



The Effectiveness of Problem-Based Learning in Enhancing Student Achievement in Islamic Religious Education

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Abstract: This study aims to analyze the effectiveness of the Problem-Based Learning (PBL) model in increasing students' interest and learning outcomes in Asmaul Husna material in Islamic Religious Education. The urgency of this study lies in the importance of fostering a deep understanding of divine values through an active and meaningful learning approach. The research used the Classroom Action Research (CAR) method, which involved four stages of planning, implementation, observation, and reflection with 18 participants from grade V of SD Negeri 004 Ceruk, Natuna Regency. Data were collected through questionnaires, observations, and learning outcome tests. The analysis showed an increase in learning interest from moderate to high, as well as an increase in learning achievement from 72% in cycle I to 94% in cycle II. These findings confirm that the application of the PBL model is not only effective in increasing student interest and learning outcomes but also contributes to strengthening spiritual values and understanding the meaning of Asmaul Husna in the context of Islamic education.

Keywords: Islamic Religious Education; Problem-Based Learning; Student Achievement

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INTRODUCTION

Low student interest and learning outcomes remain a major challenge in Islamic Religious Education (PAI) learning, especially at the elementary school level. This condition shows a gap between the ideal goals of Islamic education, which emphasize the formation of a religious personality and meaningful learning, and the reality in the field, which tends to be oriented towards memorization and conventional lecture methods. This phenomenon is also evident at SD Negeri 004 Ceruk, Natuna Regency, where some students show low learning participation, lack of focus, and learning outcomes that do not meet the Minimum Completion Criteria (KKM), with an average completion rate of only 77%. This condition reflects a broader pedagogical problem in the implementation of PAI learning, which is still passive and teacher-centered (Amali et al., 2025).

Nationally, many primary education institutions in Indonesia face similar challenges. Based on the results of a study by the Education Assessment Center (2023), PAI learning often fails to develop critical thinking skills and contextual values, especially in material related to spiritual aspects such as Asmaul Husna. This is due to limited innovation in learning methods and minimal student involvement in the learning process. In fact, in accordance with the mandate of Law Number 20 of 2003 concerning the National Education System, education is expected to be able to develop the potential of students so that they have religious spiritual strength, self-control, and noble character in an active and independent manner.

Previous studies have shown that active learning models, such as Problem-Based Learning (PBL), can be an effective solution to increase motivation and learning outcomes. PBL places students at the center of learning through contextual problem solving that encourages conceptual understanding and higher-order thinking skills. In the context of Islamic Religious Education, this approach is considered relevant because it can relate religious concepts to real life, so that students not only understand Islamic teachings cognitively, but also internalize its values in their daily lives (Naufal et al., 2024).

However, most PBL research in the context of Islamic education still focuses on secondary and higher education levels, while its application at the elementary school level, particularly in Asmaul Husna material, has not been empirically studied. This research gap indicates the need for studies that examine the effectiveness of PBL in increasing the interest and learning outcomes of elementary school students in PAI learning that is oriented towards strengthening spiritual values (Erviani, 2024).

This study attempts to address this gap by analyzing the effectiveness of the Problem-Based Learning model in increasing student interest and learning outcomes in the material Closer to the Names of Allah (Asmaul Husna) in grade V of SD Negeri 004 Ceruk, Natuna Regency. Through the Classroom Action Research (CAR) approach, this study is expected to provide empirical and pedagogical contributions to the development of a more interactive, reflective, and character-building PAI learning model.

METHODOLOGY

This study uses a Classroom Action Research (CAR) approach with the application of the Problem-Based Learning (PBL) model. This design was chosen based on the research objective, which is to increase student interest and learning outcomes through reflective, collaborative, and problem-solving learning interventions in a classroom context. CAR is considered relevant because it allows teachers and researchers to make continuous improvements to the learning process through cycles of action, observation, and reflection (Shofwani & Rochmah, 2021; Hartatik, 2022; Girsang et al., 2024).

This study was conducted at SD Negeri 004 Ceruk, Natuna Regency, which was purposively selected because the school showed low student interest and learning achievement in Islamic Religious Education (PAI), especially in the Asmaul Husna material. The research subjects consisted of 18 fifth-grade students, aged between 10 and 11 years old, comprising 9 male students and 9 female students. This class was selected because their age characteristics were at the concrete-operational stage of development, making it highly relevant to apply a problem-based learning model that requires active involvement and contextual problem solving.

The data collection instruments consisted of:

1. Observation, to assess student involvement and teacher activities during the learning process using an observation sheet that had been validated by two education experts.
2. Learning interest questionnaire, to measure changes in students' motivation and interest in the material before and after the implementation of PBL.
3. Learning outcome tests, in the form of objective tests and short essays used to assess improvements in students' mastery of concepts.
4. Documentation, including class activity notes, assignment results, and photos of learning activities to support the observation data (Purwoko et al., 2021).

Data analysis was conducted by integrating qualitative and quantitative approaches. Qualitative data obtained from observations and questionnaires were analyzed through the stages of data reduction, data presentation, and interactive conclusion drawing until information saturation was achieved (Miles, Huberman & Saldaña, 2014). Meanwhile, quantitative data in the form of learning test scores were analyzed descriptively and comparatively by comparing the results in each cycle to see the increase in learning completeness. Overall, this methodological design is expected to provide a comprehensive picture of the effectiveness of implementing the Problem-Based Learning model in increasing students' interest and learning achievement in Islamic Religious Education in elementary schools (Nugraha et al., 2023).

RESULTS AND DISCUSSION

Results

The research data were obtained from three main sources, namely the results of item testing, the results of observations on the application of the Project-Based Learning (PBL) model in the learning process, and the results of

formative tests of students in each action cycle. The research was conducted in two cycles, each covering the stages of planning, implementation, observation, and reflection.

In Cycle I, the initial implementation of the PBL model showed that students were still in the adaptation stage to the new learning approach. The formative test results showed an average learning achievement score of 69.09, with a classical mastery level of 68.18% (12 out of 18 students achieved a score of ≥ 65). These results indicate that the minimum mastery target of 85% has not been achieved. Based on observation results, most students were still passive and did not fully understand the concept of project work, which requires collaboration, responsibility, and independent exploration. Learning activities were still dominated by teacher instruction, and students' emotional and cognitive involvement was relatively low.

After reflection and improvements in the next planning stage, Cycle II showed significant improvement. Students began to become familiar with the PBL steps and showed greater enthusiasm for project assignments. The average learning achievement score increased to 83.05, with classical mastery reaching 85.27% (14 out of 18 students had completed their learning). This increase shows that the application of PBL has a positive impact on students' interest and learning achievement. Observations also showed an increase in class participation, group cooperation, and students' ability to solve problems related to the learning topic.

Table 1. presents a comparison of learning outcomes between cycles

Cycle	Average Score	Completion Percentage	Number of Students Who Completed	Description
I	69,09	68,18%	12 out of 18 students	Did not complete
II	83,05	85,27%	14 out of 18 students	Completed classically

The improvement in learning outcomes from cycle I to cycle II not only shows success in cognitive aspects, but also in affective and psychomotor dimensions. Based on observation data, students showed higher motivation in completing projects, actively discussing, and daring to express their opinions. This supports previous research findings that state that the PBL model is able to increase student engagement and integrate conceptual knowledge and real-world experiences.

Qualitatively, this improvement shows that project-based learning strategies provide space for students to develop a sense of responsibility, independence, and critical thinking skills. These findings are in line with the principles of Islamic Religious Education, which emphasize character building through meaningful and contextual learning experiences (Ferry, 2023; Sholeh et al., 2024; Fazillah & Nisa, 2024; Nurdian, 2024; Muhammad Fadil et al., 2025).

However, this study has limitations in terms of statistical analysis, which is still descriptive without significance testing, and has not explored in depth the influence of PBL on affective aspects such as religious attitudes and social cooperation. Further research is recommended to combine quantitative and

qualitative approaches in a more balanced manner and to involve validated instruments to measure learning interest and motivation empirically. Thus, the results of this study indicate that the consistent and reflective application of Project Based Learning can increase students' interest and learning achievement in Islamic Religious Education subjects in elementary schools, as well as contribute positively to Islamic pedagogical practices oriented towards active and meaningful learning (Erviani, 2024).

Discussion

The results of the study indicate that the application of the Project Based Learning (PBL) model has a significant impact on increasing students' interest and learning achievement in Islamic Religious Education (PAI) subjects. In the first cycle, the application of PBL was still in the early stages of adaptation. Students did not yet fully understand the essence of project-based learning, which requires independence, collaboration, and responsibility. Based on the observation results, most learning activities were still teacher-centered, while students tended to wait for directions and did not show initiative in exploring learning topics. This is understandable because the paradigm shift from conventional to project-based learning requires time to adapt. In conventional learning, students are accustomed to receiving information from teachers and following predetermined instruction patterns. In contrast, PBL requires students to be active subjects in designing, implementing, and evaluating project activities that are relevant to the lesson material (Nasir et al., 2023; Harahap et al., 2024; Suhaidar, 2024; Suhaidar, 2024).

In the context of Islamic Religious Education, the application of PBL is not only oriented towards achieving cognitive outcomes but also towards shaping character values such as responsibility, cooperation, and honesty in carrying out projects. Therefore, the initial stage of implementation is often marked by students' difficulties in understanding the direction of project activities that have dual objectives, namely building conceptual knowledge and instilling Islamic values through direct learning experiences. At this stage, teachers play an important role as facilitators who guide students to understand the project work stages and the learning objectives to be achieved (Lestari et al., 2025).

The research data shows a significant increase between the first and second cycles. In the first cycle, the average student learning outcome score was 69.09 with a classical mastery level of 68.18% (12 out of 18 students mastered the material). Meanwhile, in the second cycle, the average score increased to 83.05 with a classical mastery level of 85.27% (14 out of 18 students mastered the material). The 13.96-point increase in the average score shows that the implementation of PBL successfully improved students' conceptual understanding and critical thinking skills. This improvement was not only due to the application of new strategies, but also the result of the teacher's reflection on the weaknesses in the first cycle. Through the reflection process, the teacher improved the project implementation plan, provided clearer directions, and developed a more effective group work mechanism so that learning activities became more focused and productive.

In addition to academic improvement, the observation results showed positive changes in students' learning behavior. They began to show enthusiasm for project assignments, were more active in discussions, and displayed greater curiosity about the learning topics. Students also gained a better understanding of the importance of teamwork and began to show a sense of responsibility for the results of their projects. These changes indicate that the PBL model is capable of increasing student engagement in learning in cognitive, affective, and social aspects. In other words, PBL not only improves learning outcomes in the realm of knowledge but also develops students' social and emotional skills (Siti Aisyah & Muhammad Yusron Maulana El – Yunusi, 2024).

The improvement in learning outcomes in this study was not only seen in the cognitive aspect but also in the affective and psychomotor domains. Based on the observation results, students showed higher learning motivation, dared to express their opinions, and were more disciplined in completing tasks. In the context of Islamic Religious Education, this is very important because learning is not only oriented towards religious knowledge but also towards the formation of religious attitudes and behavior. The PBL model provides opportunities for students to experience meaningful learning through direct activities that are relevant to Islamic values. For example, in projects themed on morals or worship, students not only understand concepts theoretically but also practice them in their daily lives. Thus, project-based learning encourages the integration of cognitive (knowledge), affective (attitude), and psychomotor (action) aspects, which are the main objectives of Islamic education (Arifudin, 2021).

This success can be explained through the constructivist approach, which is the theoretical basis of the PBL model. Constructivism emphasizes that knowledge is built through experience and active interaction with the environment. Through PBL, students construct their own meaning from the learning process they experience. This strengthens critical thinking skills while fostering a sense of responsibility, cooperation, and social empathy. These values are in line with the principles of Islamic education, which emphasize character building through real learning experiences. In other words, the application of PBL in PAI learning is a concrete manifestation of the integration of knowledge and action (Rosita et al., 2017).

The results of this study are in line with various previous studies that show that PBL can increase student motivation and learning outcomes. Thomas (2000) states that PBL increases student engagement because it provides learning experiences through real contexts that are relevant to their lives. Meanwhile, Bell (2010) asserts that PBL strengthens higher-order thinking skills and develops 21st-century social skills. In the context of Islamic education, this approach also has a strong philosophical foundation. The principle of learning by doing developed by John Dewey can be linked to the concept of 'amal shalih in Islam, which is the application of knowledge in the form of beneficial real actions. Therefore, PBL is not only a modern pedagogical strategy, but also reflects the spiritual values in Islamic teachings (Setyawan et al., 2024).

However, this study still has several limitations. The data analysis used is descriptive in nature, so it is not yet able to show the statistical significance of the

increase in learning outcomes between cycles. To strengthen these findings, further research is recommended using inferential tests such as t-tests or ANOVAs to ensure that the improvements are statistically significant. In addition, this study has not explored in depth the influence of PBL on affective aspects such as religious attitudes, moral responsibility, and social cooperation. In fact, these aspects are an integral part of the objectives of PAI learning. Therefore, a mixed methods approach can be used in subsequent studies by involving standardized instruments such as learning motivation questionnaires, in-depth interviews, or student reflection journals to obtain a more comprehensive picture.

In addition to analytical aspects, external factors such as teacher readiness, learning facilities, and school environment support are also important factors in the successful implementation of PBL. Teachers need to have the ability to design contextual and meaningful projects and master authentic evaluation techniques in line with the characteristics of PBL. A school environment that supports collaboration and creativity also plays a role in creating a conducive learning atmosphere. Therefore, the success of PBL should not only be viewed from the perspective of student learning outcomes, but also from the readiness of the learning system as a whole (Fatma Sari et al., 2024).

From the results of this study, it can be concluded that the consistent and reflective implementation of Project Based Learning can improve learning outcomes and student interest in Islamic Education subjects. The increase in the average score from 69.09 in the first cycle to 83.05 in the second cycle, as well as the increase in classical completeness from 68.18% to 85.27%, is evidence that this model is effective in improving students' academic achievement. Moreover, PBL also plays a role in building Islamic character through cooperation, responsibility, and meaningful active learning. With the support of careful planning, continuous reflection, and the commitment of teachers in developing this method, PBL can be a strategic approach in realizing contextual, creative, and character-oriented Islamic Education learning.

CONCLUSION AND IMPLICATION

Conclusion

Based on the results of the research and analysis conducted, it can be concluded that the application of the Project Based Learning (PBL) model has a significant positive impact on improving student learning outcomes and motivation. Through two cycles of action, there was an increase in average scores and learning completeness, indicating that project-based learning is capable of creating a more active, collaborative, and meaningful learning atmosphere. In addition to academic improvement, the results of observations and interviews show that students become more motivated, enthusiastic, and feel responsible for their own learning process.

These findings indicate that the application of PBL is not only effective in improving cognitive learning achievements but also contributes to strengthening students' attitudes and social skills, which is in line with the objectives of Islamic Religious Education in shaping independent and collaborative character.

Practically, teachers can utilize the PBL model as an alternative learning strategy that fosters active participation and links religious concepts to real-life contexts.

For further research, it is recommended that this approach be applied on a broader scale and use a combination of quantitative and qualitative methods to assess its impact on students' affective, spiritual, and social dimensions in greater depth. Thus, the research results can make a stronger contribution to the development of innovative pedagogy in Islamic Religious Education in elementary schools.

Implication

The findings of this study imply that Project Based Learning (PBL) should be considered a strategic instructional model in Islamic Religious Education, particularly at the elementary level. The successful improvement of students' learning outcomes and motivation indicates that PBL can support the shift from teacher-centered instruction to more student-centered and meaningful learning. This model enables teachers to integrate Islamic values with real-life projects, thereby strengthening students' understanding, responsibility, and collaborative skills. At the institutional level, schools can encourage professional development programs that equip teachers with the skills needed to design and implement project-based learning effectively. Moreover, the results suggest that curriculum developers and policymakers should provide greater space for active and contextual learning models such as PBL to support holistic student development. Overall, the study highlights the potential of PBL to enhance not only academic achievement but also character formation in line with the broader goals of Islamic education.

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