problems in Cycle I

Interval	Category	Quantity (Frequency)	Presentase
85-100	Excellent	5	10%
76-85	Good	9	45%
60-75	Enough	6	35%
30-60	Less	5	10%
0-30	Very Less	0	0%
Sum		25	100%

Source: Research Data

The results in Table 3 show that out of a total of 25 students, none had the ability to solve mathematical story problems in the very poor category. The students' abilities were distributed as follows: 5 students (10%) were in the poor category, 9 students (45%) were in

the fair category, 6 students (35%) were in the good category, and 5 students (10%) were in the very good category. Based on these results, the percentage of student learning completeness in Cycle I can be seen in the following table.

Table 4 Data on Ability to Solve Mathematical Story Problems for Cycle II Students

Value	Kualifikasi	Number of Students	Presentase
60-100	Tuntas	14	56%
0-59	Incomplete	11	44%
Sum		33	100%

Source: Research Data

Based on Table 4, it can be seen that of the 25 fifth-grade students at UPT SPF SD Inpres Karunrung, Makassar City, 14 students achieved learning proficiency. Meanwhile, the other 11 students did not achieve proficiency. With classical learning proficiency,

namely:

$$\begin{aligned}
 \text{KBK (Classical Learning Completion)} &= \\
 &= (\text{number of students who completed}) / \\
 &= (\text{total number of students}) \times 100\% \\
 &= 14/25 \times 100 \\
 &= 56\%
 \end{aligned}$$

Table 5 Percentage of Improvement in Ability to Solve Mathematics Story Problems in Cycle I

Yes	Percentage of Story Problem Solving Ability	Improved Story Problem Solving Ability
	Initial Observations	Cycle I
1.	40%	56%
		16%

Source: Research Data

Based on Table 5, it can be seen that the percentage of students' ability to solve story problems from the initial observation (40%) to cycle I (56%) increased by 16%. This shows that in cycle i, the students' mastery was not yet in the good category because the success indicator was set to be successful if it was in the good category with a mastery of solving story problems classically of 76%.

b. Reflection Cycle I

The results of the reflection show several weaknesses in the implementation of learning by teachers, namely:

- 1) Class Management: Teachers have difficulty forming small groups because they tend to be homogeneous. As a result, discussions become less effective because student participation is uneven (mostly passive).
- 2) Information Delivery: Teachers did not explicitly convey learning objectives and only focused on explaining the material and providing examples of problem-solving questions.
- 3) Time Efficiency: Teachers were not efficient in managing time, causing lessons to exceed the allocated time.
- 4) Explanation Pace: Teachers deliver material too quickly, causing students to become confused by the explanations given in class.

5) Perception: Teachers are not competent in providing perception, as evidenced by the lack of response or answers from students when teachers ask opening questions.

c. Cycle II Planning

The action plan for Cycle II was designed as a follow-up to the reflections from Cycle I. The main focus of this plan was to improve learning and assessment strategies in order to achieve a more effective learning process and enhance students' conceptual understanding. The improvement measures prepared include:

- 1) Formation of Heterogeneous Groups: Teachers form small groups (4-5 students) with diverse abilities (heterogeneous) to maximize interaction and equal distribution of group work.
- 2) Clarity of Objectives: Teachers will explicitly convey learning objectives in class to ensure that the process runs smoothly and effectively.

3) Time Management: Teachers are expected to use the allocated time as effectively as possible with a clear structure so that learning objectives are achieved.

4) Explanation Pace: Teachers adjust the pace of material explanation so that it is neither too fast nor too slow, but easy for students to understand.

5) Quality of Apperception: Teachers need to explain apperception more deeply by relating it to students' daily experiences and activities.

6) Motivation: Improvements are made in providing reinforcement, feedback, and rewards (verbal/symbolic) to active groups after discussions or worksheet completion.

7) Non-Academic Intervention: Ice-breaking activities are prepared before starting the lesson.

Through more thorough planning based on experiences from the previous cycle, it is hoped that students' ability to solve math word problems will improve significantly, so that the learning objectives for Cycle II can be achieved more optimally.

Table 6 Percentage of Success of Teacher Teaching Activities Cycle II

Cycle I	Indicator	Sum	Success Indicator(%)	Category
	B C K			
Meeting III	9 6 -	15	83,3%	Good
Meeting IV	15 2 -	17	94,4%	Good

Source: Research Data

The percentage of teaching activities based on the researcher's observations using the problem posing model increased in the third meeting compared to the previous meeting. Three aspects implemented by the teacher were categorized as good because all three indicators were implemented, while three aspects were categorized as sufficient because only two indicators were implemented,

resulting in a total of fifteen indicators implemented. In this meeting, there were no aspects that fell into the poor category. The percentage of success indicators in meeting III was categorized as good with a score of 83.3%.

In meeting IV, the percentage of teacher teaching activities increased from meeting III because there were five aspects in the good category where all three indicators were implemented, while one

aspect was in the adequate category because only two indicators were implemented. Thus, there were seventeen indicators implemented overall. In this meeting, there were no aspects in the poor category. The percentage of success indicators in meeting IV was categorized as good with a score of 94.4%.

Based on this data, the overall percentage of teacher teaching activities for meetings III and IV of cycle II was 88.8%. Thus, it can be concluded that in cycle II, the results of the observation of teacher teaching activities were in the good category and had achieved the predetermined success indicator of 76% - 100%.

The student activity observation sheet obtained a score of 348 out of 450 for meeting III and a percentage of achievement in the good (B) category of 77.3%, which reached the success indicator. Meanwhile, in meeting IV, the score obtained was 397 out of 450 and the percentage was in the good (B) category, namely 88.2%, experiencing a slight increase in percentage from meeting III and achieving the success indicator.

Based on this data, the overall student activity percentage for meetings III and IV in cycle II was 82.7%. Therefore, it can be concluded that cycle II of the teacher's teaching activity observation results were in the good category and achieved the set success indicator of 76%-100%.

Table 7 Distribution of Frequency and Percentage of Test Scores on Students' Ability to Solve Mathematical Story Problems in Cycle II

Interval	Category	Quantity (Frequency)	Presentase
85 – 100%	Excellent	11	52%
76 – 85 %	Good	9	33%
60 – 75 %	Enough	3	9%
30 – 60%	Less	2	6%
0 - 30%	Very Less	0	0%
Sum		25	100%

Source: Research Data

Indicate that out of a total of 25 students, none were in the very poor category for their ability to solve math word problems. The results show that 2 students (6%) were in the poor category, 3 students (9%) were in the fair category,

9 students (33%) were in the good category, and 11 students (52%) were in the very good category. Based on this data, the percentage of student learning completeness in Cycle II can be seen in the following table.

Table 8 Data on Ability to Solve Mathematical Story Problems for Cycle II Students

Value	Kualifikasi	Number of Students	Presentase
60-100	Tuntas	20	85%
0-59	Incomplete	5	15%
Sum		33	100%

Source: Research Data

Based on Table 8, it can be seen that of the 25 fifth-grade students at

UPT SPF SD Inpres Karunrung, Makassar City, 20 students achieved mastery in solving story problems. Meanwhile, the other 5 students did not achieve mastery. With classical learning mastery, namely:

$$\begin{aligned} \text{KBK (Classical Learning Completion)} &= (\text{number of students who completed}) / (\text{total number of students}) \times 100\% \\ &= 20/25 \times 100 \\ &= 80\% \end{aligned}$$

Table 9 Percentage of Improvement in Ability to Solve Mathematics Story Problems Cycle II

Yes	Percentage of Story Problem Solving Ability		Improved Story Problem Solving Ability
	Cycle I	Cycle II	
1.	56%	80%	24%

Source: Research Data

As shown in Table 9, there was a 24% increase in students' ability to solve math story problems, from 56% in Cycle I to 80% in Cycle II. With an achievement of 80%, this result has met the predetermined success indicator, whereby classical learning completeness must be in the good category (76-100%). Therefore, it can be concluded that the actions in Cycle II successfully achieved the research targets. Based on the data on students' mathematical story problem solving ability in cycle II, which had reached the target, the implementation of cycle II was declared successful.

d. Reflection Cycle II

The reflection stage of Cycle II involved teachers and researchers in evaluating all activities based on the learning implementation observation sheet, student observations, and cycle test results. The results obtained in Cycle II showed significant improvements:

1) Teacher Activities: There was an increase in the percentage of achievement of the problem posing model implementation indicators by teachers. Teachers successfully implemented 15 of 18 indicators, achieving a Good (B) qualification. The implementation percentage increased from 83.3% in meeting III to 94.4% in meeting IV, indicating the success of

improvements in Cycle II.

2) Student Activity: Observations of students also showed an increase in the percentage of achievement of the problem posing model to reach a Good (B) qualification (from 77.3% in meeting III to 88.2% in meeting IV). This improvement was marked by high enthusiasm and involvement of students in the entire series of activities, including discussions, LKPD assignments, and cycle tests, as well as their activeness in asking questions and discussing story problems.

3) Learning Outcomes: The average score for students' ability to solve math story problems increased sharply from 56 in Cycle I (did not reach KKTP) to 80 in Cycle II, which means that they have achieved the Process Mastery Criteria Score (KKTP).

Comparative Conclusion: Overall, there was a significant shift in qualifications: Cycle I was rated as Fair (C) for teacher and student activities, and Poor (K) for learning mastery (average of 56). Meanwhile, the results of Cycle II showed a Good (B) qualification for teacher activities, student activities, and learning completeness (average of 80). This data proves that the implementation of Cycle II has successfully achieved the predetermined success indicators, so the research does not need to be continued to the next cycle.

The increase in more active student learning activities was the result of applying the Problem Posing model in two cycles. This finding is supported by Hatmawati et

al. (2016), who define the Problem Posing model as an approach that requires students to ask questions based on their own understanding, thereby fostering independence in learning.

The effective application of the Problem Posing model increases student engagement. In group activities, students are more active in collaborating and working together to solve problems. This not only deepens their understanding but also increases their enthusiasm and cohesiveness in learning. These findings are supported by Indarto et al. (in Kurnia, 2023), who argue that the Problem Posing model not only increases student learning activities but also has a significant influence in stimulating the thinking process. Thus, students can be more active, able to communicate their ideas, and become more creative in finding solutions to problems.

This is in line with the research conducted by Nuridayanti (2023), which found that in the problem posing model, students' ability to understand the material becomes clear when they are able to ask questions or pose problems individually or in groups. This skill can be seen through several students who represent their group or the entire class and are able to convey the questions or problems they have asked in front of the class.

This is also in line with the application of the problem posing model proposed by Brown and Walter (in Rozy, 2025), which states that problem posing consists of two perspectives, namely accepting and challenging. The accepting stage relates to an activity in which students accept tasks in the form of situations given by the teacher. Meanwhile, the challenging stage relates to an activity in which students feel challenged by the situations given so that they can formulate questions.

Rahmah (2024) states that

meaningful learning can be achieved by involving students in concept formation and problem posing. Nurrahman (2023) states that the problem-posing model is an action in which students propose and create problems from a given situation.

The results showed that the application of the Problem Posing model successfully improved the ability of fifth-grade students at UPT SPF SD Inpres Karunrung, Makassar City, in solving mathematical word problems.

CONCLUSION

The conclusion of this study, based on the results and discussion, is that the Problem Posing model successfully improved the ability of fifth-grade students at UPT SPF SD Inpres Karunrung, Makassar City, to solve mathematical story problems. This improvement was evident from the improvement in test results. The ability of students who were still in the poor category in Cycle I improved significantly to reach the good category in Cycle II.

REFERENCES

- Dewi, N. R & Ardiansyah, A.S. (2022). *Basics and processes of learning mathematics*. Lakeisha Publishers, Klaten: Central Java
- Fadli, M. R. (2021). Understanding qualitative research method design. *Humanika, Vol. 21 (1): 33-54*.
- Fatimatuzzahro, et al. (2025). Development of Augmented Reality-Based Comics to Improve Computational Thinking and Numeracy Skills of Elementary School Students. *Jurnal Math-UMB.EDU, 12(3)*.
- Fatmawati, Hasan, K., & Nurjannah. (2021). Application of the Horay Course Review Learning Model to Improve Activity and Learning Outcomes in Fourth Grade Mathematics in Sidrap Regency. *Journal of Mathematical Theory and Application, Vol. 1 (2): 107-121*.
- Harefa, D. (2020). Differences in physics learning outcomes through the

- problem posing and problem solving learning models in grade X-MIA students at Teluk Dalam Private High School. In *SINASIS (National Science Seminar)*, Vol. 1 (1).
- Hariyanto, Maryam S., M & Zainal, Z. (2021). Application of the Non-Example Learning Model to Improve the Learning Outcomes of Elementary School Students in Barru Regency. *Journal Of Education*. Vol. 1 (1): 256-259.
- Hatmawati, S., R., et al. (2016). Application of the Problem Posing Learning Model with the Experimental Method to Improve Physics Learning Outcomes in Grade VIII Students at SMP Negeri 19 Mataram in the 2015/2016 Academic Year. *Journal of Physics and Technology Education*, 2(1).
- Hayati, M. et al. (2024). The Importance of Mathematical Literacy Skills in Mathematics Learning. *Griya Journal of Mathematics Education and Application*, 4(1).
- Insani, N. (2023). Application of the Problem Possing Learning Model to Improve Students' Critical Thinking Skills. *Thesis. Mataram: State Islamic University of Mataram*.
- Kamila, R. T., & Abduh, M. (2022) How Learning Interests and Family Environment Affect Difficulties in Learning Mathematics in Elementary School.? *Basicedu Journal*. Vol. 6 (2), ISSN:2495-2504.
- Khasanah, N. (2025). The Effect of Using Math Puzzle Learning Media on Understanding Mathematical Concepts in Fractions. *Jurnal Math-UMB.Edu*, 12(3).
- Kurnia, T., S. (2023). Problem Posing Model Learning in Improving Student Learning Outcomes. *PTK: Journal of Classroom Action*, 3(2).
- Law of the Republic of Indonesia Number 3 of 2014 Chapter 3 Paragraph 1 on Mathematics Learning.
- Nuridayanti, et al. (2023). Analysis of the Application of the Problem Posing Learning Model in School Learning. *Jurnal Media Elektrik*, 20(3).
- Nurrahman, P, I. (2023). Implementation of the Problem Posing Method in Improving Student Learning Activities in Islamic Education Subjects in Grade VIII at SMPI Sabilul Muhtadin Bekasi. *Turats*, 16 (1)
- Rahmah, S. (2024). Application of the Problem Posing Learning Model to Improve Mathematics Learning Outcomes of Students in Grade IV of SD N 6 Kutapanjang Gayo Lues. *Thesis: AR-Raniry State Islamic University Banda Aceh, Aceh*.
- Rozy, F, & Dwikoranto. (2025). Application of the Problem Posing Learning Model (Question Submission) Type Within Solution Posing on Student Learning Outcomes in Grade XI Science Subject of Static Fluids at SMA Negeri 2 Bangkalan. *Journal of Physics Education Innovation*, pp. 285-289.
- Sari, M. N, et al. (2024). Classroom Action Research & Research and Development Methodology. *Sukoharjo: CV. Pradina Pustaka Group*.
- Setiawan, Y. (2020) Development of an elementary school mathematics learning model based on traditional Indonesian games and a realistic mathematics approach. *Journal of Education and Culture*, 10(1), 12-21.
- Siregar, N, et al. (2025). Improving Students' Mathematical Critical Thinking Skills Through Project-Based Learning as Viewed from Students' Adversity Quotient. *Jurnal Math-UMB.Edu*, 12(3).
- Tunu, D. J. I, et al. (2022). Analysis of Students' Ability to Solve Mathematical Story Problems in

Terms of Gender. Cendekia
*Journal: Journal of Mathematics
Education*, 6(2).

Unaenah, E, et al. (2020). Brunner's
Theory on the Concept of Flat
Shapes in Elementary School.
*Journal of Education and Social
Sciences*, 2(2).

Yasmin, S. A. (2022). Improving Letter
Recognition Skills Through Letter
Cards for 4-5 Year Olds at
Aisyiyah Kindergarten, Sariwangi
District, Tasikmalaya Regency.
*Tasikmalaya: Indonesia
University of Education.
Library.upi.edu*