Efforts to Improve Student Learning Outcomes Through the Problem Based Learning Model

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ABSTRACT

This research was *motivated by the low learning outcomes of fifth-grade students at Public Elementary School 071052 Mondrali. Based on the analysis conducted, the teacher found that the low student performance was due to their lack of understanding of the material being taught, which resulted from the monotonous teaching method, namely, lecturing. This condition caused students to be less actively involved in the learning process. In addition, the teacher did not use teaching media that could engage students' interest, making the lessons less appealing. As an improvement effort, the researcher applied the Problem-Based Learning (PBL) model. The aim of this research* was *to determine whether the implementation of the PBL model can improve the social studies learning outcomes of fifth-grade students at Public Elementary School 071052 Mondrali. The method used in this study* was *a quantitative method with percentage formulas. The results show an increase in student learning outcomes in each cycle. In the pre-cycle, the initial data showed that only 9.09% or 1 student passed the learning process. However, in cycle 1, the percentage of students who passed increased to 27.3% or 3 students, and in cycle 2, it reached 100%, with all students successfully passing the social studies lesson on natural and man-made features in Indonesia.*

Keywords: Learning Outcomes; Problem Based Learning; Social Studies Learning

INTRODUCTION

Education is a very crucial process throughout the life of every individual because by taking the path of education, humans not only gain knowledge but also develop various essential self-potentials to face the challenges of life in the future (Marfu'ah, 2021), (Sembiring et al., 2024). According to (Anjani et al., 2023), through education, the next generation of good quality in terms of cognitive, affective, and psychomotor can be formed because it is the main foundation for forming character, critical thinking skills, and social skills that will guide individuals in interacting with society and adapting to the dynamics of the world that continues to develop. (Wandani et al., 2023), (Riswanti et al., 2020), (Bebasari & Suhaili, 2022) explain that education is a series of processes that individuals go through or take through various means, such as training, teaching, giving assignments, character building, and even giving punishments or sanctions.

One of the vital elements and the core of education is how to invite students to be actively involved in a series of learning. Learning by involving students actively will be more meaningful, because they can directly experience and apply the knowledge learned in real situations. The learning process that is active and involves students not only occurs in the form of discussions or questions and answers in class, but also in various activities designed to encourage students to think deeper, develop curiosity, and find solutions to problems faced. The learning process will make students learn so that it produces changes through the experiences they experience.

According to Djonomiarjo (2020), learning activities that actively involve students, both individually and in groups, will have deeper meaning. Students who are actively involved in a series of learning tend to have more meaningful and in-depth experiences. Learning is no longer just absorbing information from teachers, but students are invited to think critically, discuss, and find solutions to problems that are challenges that must be faced. Thus, teachers had a very crucial position in ensuring the level of student success. Therefore, to achieve optimal results in learning, teachers are required to be active, have creativity and a willingness to innovate, and always have the desire to improve the quality of education.

The fundamental subject that must be taught in schools is Social Sciences (IPS), whose role should not be underestimated in constructing students' understanding of the world around them and developing a strong national insight. The general purpose of studying IPS is to provide students with various problem-solving skills and be able to blend in to adapt to life in society and the state (Mardani, et al., 2021). As a subject that directly touches on everyday life, IPS helps students understand how society, nature, or both interact with each other and provides them with knowledge about the dynamics of a changing world.

In reality, many teachers face challenges in making social studies learning more interesting and effective, especially in the material on natural and artificial features in Indonesia. This material is sometimes difficult for students to understand because it contains concepts about various forms of nature, such as mountains, rivers, and lakes, as well as buildings or human works, such as highways, bridges, and cities. Students often find it difficult to confront what they learn in class with their daily lives. This makes learning feel boring and irrelevant to them. Then, followed by social studies learning, especially in elementary schools, most students prefer to learn in a more enjoyable way, such as role-playing, discussing, or working on projects. When the material is delivered only by memorizing or explaining the theory, students tend to lose interest and are not active in the learning series.

Based on the results of observation activities that had been carried out at Public Elementary School 071052 Mondrali, the results of the mid-semester exams show that learning achievement in social studies is relatively low. This can be seen from the number of students whose achievements in the Minimum Completion Criteria (KKM) that had been set, namely 70 below the expected average. In the tests that had been carried out, the number of students who had not passed the completion or are below the KKM was greater than those who had completed it. Based on the reflection of the learning results that had been carried out, the teacher identified that the less than satisfactory learning achievement was caused by various factors, including the teaching methods that had been applied so far being too teacher-centered, namely through lectures only. The learning models and media applied are also less interesting and less relevant to students' lives. As a result, students feel constrained in understanding the material on the differences in natural and artificial appearances that are delivered, because the material feels far from their daily experiences.

In efforts to overcome the problem of low learning achievement of students in social studies material at Public Elementary School 071052 Mondrali, the best step that can be taken is to choose and apply the right learning model according to the characteristics of students and the material being studied. As explained by Ahyar, et al. (2021), the learning model functions as a guide or reference that can help teachers, namely teachers, in developing the curriculum and as an effective teaching instrument in bringing about changes in students' behavior. The implementation of the right learning model, especially one that focuses on students, has the potential to have a significant impact on student achievement. An interactive and participatory learning model, namely requiring students to be actively involved in the learning series, can contribute positively and greatly to their understanding, skills, and motivation.

Seeing this, an alternative solution that can be applied by researchers to realize progressiveness in student learning outcomes is to implement the Problem-Based Learning (PBL) learning model. The application of PBL in a series of learning is expected to maximize the achievement of student learning outcomes because this model emphasizes solving problems or challenges that are directly related to students' daily lives. The learning model (PBL) is a strategic approach that begins by introducing students to an issue that they must solve (Oktavia, 2020). Sari & Rosidah (2023) stated that PBL invites students to find solutions to the problems given, which are usually related to real situations around them. The application of PBL in a series of social studies learning, especially material that discusses the differences in natural and artificial appearances in Indonesia, can provide opportunities for students to better understand the relationship between nature and humans. In addition, PBL can increase students' active involvement in the learning process, because they are given the opportunity to explore deeper information, discuss, and present their findings.

Based on the background description that has been presented, the formulation of the problem in this study is to evaluate whether the implementation of the Problem-Based Learning (PBL) learning model can create progressiveness towards the achievement of learning outcomes, especially fifth-grade students of Public Elementary School 071052 Mondrali in social studies learning with natural and artificial features in Indonesia for the 2024/2025 academic year. This study aims to describe the efforts to implement the PBL model in realizing progressive learning outcomes in social studies learning of fifth-grade students at Public Elementary School 071052 Mondrali. It is hoped that the results of this study can provide a positive contribution to various related parties, such as schools, teachers, students, and researchers in the future, in improving the quality and quality of education.

METHOD

The procedures applied in this study consist of several stages, including 1) Planning stage, which is the stage where the researcher prepares the learning schedule, designs the lesson plan and assessment instruments, and prepares the media that will be used in learning; 2) Implementation stage, where the researcher manifests a series of learning in a structured manner according to the plan that has been prepared previously; 3) Observation stage, where the researcher, with the help of supervisor 2, observes various activities carried out by various parties, namely teachers and students during the learning process; 4) Reflection stage, which aims to evaluate the implementation of learning as a basis for determining follow-up steps. The series of PTK procedures can be seen in the following image.

The data processed and used came from the learning outcomes of fifth-grade students of Public Elementary School 071052 Mondrali in social studies, focusing on the material on the differences between natural and artificial features in Indonesia. Every time the improvement is carried out, in both cycle 1 and cycle 2, a written test will be conducted to measure how deep their understanding is of the material given by the teacher in class. To calculate and analyze the students' learning outcome data, the researcher used the following formula:

RESULT AND DISCUSSION

1. Description of Results (Cycle 1)

In the implementation of learning improvement cycle 1, all learning activities were executed in accordance with the learning implementation plan (RPP) that had been prepared previously for cycle 1 improvement. The main focus of learning improvement in cycle 1 was to improve and achieve progressiveness towards student involvement in the learning series so that understanding of the social studies material being taught becomes better and deeper. In this case, learning with the Problem-Based Learning (PBL) model was chosen as the approach that was expected to achieve these learning objectives, by emphasizing problem-based learning that encourages students to actively think and collaborate.

After the learning process was complete, the researchers conducted evaluation activities to measure the extent to which the learning objectives had been achieved. As stated by Magdalena, et al. 7 (2020), evaluation activities included tests, measurements, and assessments, all of which were part of educational evaluation. In the cycle 1 evaluation, a written test in the form of multiple choice consisting of 10 questions was given to grade V students. The evaluation results showed that there was progress in students' learning outcomes when compared to the learning outcomes in the pre-cycle evaluation. Previously, in the pre-cycle evaluation, there were 10 out of 11 students who had not optimally achieved the Minimum Completion Criteria (KKM) that had been decided by the school, namely a minimum score of 70. In other words, only 1 student achieved the KKM in the pre-cycle evaluation.

However, in the evaluation of cycle 1 after learning by implementing the PBL learning model, learning outcomes experienced progression although not significant. Of the 11 fifth-grade students, 3 of them managed to achieve scores above the KKM. While the rest, namely the scores of 8 others, were below the KKM. Nevertheless, this evaluation provided a positive picture of the development of learning and shows that there was progress although not yet optimal. Thus, although not all students had achieved the KKM in cycle 1, the implementation of the PBL learning model provided an indication of progress that needs to be further developed in the next cycle. The evaluation carried out was the basis for designing improvements and developing learning strategies in the next cycle so that better results could be achieved. The results of the evaluation of fifth-grade social studies learning at Public Elementary School 071052 Mondrali were as follows:

Table 1. Social Studies Learning Evaluation Values (Pre-Cycle and Cycle 1)

No.	Students Name	Value	
		Pre-Cycle	Cycle 1
1	Alwinda Z. Zebua	70	80
2	Andianus Zai	30	50
3	Asnawati Telaumbanua	50	70
4	Aisal Gunawan Zebua	60	70
5	Belvan Molala Zebua	30	60
6	Bernandes W. Zebua	40	60
7	Doni Saputra Zai	40	50
8	Faisal Rahmat Telaumbanua	50	40
9	Gracia Agustina Zebua	40	50
10	Iman Setia Laia	30	60
11	Noberlin Zebua	20	50
	Total	460	640
	Average	41,8	58,2

Based on the information in Table 1, the learning process in cycle 1 in class V of Public Elementary School 071052 Mondrali showed a significant increase, although it was still relatively limited. Progressiveness in learning outcomes could be seen from the difference in the highest and lowest scores in each learning cycle. In the pre-cycle evaluation, the highest score obtained by students was 70, achieved by Alwinda Z. Zebua, while the lowest score was 20, obtained by Noberlin Zebua. On the other hand, in cycle 1, the highest score obtained was still achieved by Alwinda Z. Zebua, with a score of 80, while the lowest score increased to 40, obtained by Faisal Rahmat Telaumbanua. The following was an explanation of student learning achievements obtained in the improvement of learning in cycle 1.

Table 2. Learning Results of Cycle 1

Assessment Aspects	Completed	Not Completed	The highest score	Lowest value
Learning outcomes	3 students	8 students	80 (1 students)	40 (1 students)

2. Description of Results (Cycle 2)

The implementation of learning outcome improvements in cycle 2 was motivated by the findings of weaknesses that occurred in the learning process of cycle 1. Although there was progressiveness in learning achievement, the increase was not significant. One of the main weaknesses identified in cycle 1 was the low level of active student involvement in the learning process. Many students in the class depended heavily on their friends in the group to complete the assigned tasks, rather than actively participating in discussions and learning activities. In addition, the lack of teachers' experience in implementing the Problem-Based Learning (PBL) model also contributed to the limited effectiveness of the learning process, which ultimately affected their learning outcomes. The following were the learning outcomes of cycle 2 compared to the learning outcomes of cycle 1.

Table 3. Social Studies Learning Evaluation Values (Cycles 1 & 2)

No.	Students Name	Value	
		Cycle 1	Cycle 2
1	Alwinda Z. Zebua	80	100
2	Andianus Zai	50	900
3	Asnawati Telaumbanua	70	100
4	Aisal Gunawan Zebua	70	80
5	Belvan Molala Zebua	60	100
6	Bernandes W. Zebua	60	80
7	Doni Saputra Zai	50	70
8	Faisal Rahmat Telaumbanua	40	80
9	Gracia Agustina Zebua	50	90
10	Iman Setia Laia	60	100
11	Noberlin Zebua	50	100

Total		640	990
Average		58.2	90

The information listed in Table 3. explained that efforts to apply the Problem-Based Learning (PBL) model in the cycle 2 series had brought significant changes to the learning achievements of grade V students at Public Elementary School 071052 Mondrali. The improvement in learning achievement was clearly visible, both from the number of students who managed to achieve scores above the Minimum Completion Criteria (KKM), as well as from the highest and lowest scores in cycle 2. In cycle 1, the highest score was 80, while the lowest score was 40. However, in cycle 2, the changes that occurred were very striking, the highest score reached 100, and the lowest score in cycle 2 progressed to 80. This significant increase was also reflected in the average score of students and the number of students who achieved optimal achievement in cycle 2. In cycle 1, the average score of students was only recorded at 58.2, while in cycle 2, after the implementation of the more effective PBL model, the average score of students jumped to 90. This average increase shows very significant progress in student learning achievement.

Table 4. Learning Results Cycle 2

Assessment Aspects	Completed	Not Completed	The highest score	Lowest value
Learning outcomes	11 students	0 students	100 (5 students)	80 (2 students)

2. Discussion

The recorded data clearly indicated that the implementation of the PBL model in cycle 2 had succeeded in improving the deficiencies found in cycle 1, and the results were more optimal.

The significant improvement in learning outcomes had a positive impact on students' abilities in social studies learning, especially after the implementation of the Problem-Based Learning (PBL) model. The percentage of students learning completion in the pre-cycle, cycle 1, and cycle 2 could be seen in the following graph.
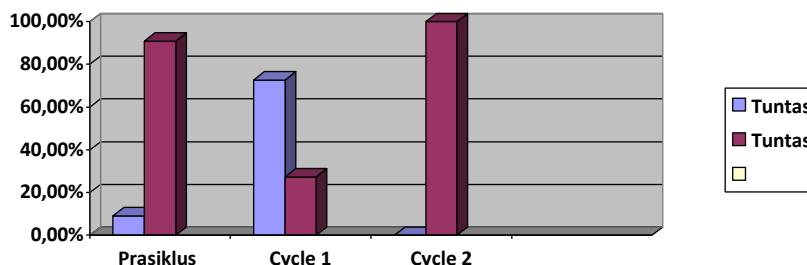

Graph 1. Percentage of Improvement in Student Learning Outcomes

In the graph above, it was clear that there was a significant increase in the completeness of student learning outcomes, starting from the pre-cycle, cycle 1, to cycle 2. Learning completeness in the pre-cycle which initially was only reached 9.09% increased to 27.3% after the implementation of improvements in cycle 1. A very significant increase occurred in cycle 2, where learning completeness reached 100%. This explained that the implementation of the Problem-Based Learning (PBL) model in the series of cycles 1 and 2 creates a positive impact that contributed to realizing progressiveness towards students learning outcomes at Public Elementary School 071052 Mondrali, especially in social studies learning regarding the material on natural and artificial features in Indonesia.

The implementation of the PBL model had proven effective in encouraging active student involvement and broadening their understanding of the material being taught. As stated by Tombokan (2021), the learning model functions as a guideline for teachers in designing and implementing more structured and targeted learning activities. By using a learning model that suited students' characteristics, the teaching and learning process became more efficient and more focused, so that learning objectives could be achieved more optimally.

This was in line with research conducted by Putri & Suradi (2021), which stated that the implementation of the PBL model could have an effect on learning outcomes, namely creating progressiveness or progress. It was further explained that the implementation of the PBL model could foster and develop students' social skills, such as the ability to work in groups and communication skills, as well as provide a deeper understanding of the social studies material. This study was also supported by Hidayati & Purnama (2022), which stated that the PBL model had a significant influence in improving student learning outcomes towards better achievement.

Based on the results of observations made on students, which refer to three aspects of assessment, namely communicative, active, and responsible. During the learning improvement of cycle 1 and cycle 2, it could be concluded that students' attitudes showed positive progressiveness. The following graph illustrates students' skills during the learning improvement process of cycle 1 and cycle 2.
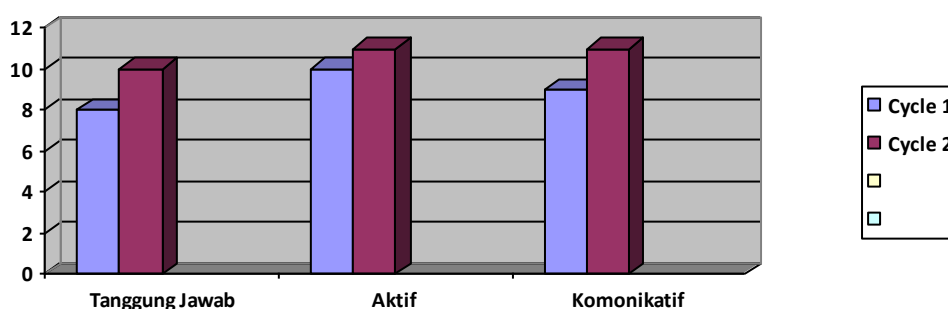
Graph 2. Student Activity Observation Data

The success reflected in the improvement of students' learning outcomes was not only seen in the improvement of their academic grades, but also in the improvement of critical thinking skills, the ability to work together, and the ability to solve problems independently. With an approach that was more focused on students' needs and facilitated by a supportive learning environment, social studies learning at Public Elementary School 071052 Mondrali could continue to develop and provide a sustainable positive impact on students.

CONCLUSIONS

Based on the results of the research that has been conducted, it can be concluded that the implementation of the Problem Based Learning (PBL) learning model on the material of natural and artificial features in Indonesia for grade V at Public Elementary School 071052 Mondrali has a positive impact. This is evident from the significant increase in learning achievement between cycle 1 and cycle 2. In cycle 1, only 3 students (27.3%) achieved completion, while in cycle 2, all students (100%) successfully completed social studies learning. In addition, the results of observations of student activities showed very good progress, with the development of positive attitudes reflected in the aspects of communication, activeness, and responsibility. Improvements in learning from cycle 1 to cycle 2 succeeded in improving these three aspects in students.

Follow-up Suggestions

The suggestions that I can put forward as a researcher in this study are that teachers need to increase the variety of learning methods to enrich students' experiences, provide more structured feedback to improve attitudes and skills, and strengthen the development of students' positive attitudes. In addition, providing more varied learning resources, such as videos or interesting learning media, can increase students' interest and understanding.

REFERENCES

Anjani, I. E., Natalia, D., Suprima, S., Tarina, D. D. Y., Anam, A. K., & Lewoleba, K. K. (2023). Sosialisasi Pentingnya Pendidikan Bagi Generasi Muda Demi Mewujudkan Indonesia Emas 2045. *Journal Of Human And Education (JAHE)*, *3*(4), 322–331.

Bebasari, M., & Suhaili, N. (2022). Perbedaan individu di dalam psikologi pendidikan. *Indonesian Journal of Counseling and Development*, *4*(1), 1–8. https://doi.org/10.32939/ijcd.v4i1.1117

Marfu'ah, M. (2021). Pendidikan Sepanjang Hayat dan Berbagai Implikasinya. *Pendidikan DAN Kajian Aswaja*, *7*(2), 87–100.

Riswanti, C., Halimah, S., Magdalena, I., & Silaban, T. S. (2020). Perbedaan Individu dalam Lingkup Pendidikan. *Jurnal Pendidikan Dan Dakwah*, *2*(1), 97–108. https://ejournal.stitpn.ac.id/index.php/pandawa

Sembiring, N. J., Silalahi, A., Maria, P., & Siagian, M. (2024). Pendidikan Sepanjang Hayat Untuk Menunjang Kompetensi Tenaga Pendidik. *AP-Kain Jurnal Mahasiswa*, *2*(2), 1–8.

Wandani, E., Sufhia, N. S., Eliawati, N., & Masitoh, I. (2023). Teori Kognitif dan Implikasinya Dalam Proses Pembelajaran Individu. *Madani : Jurnal Ilmiah Multidisipline*, *1*(5), 1–9. https://doi.org/10.29240/jbk.v1i2.331