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Improving the Learning Outcomes of Third-Grade Students at Bangsal 3 Elementary School Through the Implementation of the Problem-Based Learning Model in the Science and Social Studies Subject

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Abstract

Introduction to The Problem: The low learning outcomes in the IPAS subject (Natural and Social Sciences) among third-grade students at SD Negeri Bangsal 3 served as the basis for this study. Initial assessment showed that only 10 out of 28 students (35.7%) met the Minimum Mastery Criteria (KKM). **Purpose:** This research aims to improve students' academic achievement through the implementation of the Problem-Based Learning (PBL) model, which encourages active engagement and contextual problem solving. **Design/methods/approach:** The study employed a Classroom Action Research (CAR) approach based on the Kemmis and McTaggart model, conducted in two cycles during the second semester of the 2024/2025 academic year. The participants were 28 third-grade students. Data collection methods included observation, achievement tests, and documentation, which were analyzed using descriptive quantitative analysis. **Findings:** The findings revealed a significant improvement in learning outcomes: in Cycle I, the number of students achieving mastery increased to 17 (60.7%), and in Cycle II, it rose to 25 students (89.3%). **Research implications/limitations:** While the model yielded positive results, the study's limitations included the short implementation period and individual student differences. **Originality/value:** These findings highlight the originality and relevance of applying the PBL model in primary IPAS education, particularly for topics that require conceptual understanding and teamwork. The research provides valuable insights for primary school teachers in adopting adaptive, contextual, and student-centered learning strategies. It is recommended that the PBL model be further applied to other IPAS topics and combined with digital media for enhanced effectiveness.

Keywords: Problem-Based Learning; learning outcomes; IPAS; primary school; classroom action research

Introduction

Primary education is a crucial stage in forming the foundation of knowledge, character, and 21st-century skills in students. According to Susanto (2019), learning outcomes are the primary indicator of educational success, reflecting transformations in cognitive, affective, and psychomotor aspects following the learning process. Therefore, effective and meaningful learning processes are critical to achieving student learning outcomes. Traditional teacher-centered

learning, with minimal active participation and insufficient contextual relevance, risks leading to low engagement and learning achievements (Kusuma, 2021).

In the context of the Merdeka Curriculum, the learning paradigm shifts from a teacher-centered to a student-centered approach. This curriculum promotes differentiated, contextual, collaborative learning, as well as project- or real-world problem-based learning. One learning model that aligns with this direction is Problem-Based Learning (PBL). PBL positions students as active subjects who learn through authentic and contextual problem-solving processes that are relevant to their lives (Hakim, Rahmawati, & Putri, 2019). This model has been shown to develop critical thinking, creativity, collaboration, and communication skills across various education levels (Syafitri & Setyawan, 2020).

However, in practice, the implementation of innovative learning models like PBL remains suboptimal in many primary schools. Lecture methods and task assignments still dominate instruction, leading to low student participation and learning outcomes. This issue has also been observed at SD Negeri Bangsal 3 in Kediri, especially in grade III. Based on preliminary observations and assessments, only 10 out of 28 students (35.7%) met the Minimum Mastery Criteria (KKM) in the IPAS material "Unique Relationships in Living Organisms." Students tended to be passive, were less involved in group discussions, and showed low interest in learning.

Several previous studies have revealed the effectiveness of the Problem-Based Learning model in enhancing learning quality. Esema (2019) stated that PBL can improve student engagement and social skills at the elementary level. Kirana (2023) also demonstrated that the application of PBL optimizes concept understanding in thematic learning. However, research specifically examining PBL's application in grade III IPAS subjects, especially with an integrated science and social studies context, remains limited. This research gap is a key foundation for this study.

This research focuses on improving learning outcomes in the IPAS subject—one of the integrative subjects in the Merdeka Curriculum—through the implementation of PBL. Since IPAS integrates both natural and social sciences, it requires a learning approach that encourages deep conceptual understanding, not mere memorization. Therefore, IPAS learning demands strategies that activate comprehensive student thinking processes. PBL is considered an appropriate approach because it develops academic competencies as well as character values such as cooperation, responsibility, and problem-solving.

The choice of SD Negeri Bangsal 3 as the research location is not arbitrary. In addition to its limitations in implementing active learning, the school has shown readiness for innovation through active teacher involvement and support from the principal in the Field Experience Practice (PPL).

Moreover, grade III was chosen because students are in the concrete operational stage according to Piaget, which is ideal for the application of problem-based learning.

The primary goal of this research is to analyze and prove the effectiveness of the Problem-Based Learning model in improving the learning outcomes of grade III students at SDN Bangsal 3 in Kediri, specifically in the IPAS subject. In other words, this study aims not only to determine the extent to which the PBL model can enhance learning outcomes but also to evaluate how this model can create an active, reflective, and collaborative learning environment.

The results of this study are expected to contribute practically to improving IPAS teaching strategies in primary schools and provide theoretical insights into the development of contextual learning approaches. Furthermore, the findings are anticipated to serve as a reference for teachers and education practitioners in designing adaptive learning scenarios that meet student needs and are relevant to the challenges of the 21st century.

Literature Riview

Theories Supporting the Research

1. Learning Outcomes

   Learning outcomes are an important indicator in assessing the success of the educational process. According to Susanto (2019), learning outcomes encompass changes in the cognitive, affective, and psychomotor domains as a result of the learning interactions that occur. Learning outcomes not only reflect mastery of the material but also demonstrate the development of students' thinking abilities, attitudes, and skills. The more meaningful the learning process, the greater the likelihood that students will achieve optimal learning outcomes.

2. Problem Based Learning (PBL)

   Problem-Based Learning (PBL) is a student-centered learning model that emphasizes contextual problem-solving as the core of the learning activity. According to Hakim, Rahmawati, & Putri (2019), PBL is designed to encourage students' critical, collaborative, and reflective thinking skills through real-world problem-solving. This model allows students to explore, analyze, and formulate solutions with the guidance of the teacher as a facilitator. The main components of PBL include: (1) orientation to the problem, (2) organizing students for learning, (3) independent inquiry, (4) development and presentation of work, and (5) analysis and evaluation of the problem-solving process (Syafitri & Setyawan, 2020).

3. IPAS Learning in the Merdeka Curriculum

   IPAS (Science and Social Studies) in the Merdeka Curriculum integrates scientific and social concepts into daily life. IPAS learning is designed to help students understand natural and social

phenomena in a holistic way, while developing scientific thinking, communication, and collaboration skills. This curriculum encourages the use of active, exploratory, and contextual approaches, enabling students to build understanding through real-life experiences.

Relevant Previous Research

Research on Problem-Based Learning (PBL) has been widely conducted, showing positive results in enhancing student learning outcomes and skills. Idris, Sida, & Idawati (2019) in their study found that the implementation of PBL significantly improved the science process skills and learning outcomes of elementary school students. Through activities like formulating questions, gathering information, and engaging in discussions, students gained more meaningful learning experiences.

Esema (2019) also stated that PBL significantly increased student engagement and social interaction in elementary schools, which directly impacted their understanding of the material. Similarly, Kirana (2023) highlighted that the PBL model is effective in thematic learning, including IPAS, as it provides students with opportunities to analyze the relationships among living organisms more concretely.

Octaviana (2023) researched the implementation of PBL using the interactive media Wordwall in science learning and reported increased student learning activity and classical completion rates from cycle I to cycle II. These findings reinforce that combining PBL with contextual learning media is highly effective in IPAS learning.

A study by Rahayu & Sujana (2023) concluded that using engaging learning media, when combined with a problem-based approach, enhances student involvement and creativity in social studies learning. This demonstrates that innovative teaching strategies that actively involve students are highly relevant in the implementation of the Merdeka Curriculum.

Methods

Research Design

This research is conducted using the Classroom Action Research (CAR) method, based on the Kemmis and McTaggart (1988) model, which consists of four stages: planning, acting, observing, and reflecting. This approach is chosen because it aligns with the research objectives, which are to improve student learning outcomes through the systematic and collaborative implementation of the Problem-Based Learning (PBL) model.

Research Location and Time

The research is conducted at SD Negeri Bangsal 3 in Kediri City, East Java, during the even semester of the 2024/2025 academic year, specifically from March to April 2025. The selection of

this school is based on initial assessments showing low IPAS learning outcomes and the suboptimal implementation of active learning models. The school's environment, which supports innovation, was also a key consideration in choosing the research location.

Research Subjects

The subjects of this research are all 28 third-grade students of SD Negeri Bangsal 3, consisting of 16 male students and 12 female students. The sampling technique used is total sampling, as all students in the class are directly involved in the intervention. The researcher's role in the classroom as an observer and facilitator is crucial to the implementation process, with the assistance of the third-grade teacher as a collaborator.

Research Procedure

The research process is conducted in two cycles, with each cycle consisting of the following stages:

1. Planning (Perencanaan): This stage involves creating a Problem-Based Learning (PBL) teaching module, designing worksheets, preparing assessment instruments, and preparing supporting media and strategies for actively engaging students.
2. Action (Pelaksanaan Tindakan): Implementing IPAS learning using the PBL model, which integrates the stages of problem orientation, group discussions, information gathering, problem-solving, and presenting the results.
3. Observation (Observasi): Observing the learning process and recording data on student activity, group involvement, and classroom dynamics through the prepared observation sheets.
4. Reflection (Refleksi): Evaluating the results of the actions at the end of each cycle based on observation data and test results to determine the effectiveness of the PBL model and to develop improvements for the next cycle.

Data Collection Techniques and Instruments

Data collection is conducted through several techniques, namely:

1. Observation: Used to record student learning activities and teacher involvement during the learning process. Observations are carried out using a structured observation sheet.
2. Learning Outcome Test: Comprising multiple-choice questions and short essays aligned with the competency achievement indicators in the IPAS material. The test is administered at the end of each cycle to measure students' learning progress.
3. Documentation: Includes photos of activities, field notes, and student work as physical evidence of involvement and understanding during the learning process.

Data Analysis Techniques

The data is analyzed using a quantitative descriptive analysis method. The students' test results are calculated as the percentage of classical learning completeness, with the reference to the Minimum Mastery Criteria (KKM) set by the school, which is 70. The research is considered successful if at least 85% of students achieve or exceed the KKM score. Additionally, an increase in student engagement during the learning process serves as an additional indicator of the success of the intervention. To ensure the validity of the data, source and technique triangulation is used, which involves comparing data from observations, tests, and documentation. Reflection is conducted collaboratively between the researcher and the collaborating teacher to ensure objectivity in interpreting and planning corrective actions.

Result

Research Results

This research was conducted in the third-grade class at SD Negeri Bangsal 3 in Kediri City during the even semester of the 2024/2025 academic year, with a total of 28 students, consisting of 16 male students and 12 female students. The primary goal of this study was to improve student learning outcomes in the IPAS subject, specifically on the topic "Unique Relationships in Living Organisms," through the implementation of the Problem-Based Learning (PBL) model. The study was carried out in two cycles, each consisting of the stages of planning, action, observation, and reflection.

1. Pre-Cycle Results

Before the intervention, the researcher conducted an initial assessment of the students' learning outcomes. Based on the results of the pre-test, it was found that only 10 students (35.7%) achieved scores above the Minimum Mastery Criteria (KKM) of 70. A total of 18 students (64.3%) did not meet the KKM, with an average class score of 62.5. These results indicate that the conventional teacher-centered teaching method was not effective in promoting students' conceptual understanding to its full potential.

2. Cycle I Results

After the implementation of the PBL model in Cycle I, which involved problem-solving activities, group discussions, and information gathering, an improvement in learning outcomes was observed. A total of 17 students (60.7%) achieved learning mastery, and the average class score increased to 72.3. However, 11 students (39.3%) still did not meet the Minimum Mastery Criteria (KKM). This indicates that while the PBL approach showed positive effects, further adjustments and refinements are needed in the next cycle to ensure more students achieve mastery.

Table 1. Student Learning Outcomes in Cycle I

Category	Number of Students	Percentage	Average Score
Mastered (≥ 70)	17 students	60.7%	72.3
Not Mastered	11 students	39.3%	–

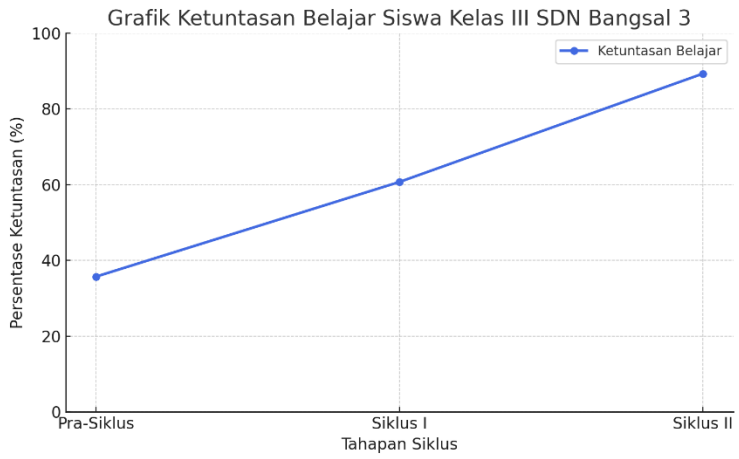
3. Cycle II Results

The reflections from Cycle I were used to strengthen the teaching strategies, such as providing scaffolding, using more contextual visual media, and offering more intensive support during group discussions. In Cycle II, student learning outcomes improved significantly. A total of 25 students (89.3%) achieved scores above the Minimum Mastery Criteria (KKM), with an average class score of 81.7. Only 3 students (10.7%) did not meet the KKM.

Table 2. Student Learning Outcomes in Cycle II

Category	Number of Students	Percentage	Average Score
Mastered (≥ 70)	25 students	89.3%	81.7
Not Mastered	3 students	10.7%	–

Figure 1. Percentage of Student Learning Mastery in Pre-Cycle, Cycle I, and Cycle II



Discussion

The research results show a significant improvement in learning outcomes from the pre-cycle to Cycle II. This change indicates that the implementation of the Problem-Based Learning (PBL) model positively impacts students' conceptual understanding and active participation in IPAS learning. This is in line with the views of Hakim, Rahmawati, and Putri (2019), who state that PBL helps students build understanding through hands-on experiences and real-world problem-solving.

The increase in the class's average score from 62.5 to 81.7 reflects the success of the PBL approach in creating a meaningful learning process. PBL emphasizes the discovery process, group

interactions, and reflection, allowing students not only to memorize concepts but also to understand and apply them in real-life contexts.

This study aligns with the findings of Idris, Sida, and Idawati (2019), which demonstrate that the implementation of PBL in elementary school students can improve science process skills and learning outcomes. Activities such as formulating questions, gathering information, and presenting solutions encourage students to actively construct their own knowledge.

In addition to improving cognitive achievement, PBL also provides space for students to practice teamwork and individual responsibility. In this study, students showed greater enthusiasm in Cycle II, with active participation in discussions and problem-solving. This supports the view of Esema (2019), who found that PBL enhances students' emotional and social engagement in the learning process.

Another study by Octaviana (2023) also proves that the application of PBL using interactive media like Wordwall can improve students' science learning outcomes in elementary school. Thus, combining a problem-based approach with the use of contextual media is highly recommended for IPAS learning.

Kirana's (2023) research further strengthens the notion that problem-based learning is particularly suitable for IPAS themes that require analytical understanding, such as the relationships between living organisms in ecosystems.

The implications of these findings suggest that the PBL model not only improves students' cognitive learning outcomes but also has a positive impact on their social and communication skills. Teachers are encouraged to play the role of facilitators, guiding students to explore knowledge independently rather than merely delivering content.

For future research directions, it is recommended that PBL be integrated with the use of interactive digital media or local wisdom to enhance the learning context. Furthermore, it is important to further explore how PBL can be adapted to online or blended learning environments.

Conclusion

Based on the results obtained, it can be concluded that the implementation of the Problem-Based Learning (PBL) model has proven to be effective in improving the quality of the learning process and outcomes for third-grade students in the subject of Science and Social Studies (IPAS). PBL encourages active student involvement through activities such as exploration, discussion, and collaborative problem-solving. This model has the potential to transform the traditional teacher-centered learning approach into student-centered learning. The increase in conceptual understanding, critical thinking abilities, and active participation in the learning process indicates that PBL creates meaningful and contextual learning experiences.

From a scientific contribution perspective, this finding reinforces the position of the Problem-Based Learning model as a relevant approach to support the implementation of the Merdeka Curriculum, especially in the development of 21st-century competencies such as collaboration, communication, and problem-solving. It also demonstrates that PBL can be effectively applied in IPAS learning at the elementary school level, even in classes with heterogeneous student characteristics.

The implications of this research provide a new direction in the practice of IPAS teaching in elementary schools, highlighting the importance of teachers designing problem-based learning that is contextual to students' real-world experiences. Thus, teachers are not only teaching for knowledge transfer but also shaping students' thinking processes and learning attitudes in an active, reflective, and independent manner.

This research recommends that elementary school teachers, particularly those teaching IPAS, consider using the PBL model as a student-centered learning alternative. This model can be adapted to various IPAS themes related to students' everyday lives and combined with appropriate learning media. Additionally, it is advised to continuously conduct reflection and evaluation of the learning process periodically to ensure that this model can be applied optimally and sustainably.

References

Aini, N. (2024). Penerapan media digital untuk meningkatkan kreativitas siswa dalam pembelajaran. *Jurnal Teknologi Pendidikan*, 12(1), 45–52.

Alfian, R., & Suparno, S. (2020). Pengaruh model PBL terhadap hasil belajar IPA siswa SD. Jurnal Pendidikan Dasar, 8(2), 103–110.

Arends, R. I. (2012). Learning to Teach (9th ed.). McGraw-Hill Education.

Aryani, D. (2021). Implementasi model pembelajaran berbasis masalah dalam meningkatkan kemampuan berpikir kritis. Jurnal Pendidikan dan Pengajaran, 14(1), 23–30.

Damayanti, M. I. (2023). Pengaruh penggunaan aplikasi Canva terhadap hasil menulis poster siswa SMP. Jurnal Bahasa dan Sastra Indonesia, 9(2), 88–95.

Djonomiarjo, H. (2019). Efektivitas model PBL dan konvensional terhadap hasil belajar ekonomi. Jurnal Pendidikan Ekonomi, 6(1), 15–22.

Esema, M. (2019). Problem based learning untuk meningkatkan keaktifan siswa sekolah dasar. Jurnal Inovasi Pendidikan Dasar, 4(2), 112–118.

Fadilah, N., & Suryani, A. (2020). Penerapan model PBL dalam pembelajaran IPA SD. Jurnal Pendidikan Dasar Indonesia, 5(1), 34–41.

Hakim, L., Rahmawati, D., & Putri, N. S. (2019). Efektivitas model problem based learning dalam meningkatkan hasil belajar IPA. Jurnal Ilmiah Pendidikan, 8(1), 33–40.

Harwati, R. (2021). Meningkatkan keterlibatan siswa melalui interaksi dalam pembelajaran. Jurnal Pendidikan dan Pembelajaran, 11(3), 56–63.

Idris, A., Sida, M., & Idawati, R. (2019). Penerapan problem based learning untuk meningkatkan hasil belajar IPA siswa SD. Jurnal Pendidikan Dasar Nusantara, 4(2), 93–102.

Johan, R., Sari, M. A., & Kartika, T. (2022). Pengaruh penggunaan Canva terhadap kemampuan menulis teks iklan siswa SMP. Jurnal Media Literasi Pendidikan, 5(1), 17–23.

Kirana, D. (2023). Implementasi model PBL pada pembelajaran tematik di sekolah dasar. Jurnal Pendidikan Dasar Nusantara, 7(1), 25–34.

Kurniasih, I., & Sani, B. (2017). Ragam model pembelajaran. Kata Pena.

Kusuma, Y. (2021). Hubungan kualitas pembelajaran dengan hasil belajar siswa. Jurnal Evaluasi Pendidikan, 12(2), 45–52.

Kusumawati, S., Handayani, I., & Pratama, B. (2023). Pelatihan desain poster digital menggunakan Canva bagi siswa SMA. Jurnal Pengabdian Masyarakat Digital, 2(2), 60–66.

Lestari, P., & Yuliana, S. (2020). Pengembangan keterampilan berpikir kritis melalui model pembelajaran berbasis masalah. Jurnal Pendidikan Karakter, 10(1), 45–56.

Marlina, S., & Hidayat, R. (2019). Implementasi model pembelajaran PBL untuk meningkatkan hasil belajar siswa. Jurnal Inovasi Pendidikan Sekolah Dasar, 5(2), 34–41.

Mulyasa, E. (2018). Pengembangan dan implementasi Kurikulum 2013. Remaja Rosdakarya.

Octaviana, R. (2023). Penerapan PBL berbasis Wordwall untuk meningkatkan hasil belajar IPA siswa SD. Jurnal Pendidikan Inovatif, 10(1), 89–97.

Puspitasari, D., & Wahyuniarti, E. (2024). Media interaktif Canva dalam pembelajaran Bahasa Indonesia. Jurnal Media Pembelajaran Dasar, 6(1), 15–22.

Rahayu, T., & Sujana, I. M. (2023). Efektivitas media Canva dalam peningkatan keterampilan visual siswa SD. Jurnal Teknologi dan Pendidikan, 4(3), 101–108.

Riyanto, Y. (2010). Metodologi penelitian pendidikan. UNESA University Press.

Rosyidah, U. (2021). Strategi pembelajaran kolaboratif untuk membentuk karakter siswa SD. Jurnal Pendidikan Dasar dan Karakter, 8(1), 78–85.

Safrida, N. (2020). Penerapan PBL dalam meningkatkan hasil belajar IPA. Jurnal Ilmu Pendidikan Dasar, 5(2), 77–84.

Santrock, J. W. (2012). Educational psychology. McGraw-Hill.

Sartika, F., & Nugroho, H. (2022). Pengaruh model PBL terhadap hasil belajar IPA. Jurnal Pendidikan Dasar Indonesia, 7(3), 56–64.

Siregar, D., & Silitonga, R. (2020). Penerapan PBL dalam pembelajaran IPAS di sekolah dasar. Jurnal Inovasi Pendidikan Dasar, 6(1), 112–120.

Sugiyono. (2018). Metode penelitian pendidikan: Pendekatan kuantitatif, kualitatif, dan R&D. Alfabeta.

Sukardi. (2020). Evaluasi pendidikan dan pembelajaran. Bumi Aksara.

Susanto, A. (2019). Teori belajar dan pembelajaran di sekolah dasar. Kencana.

Syafitri, N. L., & Setyawan, D. (2020). Problem based learning untuk pengembangan keterampilan berpikir tingkat tinggi. Jurnal Ilmiah Pendidikan dan Pembelajaran, 9(1), 21–30.

Tanjung, F., & Faiza, R. (2019). Canva sebagai media pembelajaran desain poster. Jurnal Teknologi Pendidikan, 11(2), 70–79.

Trianto. (2014). Model pembelajaran terpadu. Bumi Aksara.

Utami, S. N., & Prasetyo, E. (2021). Pengaruh PBL terhadap hasil belajar IPA tema makhluk hidup dan lingkungannya. Jurnal Edukasi Dasar, 9(2), 88–96.

Wulandari, T., & Hartati, S. (2022). Pembelajaran IPAS berbasis masalah untuk meningkatkan keterampilan berpikir kritis siswa. Jurnal Pendidikan Dasar Indonesia, 8(1), 40–48.

Yamin, M. (2015). Strategi pembelajaran konstruktivistik dalam pendidikan karakter. Referensi.