

Efforts to Improve Student Learning Outcomes Using the Project-Based Learning Model in PAI and BP Subjects

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Abstract

The Project Based Learning model is an innovative, student-centered learning model, where students are actively involved in solving problems or completing authentic and meaningful projects. In this context, this study aims to explore the application of the Project Based Learning model in Islamic Religious Education (PAI) learning as an effort to improve student learning outcomes and the effectiveness of student creativity. The purpose of this study is to determine efforts to improve student learning outcomes by using the project-based learning model in Islamic Religious Education and Social Studies subjects at SDN 11 Cilegon City. The method of this study is PTK. PTK is an abbreviation of Classroom Action Research. Classroom Action Research is a research method carried out by teachers in their own classes to improve the learning process and improve student performance. The results of this study indicate that the achievement of student learning outcomes after participating in the learning process is still in the category of not being fully optimal. Based on the minimum completeness criteria (KKM) of 75, data obtained show that some students have achieved learning completeness, while others have not. Students who achieve a score of ≥ 75 are declared complete, while students with scores below the KKM are declared not yet complete. This condition indicates that there is variation in students' academic abilities, and shows that the learning process implemented needs to be increased in its effectiveness in order to be able to improve learning outcomes evenly.

Keywords

Efforts; Improve Student; Learning Outcomes; Project-Based Learning Model in PAI; BP Subjects



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INTRODUCTION

Education is widely recognized as one of the most important indicators of a nation's development and progress. A country with a high-quality education system tends to demonstrate stronger economic growth, social stability, and human resource development. Education serves as a conscious and systematic effort to transmit knowledge, values, skills, and cultural heritage from one generation to the next. Through educational processes, individuals

acquire the competencies necessary to participate effectively in society and contribute to national development. Education involves dynamic interactions between educators and learners aimed at facilitating intellectual growth, character formation, and lifelong learning. Furthermore, education occurs not only in formal institutions such as schools and universities but also within families, communities, and broader social environments, making it a continuous and comprehensive process throughout life (UNESCO, 2021).

The primary purpose of education extends beyond the mere transfer of academic knowledge. It seeks to develop learners holistically by fostering cognitive, social, emotional, and physical competencies. Effective education equips individuals with critical thinking skills, problem-solving abilities, communication competencies, and the capacity to adapt to changing societal demands. In addition, education plays a vital role in nurturing ethical values, social responsibility, and moral character. Through educational experiences, learners develop awareness of their rights and responsibilities as citizens, enabling them to participate actively and responsibly in democratic societies. Therefore, education serves as a foundation for personal growth, social cohesion, and sustainable development in contemporary societies (OECD, 2019).

Within the Indonesian educational context, Islamic Religious Education (Pendidikan Agama Islam/PAI) occupies a strategic position in shaping students' faith, religious understanding, and moral behavior. PAI is not only intended to provide students with religious knowledge but also to cultivate spiritual awareness, ethical conduct, and positive character traits that can guide their daily lives. The success of Islamic Religious Education largely depends on the effectiveness of instructional strategies employed by teachers. Consequently, educators are encouraged to implement innovative learning models that actively engage students and enhance their learning outcomes. The selection of appropriate learning methods is essential because it directly influences students' motivation, participation, and achievement in the learning process (Alim, 2018).

One instructional approach that has gained considerable attention in recent years is Project-Based Learning (PjBL). This student-centered learning model is rooted in the progressive educational philosophy of John Dewey, who emphasized learning through experience and active engagement. Project-Based Learning encourages students to investigate authentic problems, collaborate with peers, and produce meaningful products or solutions. Rather than relying on passive knowledge transmission, PjBL emphasizes inquiry, critical thinking, creativity, and real-world application of concepts. Research has consistently demonstrated that Project-Based Learning can significantly improve students' academic achievement, learning motivation, and higher-order thinking skills by actively involving them in meaningful learning experiences (Bell, 2010).

Project-Based Learning is particularly relevant in Islamic Religious Education because it allows students to connect religious concepts with practical situations encountered in everyday life. Through project-based activities, students are encouraged to explore religious values, analyze contemporary issues from Islamic perspectives, and apply their understanding in meaningful contexts. Such learning experiences foster deeper conceptual understanding while

simultaneously developing collaboration, communication, and problem-solving skills. Moreover, the implementation of Project-Based Learning supports the development of student creativity and independence, which are essential competencies in the twenty-first century. Therefore, integrating PjBL into PAI instruction has the potential to enhance both academic performance and character development among students (Thomas, 2000).

Based on preliminary observations conducted at SDN 11 Kota Cilegon, several challenges were identified regarding students' understanding of learning materials, conceptual comprehension, and overall learning outcomes in Islamic Religious Education classes. Many students demonstrated difficulties in grasping key concepts and applying their knowledge effectively. These findings indicate the need for instructional improvements that can increase student engagement and facilitate deeper understanding. To address these challenges, the teacher implemented the Project-Based Learning model as an alternative instructional strategy. This approach was selected because it emphasizes active student participation and experiential learning, which are expected to improve learning outcomes and strengthen conceptual mastery among learners (Sani, 2014).

This study employed Classroom Action Research (CAR) as its methodological framework. Classroom Action Research is a reflective and cyclical process conducted by teachers or researchers to improve teaching practices, learning processes, and educational outcomes. Through systematic planning, implementation, observation, and reflection, CAR enables educators to identify classroom problems and develop effective solutions based on empirical evidence. Accordingly, this research aims to examine the effectiveness of Project-Based Learning in improving students' learning outcomes in Islamic Religious Education and Character Education (PAI and BP) at SDN 11 Kota Cilegon. The findings of this study are expected to contribute to the development of innovative instructional practices and provide practical guidance for educators seeking to create engaging, meaningful, and student-centered learning environments (Kemmis, McTaggart, & Nixon, 2014).

METHODS

The subjects of this Classroom Action Research (CAR) consisted of 35 fourth-grade students at SDN 11 Kota Cilegon. These students were selected as the participants because the researcher identified learning difficulties related to understanding concepts and achieving satisfactory learning outcomes in Islamic Religious Education and Character Education (PAI and BP). The study focused on improving students' academic achievement through the implementation of the Project-Based Learning model. The research was conducted in the fourth-grade classroom of SDN 11 Kota Cilegon, which served as the primary setting for all research activities, observations, and interventions. The school was chosen because preliminary observations revealed that many students experienced challenges in comprehending learning materials and applying concepts effectively during classroom instruction (Creswell & Creswell, 2018).

This study employed Classroom Action Research (CAR), a research method commonly used by educators to improve teaching practices and learning outcomes within their own classrooms. Classroom Action Research is characterized by a systematic and reflective process that enables teachers to identify educational problems, implement interventions, observe their effects, and make improvements based on evidence collected during the study. According to Kemmis and McTaggart (2014), CAR is a form of self-reflective inquiry conducted by practitioners to improve the rationality and justice of educational practices. Similarly, Sagala (2013) argues that CAR allows teachers to enhance instructional quality through the exploration and application of various learning strategies. Furthermore, Sujana (2019) emphasizes that CAR involves planning, implementing, and evaluating actions designed to improve teaching and learning processes. Therefore, Classroom Action Research was considered the most appropriate method for investigating the effectiveness of Project-Based Learning in enhancing students' learning outcomes (Kemmis, McTaggart, & Nixon, 2014).

The research procedure adopted the Classroom Action Research model developed by Kemmis and McTaggart, which is an extension of Lewin's action research framework. This model consists of cyclical stages that include planning, action and observation, and reflection. The cyclical nature of the model enables continuous improvement of teaching practices through repeated evaluation and modification of instructional strategies. In the planning stage, the researcher prepared lesson plans, learning materials, assessment instruments, and project activities aligned with the objectives of Project-Based Learning. Careful planning was conducted to anticipate potential challenges and ensure that learning activities would effectively address students' learning needs. The action stage involved implementing the planned instructional activities in the classroom, while the observation stage focused on monitoring student participation, engagement, and learning progress throughout the learning process. Finally, the reflection stage was conducted to analyze the outcomes of the intervention, identify strengths and weaknesses, and determine necessary improvements for subsequent cycles (Kemmis et al., 2014).

The first cycle consisted of four stages: planning, action, observation, and reflection. During the planning phase, the researcher designed learning activities based on Project-Based Learning principles and prepared all necessary instructional resources. In the action phase, the learning activities were implemented systematically, encouraging students to participate actively in project-based tasks. Observation was conducted simultaneously to document student behavior, classroom interactions, learning difficulties, and responses to the instructional approach. Reflection was then carried out to evaluate the effectiveness of the intervention and identify areas requiring improvement. The second cycle was designed based on the results of the first cycle's reflection. If students failed to achieve the predetermined Minimum Mastery Criterion (KKM) during the first cycle, a second cycle would be implemented with necessary modifications. However, if students successfully met the expected learning outcomes during the first cycle, the research would be concluded without proceeding to a second cycle (Mertler, 2021).

Data were collected using three primary techniques: observation, tests, and documentation. Observation was used to gather qualitative data regarding students' participation, engagement, and responses during learning activities. Tests were administered to measure students' learning outcomes and evaluate the effectiveness of the Project-Based Learning model in improving academic achievement. Documentation techniques were employed to collect supporting evidence, including lesson plans, student assignments, photographs, and other relevant records related to the research process. The combination of these data collection techniques provided comprehensive information regarding both the learning process and learning outcomes (Ary, Jacobs, Irvine, & Walker, 2019).

The data analysis process involved both qualitative and quantitative approaches. Qualitative data obtained through observations were analyzed descriptively to identify patterns of student behavior, participation, and classroom interactions during the implementation of Project-Based Learning. Quantitative data derived from students' test scores were analyzed to determine improvements in academic performance across research cycles. This mixed approach enabled the researcher to evaluate not only the effectiveness of the instructional intervention but also the learning experiences of students throughout the research process (Miles, Huberman, & Saldaña, 2014).

The success indicator of this Classroom Action Research was determined based on students' achievement of the Minimum Mastery Criterion (KKM). The research was considered successful if students achieved a minimum score of 70, which represents the mastery standard established by the school. The attainment of this criterion indicated that the implementation of Project-Based Learning had effectively improved students' learning outcomes in Islamic Religious Education and Character Education. Therefore, the achievement of the KKM served as the primary benchmark for evaluating the success of the intervention and determining whether further action cycles were necessary (Arikunto, Suhardjono, & Supardi, 2017).

FINDINGS AND DISCUSSION

Based on the results of observations and assessments conducted during the pre-cycle stage, it was found that the learning outcomes of fourth-grade students at SDN 11 Kota Cilegon in Islamic Religious Education and Character Education (PAI and BP), particularly on the topic of the authenticity of the story of Prophet Muhammad (peace be upon him), were still relatively low. The average score achieved by the students was 62, with the highest score reaching 80 and the lowest score recorded at 20. Out of the 35 students participating in the study, only 14 students (40%) successfully met the Minimum Mastery Criterion (KKM), while the remaining 21 students (60%) failed to achieve the required standard of 75. These findings indicate that the majority of students had not yet mastered the learning objectives expected for the topic. The low level of achievement observed during the pre-cycle stage highlighted the need for instructional improvements to enhance students' understanding and academic performance in Islamic Religious Education (Slavin, 2018).

The relatively low learning outcomes can be attributed to several instructional factors identified during classroom observations. Teaching activities were primarily dominated by the lecture method, where the teacher served as the main source of information while students assumed passive roles during the learning process. Such a teacher-centered approach limited opportunities for students to actively engage with learning materials, participate in discussions, and construct their own understanding of historical and religious concepts. As a result, many students experienced difficulties in comprehending the content related to the life and teachings of Prophet Muhammad (peace be upon him). Furthermore, the limited interaction and participation observed in the classroom contributed to low learning motivation and reduced enthusiasm among students. Previous studies have shown that passive instructional methods often hinder students' conceptual understanding and negatively affect learning achievement, particularly in subjects requiring critical reflection and contextual understanding (Hattie, 2009).

The data obtained during the pre-cycle stage, as presented in Tables 1 and 2, further illustrate the distribution of students' learning achievement levels. Among the 35 students, five students were categorized as having very low achievement, while eleven students fell into the low-achievement category. Additionally, nine students achieved scores within the moderate category, and only three students reached the high-achievement category. These results suggest that a substantial proportion of students struggled to understand the material adequately and were unable to demonstrate satisfactory mastery of the learning objectives. The distribution of scores reveals a significant learning gap among students and indicates that the instructional methods employed prior to the intervention were insufficient to support optimal learning outcomes. Such findings emphasize the importance of implementing more innovative and student-centered learning strategies capable of increasing engagement, participation, and conceptual understanding (Tomlinson, 2017).

Overall, the findings from the pre-cycle stage demonstrate that students' learning outcomes had not yet reached the expected level of mastery established by the school. The majority of students remained below the Minimum Mastery Criterion, indicating that the learning objectives for the topic had not been successfully achieved. The prevalence of students within the low and very low achievement categories further confirms that improvements in instructional practices were necessary. Consequently, the implementation of the Project-Based Learning (PjBL) model was considered an appropriate intervention to address these challenges by promoting active participation, collaborative learning, and meaningful engagement with the subject matter. Through this innovative learning approach, it was expected that students would develop a deeper understanding of the authenticity of the story of Prophet Muhammad (peace be upon him) and achieve improved academic performance in subsequent learning cycles (Bell, 2010).

The Effect of Project-Based Learning on Students' Learning Outcomes in Islamic Religious Education and Character Education

Cycle I Implementation

The first cycle of the Classroom Action Research was conducted on Saturday, June 29, 2024, and consisted of two instructional meetings totaling three class periods. During this cycle, the Project-Based Learning (PjBL) model was implemented in teaching the topic of the authenticity of the story of Prophet Muhammad (peace be upon him) in Islamic Religious Education and Character Education (PAI and BP). The results of the achievement tests and classroom observations revealed a noticeable improvement in students' learning outcomes compared to the pre-cycle stage. The average score increased from 62 to 74, indicating that students demonstrated a better understanding of the learning material after participating in project-based learning activities. Out of 35 students, 20 students (69%) successfully achieved the Minimum Mastery Criterion (KKM), while 9 students (31%) remained below the required standard. These findings suggest that the implementation of Project-Based Learning positively influenced students' academic performance and engagement in the learning process (Bell, 2010).

Further analysis of the score distribution showed that one student remained in the very low achievement category, five students were categorized as low achievers, fifteen students achieved moderate scores, and fourteen students reached the high-achievement category. Compared with the pre-cycle results, this distribution demonstrates a clear shift toward higher levels of achievement and conceptual understanding. Classroom observations also indicated increased student participation, collaboration, and enthusiasm during learning activities. Students became more actively involved in discussions, group work, and project completion, reflecting the student-centered nature of Project-Based Learning. However, despite these positive developments, the overall classical mastery level had not yet reached the expected target of at least 75%. Several challenges were still observed, including unequal participation among group members, difficulties maintaining concentration during collaborative tasks, and variations in students' understanding of the learning material. Consequently, although the first cycle demonstrated promising results, further improvement was necessary, leading to the implementation of a second cycle (Thomas, 2000).

Cycle II Implementation

The second cycle was conducted following the reflection and evaluation of the first cycle. Similar to the previous cycle, the implementation took place on Saturday, June 29, 2024, through two instructional meetings focusing on the same learning topic, namely the authenticity of the story of Prophet Muhammad (peace be upon him). The Project-Based Learning model continued to serve as the primary instructional approach, with several improvements incorporated based on the findings from Cycle I. Additional learning support activities, such as reviewing learning materials and encouraging students to summarize key concepts before project implementation, were introduced to strengthen students' preparedness and understanding. These modifications aimed to address the challenges

identified during the first cycle and further enhance student learning outcomes (Larmer, Mergendoller, & Boss, 2015).

The results obtained during Cycle II demonstrated substantial improvement in students' academic achievement. The average learning outcome score increased to 77, representing an improvement of three points compared to Cycle I. The highest score achieved by students was 85, while the lowest score increased to 65. More importantly, the percentage of students achieving mastery learning rose significantly to 86%, with 30 students successfully meeting or exceeding the Minimum Mastery Criterion and only 5 students remaining below the expected standard. These findings indicate that the modifications implemented during Cycle II effectively enhanced students' comprehension of the learning material and contributed to higher academic performance. Because the mastery level exceeded the predetermined success indicator, the researcher concluded that additional action cycles were unnecessary (Mertler, 2021).

The distribution of student achievement categories in Cycle II further confirmed the effectiveness of the intervention. No students remained in the very low achievement category, while only one student was classified within the low-achievement category. Thirteen students achieved moderate scores, and twenty-one students reached the high-achievement category. Compared to previous stages, these results demonstrate a substantial shift toward higher academic performance and greater mastery of the learning content. Classroom observations also revealed significant improvements in student engagement and learning behavior. Students appeared more confident in expressing ideas, participating in discussions, and responding to questions posed by the teacher. Learning activities became increasingly interactive, communicative, and conducive to meaningful knowledge construction. These outcomes suggest that Project-Based Learning not only improved academic achievement but also fostered positive learning attitudes and active participation among students (Krajcik & Blumenfeld, 2006).

Improvement of Learning Outcomes from Pre-Cycle to Cycle II

The overall findings of the study demonstrate a gradual and significant improvement in students' learning outcomes throughout the implementation of Classroom Action Research. The average score increased from 62 during the pre-cycle stage to 74 in Cycle I and further improved to 77 in Cycle II. Similarly, the percentage of students achieving mastery learning increased consistently, rising from 40% during the pre-cycle stage to 69% in Cycle I and ultimately reaching 86% in Cycle II. The increase in learning achievement from the pre-cycle to Cycle I was 19.35%, while an additional improvement of 23.07% was observed by the end of Cycle II. These results indicate that each instructional intervention contributed positively to enhancing students' understanding of the authenticity of the story of Prophet Muhammad (peace be upon him) and improving their overall academic performance (Slavin, 2018).

Based on the achievement of the predetermined success indicators and the substantial improvement in learning outcomes, it can be concluded that the implementation of the Project-Based Learning model was effective in improving students' learning achievement in Islamic

Religious Education and Character Education. The model successfully encouraged active learning, collaboration, critical thinking, and meaningful engagement with learning content. Furthermore, Project-Based Learning created a more dynamic and student-centered classroom environment, enabling learners to construct knowledge through authentic and purposeful activities. Therefore, the findings of this study support previous research emphasizing the effectiveness of Project-Based Learning as an innovative instructional strategy capable of enhancing both student understanding and academic achievement in religious education contexts (Bell, 2010; Thomas, 2000).

CONCLUSION

The Project Based Learning model is an innovative, student-centered learning model, where students are actively involved in solving problems or completing authentic and meaningful projects. In this context, this study aims to explore the application of the Project Based Learning model in Islamic Religious Education (PAI) learning as an effort to improve student learning outcomes and the effectiveness of student creativity. The purpose of this study is to determine efforts to improve student learning outcomes by using the project-based learning model in Islamic Religious Education and Social Studies subjects at SDN 11 Cilegon City. The method of this study is PTK. PTK is an abbreviation of Classroom Action Research. Classroom Action Research is a research method carried out by teachers in their own classes to improve the learning process and improve student performance. The results of this study indicate that the achievement of student learning outcomes after participating in the learning process is still in the category of not being fully optimal. Based on the minimum completeness criteria (KKM) of 75, data obtained show that some students have achieved learning completeness, while others have not. Students who achieve a score of ≥ 75 are declared complete, while students with scores below the KKM are declared not yet complete. This condition indicates that there is variation in students' academic abilities, and shows that the learning process implemented needs to be increased in its effectiveness in order to be able to improve learning outcomes evenly.

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