

THE EFFECT OF THE USE OF PROBLEM BASED LEARNING (PBL) MODEL ON IMPROVING STUDENTS' LITERACY SKILLS AND LEARNING MOTIVATION

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Abstract

This study aims to analyze the effect of the use of PBL on improving literacy skills and learning motivation of grade IV students of SDN, Branggah through Social Studies Learning. The method used in this study is the *Quasi Experiment Method*. The data analysis technique used in this study is in the form of multiple-choice test questions with a total of 20 questions. The final results of this study include; First, there is a positive influence of PBL (X1) on the literacy (Y1) of students of SD Negeri Branggah, Lumbang District, Probolinggo. This can be said to be positive because the value of the determination coefficient (R²) is .677a which means that the independent variable PBL(X) is able to explain the literacy-bound variable (Y1) of 67.7% while the remaining 32.3% is explained by other variables outside the model. Second, there is a positive influence of PBL on the motivation of students of SD Negeri Branggah, Lumbang District, Probolinggo. This can be said to be positive because the value of the determination coefficient (R²) is .693a which means that the independent variable PBL (X) is able to explain the literacy-bound variable (Y2) of 69.3% while the remaining 30.7% is explained by other variables outside the model. So, the existence of PBL (X) has a positive impact on the literacy (Y1) and motivation of students (Y2) of SDN Branggah, Lumbang Probolinggo District.

Keywords: *Teacher Competence, Character Responsibility, Social Concern*

INTRODUCTION

Learning in elementary school is an important foundation for the development of students' cognitive, affective, and psychomotor abilities. In social studies learning, students are not only required to understand basic concepts, but also to develop critical thinking skills, literacy, and learning motivation. However, in reality, many students show low motivation to learn and inadequate literacy skills. This is a big challenge for educators to find effective learning methods in improving the quality of social studies learning in elementary schools (Fadli & Yuliana, 2020).

One of the approaches that can be applied to overcome this problem is the use of the Problem Based Learning (PBL) model. PBL is a student-centered learning method and emphasizes problem-solving as a means of learning. Through PBL, students are faced with real-life situations that require critical thinking and collaboration to find solutions. This process

not only helps students understand the material more deeply, but also improves their literacy skills.

The application of PBL in social studies learning in elementary schools is considered relevant because this subject is often related to complex social situations and requires in-depth understanding. With the PBL model, students are invited to identify problems, gather information, analyze data, and propose solutions. This process develops literacy skills, such as reading, writing, and speaking, as students must communicate their findings and solutions effectively (Anwar & Sari, 2020).

In addition to literacy, learning motivation is also an important factor that supports students' academic success. High learning motivation allows students to be more enthusiastic in following the learning process and more active in completing the tasks given. However, low learning motivation is still a common problem found in many elementary

schools. The application of the PBL model is expected to increase students' learning motivation because students are more actively involved in learning and feel that what they learn has relevance to real life (Dewi & Rahmawati, 2023).

At SDN Branggah I, social studies learning conditions still need innovation to improve student learning outcomes. Based on initial observations, it is still found that many students are less interested in social studies learning, especially because the learning methods used tend to be monotonous and less interactive. Students are more often directed to memorize the material than to understand and apply concepts in a broader context. This has an impact on low literacy skills and students' motivation to learn (Hadi & Prasetyo, 2019).

The PBL model offers a more engaging and challenging learning alternative for students. Through this approach, students are invited to actively participate in learning, seek information, discuss, and solve problems together. This activity not only improves their understanding of the material, but also fosters interest and motivation to learn. In addition, PBL allows students to develop their literacy skills, both individually and in groups (Cahyani & Setiawan, 2022).

Previous studies have shown that the implementation of PBL can have a positive impact on students' literacy and learning motivation. For example, research conducted in several primary schools shows that students who learn through PBL show significant improvements in literacy skills and learning motivation compared to students who learn through conventional methods. This shows the great potential of PBL to be implemented at SDN Branggah I.

However, although the potential for PBL is quite large, the implementation of this model does not always run smoothly. Challenges that may be faced include limited resources, the time required to design and implement problem-based learning, and the need for training for teachers to implement PBL effectively. Therefore, it is important to conduct in-depth research on how the PBL model can be applied effectively at SDN Branggah I, as well as how it impacts students' literacy and learning motivation.

This study aims to explore the influence of the application of the PBL model in social studies learning on the literacy ability and learning motivation of grade IV students at SDN Branggah I. With this research, it is hoped that the right strategy can be found to improve the quality of social studies learning and at the same time improve student learning outcomes in terms of literacy and motivation (Sia & Tan, 2018).

In particular, this study will look at how PBL can stimulate students' interest in solving problems relevant to their daily lives, as well as how active involvement in the learning process can improve students' literacy skills. This study will also examine whether the application of PBL can increase student learning motivation by making learning more meaningful and contextual.

In addition, this study will also consider other factors that may affect the effectiveness of PBL, such as support from teachers, the availability of learning resources, and parental involvement in the learning process. Thus, the results of this study are expected not only to contribute to the development of learning theory, but also to provide practical recommendations for educators at SDN Branggah I and other elementary schools (Jang & Kim, 2020).

In the long term, the implementation of PBL is expected to form students who not only have good literacy skills, but also have high motivation to learn, and are able to think critically and creatively in facing various challenges. Thus, social studies learning in elementary school can be more meaningful and beneficial for the overall development of students.

In conclusion, this research is very relevant to answer current educational challenges, especially in an effort to improve the quality of learning in elementary schools. The PBL model offers an innovative and effective approach to develop students' literacy skills and learning motivation, so it is expected to be a solution to the problems faced at SDN Branggah I.

RESEARCH METHODS

The method used in this study is the *Quasi Experiment Method*. Experimental research is a type of quantitative research that is

very powerful to measure the relationship of cause and effect. The data used to analyze the quantitative approach is data in the form of numbers.

The research design used in this study is a *quasi-experimental* design in the form of a *nonequivalent control group design*. In this design, neither the experimental group nor the control group was randomly selected. Two groups will be given a *pre-test*, then in the *post-test*, the experimental group will be given treatment in the form of PBL and the control group will remain conventional without PBL treatment.

The population in this study is all grade IV students at SDN Branggah I, Lumbang District. The sample determination technique used by the researcher is Nonprobability *sampling technique* with the type of *purposive sampling technique*. According to Sugiyono (2019), "*purposive sampling* is a technique for sampling data sources with certain considerations." The considerations taken by the researcher in determining the sample are seen from the condition of the same student characteristics, so the sample taken in this study is grade IV students of SDN Branggah I which totals 19 people as the Experimental class and class IV students of SDN Branggah II which totals 19 people as the Control class.

The data collection techniques used in this study are in the form of questionnaires, *pre-tests*, *post-tests*, and documentation. The aspect researched in this study is student learning outcomes, using the *Problem Based Learning type Cooperative model*. The description of the data collection technique above is explained as follows:

a. Questionnaire

In this study, a closed questionnaire is a questionnaire that is presented in such a form that the respondent only needs to give a check mark (✓) in the appropriate column or place.

b. Test

The test questions referred to in this study are *pre-test* and *post-test* questions which aim to measure student learning outcomes. *Pre-test* and *post-test* questions will be given to students but at different times.

c. Documentation

The documentation in this study was used to find data related to the research and photos at

the time of the research conducted at SDN Branggah, Lumbang District.

The data analysis technique used in this study is in the form of multiple-choice test questions with a total of 20 questions. Previously, the number of questions was 30 items, but after consulting with supervisors and several lecturers, the final result was obtained that the number of valid questions was around 20 items. Of these 20 questions, they will be used as *pre-test* and *post-test materials* in the experimental class and control class.

RESULTS AND DISCUSSION

Result

This research was carried out at SD Negeri Branggah, Lumbang District, Probolinggo Regency on grade IV students of SD Negeri Branggah I and grade IV students of SD Negeri Branggah II. This study involves two research groups, namely the experimental group on grade IV students of SD Negeri Branggah. This research was carried out at SD Negeri Branggah, Lumbang District, Probolinggo Regency in grade IV students of SD Negeri Branggah I and the control group of grade IV students of SD Negeri Branggah II. Students in the experimental class used the *Problem Based Learning* method in learning and the control group used conventional learning methods.

Data description

This research includes experimental research. The research data consists of the initial test and the final test about the material that has been presented using the *Problem Based Learning* method. The research was carried out on March 4-9, 2024. The treatment was carried out on Monday at 08.00 WIB and Thursday at 08.00 for the Experiment class, Wednesday at 08.00 WIB and Saturday at 08.00 WIB for the Control class.

This study raises the research variables, namely the free variable of social studies learning with the Problem Based Learning method and the bound variable, namely the increase in literacy and learning motivation. In this study, the researcher obtained data from the results of the *pre-test* and *post-test* conducted in the experimental class and the control class. The overview of the research data is as follows:

Table 1. Posttest Results of Experimental Class and Control Class

No	Experimental Class Values	Control Class Values
1	85	79
2	87	81
3	86	79
4	88	82
5	86	81
6	87	80
7	89	85
8	88	79
9	86	81
10	88	79
11	86	82
12	89	81
13	85	80
14	87	82
15	88	85
16	87	80
17	87	85
18	86	79
19	87	81

Data Analysis

Before conducting the results of the partial hypothesis and simultaneous hypothesis tests, it is necessary to state the description of the data,

homogeneity and normality. The following description of the research data will be presented in the form of the following table;

Table 2. X, Y1 and Y2 Statistical Analysis

Statistics				
		X	Y1	Y2
N	Valid	38	38	38
	Missing	0	0	0
Mean		36.24	37.13	3.72
Median		35.00	36.00	3.50
Mode		31	31	3
Std. Deviation		5.400	5.231	.572
Minimum		31	31	3
Maximum		46	45	5
Sum		1377	1411	142

Table 4.2 explains that the 38 respondents are all valid, Mean X = 36.24, Y1 = 37.13, and Y2 = 3.72. Midpoint or Median X = 35.00, Y1 = 36.00, and Y2 = 3.50. and Deviation or Std DeviationX = 5,400, Y1 = 5,231, and Y2 = .572. PBL Frequency

Analysis (X). It can be known that the percentage of Problem Based Learning (PBL) frequency is from 2.6 percent to 23.7 percent, with details of 2.6 percent as many as 4 people, 5.3 percent as many as 6 people, 7.9 percent as

many as 3 people, 10.5 percent as many as 4 people, 13.5 percent as many as 5 people, 18.4 percent as many as 7 people. And 23.7 percent as many as 9 people. The conclusion of the frequency of Problem Based Learning (PBL)(X) was the lowest at 2.6 percent for 4 people and the highest at 23.7 percent for 9 people. Frequency Analysis Y1 Literacy Ability

It can be seen that the percentage of Literacy Abilities is from 5.3 percent to 21.1 percent, with details of 5.3 percent as many as 6 people, 7.9 percent as many as 9 people, 10.5 percent as many as 8 people, 18.4 percent as many as 7 people, and 21.1 percent as many as 8 people

Conclusion The frequency of Literacy Ability Frequency (Y1) was the lowest at 5.3 percent for 6 people and the highest at 21.1 percent for 8 people.

Y2 frequency analysis Learning motivation.

It can be known that the percentage of learning motivation frequency ranged from 5.3 percent to 21.1 percent, with details of 5.3 percent as many as 4 people, 7.9 percent as many as 6 people, 10.5 percent as many as 8 people, 13.2 percent as many as 5 people, and 21.1 percent as many as 8 people

Conclusion The frequency of Learning Motivation Frequency (Y2) was the lowest at 5.3 percent for 4 people and the highest at 21.1 percent for 8 people.

Homogeneity analysis of control class and experimental class

Table 3. Homogeneity Analysis Control class and experimental class

Tests of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
Kontrol	Based on Mean	3.150	1	36	.084
	Based on Median	2.696	1	36	.109
	Based on Median and with adjusted df	2.696	1	27.882	.112
	Based on trimmed mean	2.618	1	36	.114

Sumber: SPSS 27 (2024)

Interpretation

Tests of Homogenitas

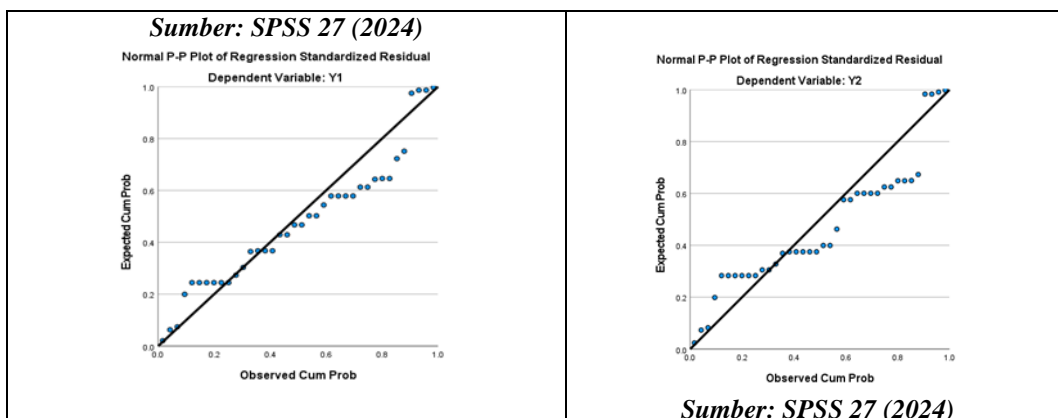
Learning Outcomes

Levene Statistic	df1	df2	Sig.
3.150	1	36	.084

Based on the output table "Tests of Homogeneity of Variances" above, it is known that the significance value (Sig) of the variable learning outcomes of the control class and the experimental class is .084. Because of the value

of Sig. $084 > 0.05$, then as the basis for decision-making in the Homogeneity test, it can be concluded that the variation of the learning outcomes of the control class and the experimental class is the same or homogeneous

Figure 1. Y1 and Y2 Normality Charts



The residual normality test with the graph method is by looking at the distribution of data at the diagonal source on the Normal P-P Plot of regression standardized residual graph. As the basis for his decision-making, if the dots spread around the line and follow the diagonal line, then the residual value is normal. Thus these Y1 and Y2 charts are normal.

Uji Hipotesis

Hypothesis X vs. Y1

There is a positive influence of PBL (X1) on literacy (Y1) of students of SD Negeri Branggah, Lumbang District, Probolinggo. This can be seen in the following table:

Table 4. Analysis of PBL Linear Hypothesis Test on Literacy

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.677 ^a	.459	.444	3.901	.373
a. Predictors: (Constant), X					
b. Dependent Variable: Y1					

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	464.378	1	464.378	30.509	.000 ^b
	Residual	547.964	36	15.221		
	Total	1012.342	37			
a. Dependent Variable: Y1						
b. Predictors: (Constant), X						

From table 4, it can be seen that the value of the determination coefficient (R2) is .677^a, which means that the independent variable PBL(X) is able to explain the literacy-bound variable (Y1) of 67.7 % while the remaining 32.3 % is explained by other variables outside the model. This shows that the independent

variable with the bound variable has a positive influence.

Hypothesis X vs. Y2

There is a positive influence of PBL on the motivation of students of SD Negeri Branggah, Lumbang District, Probolinggo. This can be seen in the following table:

Table 5. Analysis of PBL Linear Hypothesis Test on Motivation

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson

1	.693 ^a	.481	.466	.418	.303
a. Predictors: (Constant), X					
b. Dependent Variable: Y2					

ANOVA ^a						
	Model	Sum of Squares	f	Mean Square	F	Sig.
1	Regression	5.812		5.812	33.337	.000 ^b
	Residual	6.277	6	.174		
	Total	12.089	7			
a. Dependent Variable: Y2						
b. Predictors: (Constant), X						

From table 5, it can be seen that the value of the determination coefficient (R²) is .693^a, which means that the independent variable PBL (X) is able to explain the literacy-bound variable (Y2) of 69.3% while the remaining 30.7% is explained by other variables outside the model. This shows that the independent variable with the bound variable has a positive influence.

Discussion

The results of this study show that the application of the Problem Based Learning (PBL) model in social studies learning in grade IV of SDN Branggah I has a significant influence on improving students' literacy skills and learning motivation. These findings are in line with various previous studies that show that PBL is an effective learning method to improve student learning outcomes, especially in cognitive and affective aspects (Ahmad & Fitriani, 2021).

One of the main reasons why PBL is effective in improving literacy skills is that this model requires students to be directly involved in the process of information search, data analysis, and presentation of results. During the PBL process, students must read various sources, understand relevant content, and convey their findings in both written and oral form. These activities directly contribute to the development of literacy skills, such as critical reading, argumentative writing, and structured speaking skills.

In addition, PBL also encourages students to think critically and analytically. When students are faced with a problem they have to solve, they must consider the various available information, evaluate the validity of the sources, and make decisions based on the evidence found. This process helps students develop high-level literacy skills, such as analyzing and synthesizing information, which are very important in social studies learning.

Student learning motivation also increased after the implementation of PBL. This is most likely due to the characteristics of PBL that place students as the center of learning. In PBL, students have greater autonomy to explore topics that interest them and feel that the learning carried out has real relevance to their lives. This feeling triggers intrinsic motivation, where students learn not only to get grades, but because they are genuinely interested in the learning process itself (Erdal & Özdemir, 2022).

PBL also provides opportunities for students to work collaboratively in groups. Cooperation in groups allows students to share knowledge, support each other, and develop important social skills. This collaborative aspect also plays a role in increasing learning motivation, as students feel more engaged and motivated when they work alongside their peers to achieve a common goal (Bell & O'Neill, 2022).

However, the implementation of PBL is not without challenges. One of the main challenges is the need for careful planning and sufficient time allocation. Teachers must design problems that fit the curriculum, facilitate group

discussions, and provide constructive feedback. This process requires more time and effort compared to conventional learning methods. Nonetheless, the positive results obtained from the implementation of PBL show that this investment of time and effort is worth the improvement in the quality of learning produced.

In addition, students' literacy skills are not only improved through reading and writing activities, but also through group discussions and presentations. In PBL, students are encouraged to communicate their thoughts effectively to group members and teachers. It helps students develop speaking and listening skills, which are essential components of literacy. Group discussions also allow students to hear a variety of perspectives, which helps them develop a broader and deeper understanding of the topic being studied (O'Neill & McMahon, 2023).

Increased learning motivation also has a positive impact on student involvement in learning. Motivated students tend to be more active in participating in discussions, more actively seeking additional information, and more enthusiastic in completing assigned tasks. This shows that learning motivation is not only the result of effective learning, but is also a factor that drives the effectiveness of learning itself (Li & Zhao, 2021).

In the context of social studies learning, high literacy skills are very important. Literacy allows students to understand complex social issues, evaluate information sources, and make evidence-based decisions. With good literacy, students can more easily understand social studies concepts and apply them in daily life. This is very important in social studies education, which aims to shape students to become critical, socially aware, and responsible citizens.

The findings of this study also show that PBL can be a solution to overcome challenges in social studies learning in elementary schools, especially in increasing student engagement and making learning more engaging and meaningful. Social studies learning, which is often considered boring due to the large amount of memorization material, can be changed to be more dynamic with the application of PBL, where students learn through hands-on experience and problem solving.

From the teacher's point of view, the implementation of PBL also provides advantages in terms of classroom management. When students are more engaged and motivated, they tend to be more focused and disciplined during learning. This makes it easier for teachers to manage classes and create a conducive learning environment. Teachers can also more easily identify difficulties faced by students, as PBL allows teachers to observe the learning process of students directly and provide the necessary interventions (Kusuma & Junaidi, 2021).

While PBL shows many advantages, it is important to remember that implementing PBL requires constant adjustment and adaptation. Teachers must be flexible in responding to student needs and be ready to modify lesson plans based on the feedback received. In addition, support from the school side, such as the availability of resources and training for teachers, is also important to ensure the successful implementation of PBL (Çakmak & Güneş, 2021).

It is also important to consider the role of parents in supporting PBL learning. Parents can help by providing learning resources at home and encouraging children to talk about what they are learning in school. Parent involvement can strengthen students' motivation to learn and help them connect learning at school with daily life (Budiyanto & Hidayati, 2019)

In addition, this study also emphasizes the importance of continuous evaluation in the implementation of PBL. Evaluation must not only be done on the final result, but also on the learning process itself. By doing so, teachers can continue to improve their approach and ensure that PBL is truly providing maximum benefits to students.

In the long term, the implementation of PBL is expected to help students develop the critical and creative thinking skills they will need in the future. With good literacy and high motivation to learn, students will be better prepared to face challenges at higher levels of education and in daily life.

Overall, this study shows that PBL has great potential to improve the quality of social studies learning at SDN Branggah I. Despite the

challenges in its implementation, the positive results obtained show that PBL can be an effective tool to develop students' literacy and learning motivation (Alrummi & Witte, 2023).

Therefore, it is recommended that PBL continue to be implemented and developed in social studies learning, with full support from schools and parents. In addition, ongoing training for teachers is also needed so that they can implement PBL more effectively and can tailor this approach to the specific needs of their students.

With proper application, PBL can assist students not only in mastering social studies material, but also in developing broader skills that will be useful to them in the future. Effective social studies learning through PBL can form a generation of students who are more critical, creative, and ready to face the challenges of an increasingly complex world.

CONCLUSIONS AND SUGGESTIONS

Conclusion

In conclusion, the application of the Problem Based Learning (PBL) model in social studies learning in grade IV of SDN Branggah I has proven to be effective in improving students' literacy skills and learning motivation. PBL allows students to be more actively involved in the learning process, encourages the development of critical thinking skills, and makes learning more meaningful and relevant to daily life. Despite the challenges in its implementation, the results obtained show that PBL can be an innovative solution to improve the quality of social studies learning in elementary schools.

Suggestion

To increase the effectiveness of the implementation of the Problem Based Learning (PBL) model at SDN Branggah I, it is recommended that the school provide adequate training and support for teachers in designing and implementing problem-based learning. Additionally, it is important to involve parents in supporting the student's learning process and ensuring that the necessary resources are available. Continuous evaluation of the implementation of PBL also needs to be carried out to adjust the method to the needs of students and overcome the challenges that arise, so as to

maximize the positive impact of PBL on student literacy and learning motivation.

BIBLIOGRAPHY

- Ahmad, S., & Fitriani, D. (2021). Application of Problem Based Learning Model to Improve Students' Literacy Ability in Elementary Schools. *Journal of Education and Learning*, 24(3), 287-298.
- Alrummi, T., & Witte, J. (2023). The Effectiveness of Problem-Based Learning on Students' Literacy Skills: A Meta-Analysis. *Journal of Educational Research*, 116(2), 145-159.
- Anwar, S., & Sari, R. (2020). The Effectiveness of the Problem Based Learning Model in Improving Student Motivation and Learning Outcomes. *Journal of Education*, 18(2), 105-118.
- Bell, S., & O'Neill, S. (2022). Problem-Based Learning in Primary Education: Improving Literacy and Student Motivation. *International Journal of STEM Education*, 9(1), 35-50.
- Budiyanto, A., & Hidayati, N. (2019). Implementation of PBL Model to Improve Critical Thinking Skills and Literacy of Elementary School Students. *Journal of Educational Research*, 22(1), 45-57.
- Çakmak, K., & Güneş, S. (2021). The Impact of Problem-Based Learning on Literacy Development and Student Engagement. *Journal of Educational Psychology*, 113(4), 679-690.
- Cahyani, A., & Setiawan, A. (2022). The Effect of the Problem Based Learning Model on Learning Motivation and Student Learning Outcomes. *Journal of Education and Technology*, 26(1), 77-89.
- Dewi, S., & Rahmawati, F. (2023). Problem Based Learning Model as an Alternative to Improve Literacy Skills of Elementary School Students. *Journal of Basic Education*, 30(2), 142-156.

- Erdal, M., & Özdemir, H. (2022). Problem-Based Learning in Early Childhood Education: Enhancing Literacy and Motivation. *Early Childhood Education Journal*, 50(1), 79-92.
- Fadli, M., & Yuliana, L. (2020). Application of Problem Based Learning to Improve Students' Literacy and Social Skills. *Journal of Education and Culture*, 21(4), 320-331.
- Hadi, S., & Prasetyo, A. (2019). The Effect of the PBL Model on Literacy Ability and Learning Motivation of Elementary School Students. *Journal of Elementary School Education*, 17(3), 205-219.
- Jang, H., & Kim, H. (2020). Effects of Problem-Based Learning on Students' Literacy and Motivation in Primary Education. *Educational Research Review*, 15(3), 210-223.
- Kusuma, R., & Junaidi, H. (2021). The Effectiveness of the Problem Based Learning Model in Improving Literacy Skills and Learning Motivation. *Journal of Educational Sciences*, 25(2), 134-145.
- Li, J., & Zhao, Y. (2021). Enhancing Students' Literacy through Problem-Based Learning: An Empirical Study. *Journal of Curriculum Studies*, 53(2), 222-236.
- O'Neill, J., & McMahon, M. (2023). Problem-Based Learning and Literacy Outcomes: Evidence from an International Study. *Journal of Educational Development*, 47(3), 333-348.
- Sia, L., & Tan, Y. (2018). Problem-Based Learning and Its Impact on Literacy and Motivation: A Review of Recent Research. *International Journal of Educational Technology*, 11(4), 293-307.