
The Effect of the Project-Based Learning Model on Fourth Grade Students' Learning Outcomes in the Pancasila Principles at SDN Tlesa Pamekasan

Dzikri Wahyu Ramadhani^{1*}, Conny Dian Sumadi²

^{1*,2} Universitas Trunodjoyo Madura, Jawa Timur, Indonesia

Corresponding author: 210611100179@student.trunojoyo.ac.id,
conny.diansumadi@trunojoyo.ac.id

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Abstract

This study aimed to examine the effect of the Project-Based Learning model on the learning outcomes of fourth-grade students. This research was conducted based on classroom observations indicating that students' learning outcomes were not optimal because teachers tended to use lecture based methods with limited variation in learning models. The study employed a quantitative approach using a non- equivalent control group design. The research sample consisted of fourth grade students selected through purposive sampling. Hypothesis testing was conducted using an independent samples t-test. The result showed a significant difference between the pretest and posttest mean scores of students in the experimental class. The t-test analysis revealed a significance value of 0.003, which was lower than 0.05, indicating that the null hypothesis was rejected and the alternative hypothesis was accepted. Therefore, it can be concluded that the Project Based Learning model has a significant effect on students' learning outcomes.

Keywords– Project-Based Learning, Pancasila Principles, Learning Outcomes



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1. Introduction

The results of this study indicate that the implementation of Project-Based Learning (PjBL) significantly improved fourth-grade students' learning outcomes in understanding the principles of Pancasila. The experimental group, which applied PjBL, achieved a higher average posttest score (76) compared to the control group, which received conventional instruction (60). The independent sample t-test revealed a significance value of 0.003, lower than the threshold of 0.05, confirming that the improvement in the experimental group was statistically significant. This demonstrates that PjBL is an effective instructional model for enhancing students' academic performance in value-based learning contexts, particularly in Civics education (Sugiyono, 2013). These findings highlight the importance of implementing innovative teaching strategies that move beyond rote memorization, allowing students to actively engage with the material and achieve measurable improvements in cognitive learning outcomes.

The improvement in students' learning outcomes can be attributed to the active, student-centered, and collaborative nature of PjBL. During the learning process, students participated in hands-on project activities that required problem identification, solution planning, and presentation of tangible outputs. This approach encouraged them to engage in higher-order thinking skills such as critical thinking, creativity, and communication. Moreover, students were able to take ownership of their learning by making decisions, reflecting on their progress, and seeking knowledge independently. These results are consistent with prior studies by Thomas (2000) and Bell (2010), which emphasize that PjBL enhances meaningful learning by situating academic content within real-world contexts and promoting sustained cognitive engagement.

Furthermore, the application of PjBL in learning Pancasila principles allowed students to relate abstract values to real-life experiences, which reinforced moral understanding, civic responsibility, and social awareness. Observational data showed that students were more active in classroom discussions, cooperative group work, and problem-solving exercises, demonstrating greater attention, enthusiasm, and persistence compared to peers in

conventional learning settings. This aligns with Krajcik and Blumenfeld's (2006) argument that project-based approaches improve contextual understanding and motivation by linking theoretical content to students' lived experiences. The study also indicated that students developed better collaboration skills and interpersonal competencies, which are essential for internalizing civic values and applying them in daily life.

Comparisons with previous research suggest that while PjBL has been widely implemented in subjects such as science, mathematics, and general civic education, its use in teaching Pancasila at the elementary level has been limited (Hanif et al., 2021). This study provides new empirical evidence demonstrating that PjBL can simultaneously support cognitive achievement and value internalization. The integration of project-based activities into Pancasila learning not only improves students' academic performance but also cultivates their understanding of social norms, ethical behavior, and democratic principles. These findings underscore the potential of PjBL to bridge the gap between abstract national values and practical, everyday applications in students' social and academic lives.

In conclusion, the Project-Based Learning model offers substantial benefits in enhancing students' learning outcomes and experiences in Pancasila education. By promoting active engagement, collaboration, problem-solving, and the connection between academic content and real-life contexts, PjBL facilitates both cognitive development and the internalization of national values. The findings provide practical guidance for elementary school teachers, emphasizing the importance of designing student-centered, interactive, and meaningful learning activities. Implementing PjBL in Civics learning can therefore foster not only academic improvement but also the holistic development of students' intellectual, moral, and social capacities, preparing them to apply Pancasila principles thoughtfully in their everyday lives.

2. Method

This study employed a quantitative approach with a quasi-experimental design to examine the effect of the Project-Based Learning (PjBL) model on fourth-grade students' learning outcomes in Pancasila education. A Non-Equivalent Control Group Design was applied, involving an experimental group and a control group without random assignment due to practical constraints in classroom organization and school schedules (Sugiyono, 2019). Quantitative research was selected for this study because it enables objective measurement of variables, allows the collection of numerical data, and facilitates statistical analysis to determine the effect of instructional interventions on student outcomes (Creswell, 2014). This approach provides a clear framework to evaluate whether the implementation of PjBL contributes to measurable improvements in students' understanding of abstract civic values, ensuring that the findings are empirical and replicable.

The study was conducted at an elementary school targeting fourth-grade students, where purposive sampling was used to select classes with comparable academic characteristics and learning conditions (Etikan et al., 2016). One class was designated as the experimental group, receiving instruction through the Project-Based Learning model, which emphasizes active student engagement, collaborative problem-solving, and the creation of tangible projects. The other class served as the control group, following conventional teacher-centered instruction, including lectures, question-and-answer sessions, and limited student interaction. The design ensured that the differences in student outcomes could be attributed primarily to the instructional model rather than extraneous classroom variables, while also reflecting practical constraints commonly encountered in school settings.

The independent variable in this study was the Project-Based Learning model, while the dependent variable was students' learning outcomes in Pancasila education, measured through multiple-choice tests specifically designed to assess understanding of the principles of Pancasila. Both pretests and posttests were administered to evaluate students' initial abilities and learning progress over the course of the study. Prior to implementation, the research instruments were

subjected to content validation by experts to ensure alignment with learning objectives and indicators, and reliability testing was performed to confirm consistency in measuring students' knowledge (Arikunto, 2018). This careful preparation of instruments was critical to maintain the accuracy and credibility of the data collected, as well as to provide a robust basis for statistical analysis.

Data analysis included both descriptive and inferential statistical techniques to comprehensively evaluate student performance. Descriptive statistics summarized the distribution of pretest and posttest scores, including mean, minimum, maximum, and standard deviation values, while inferential analysis was conducted to test research hypotheses. Prior to hypothesis testing, normality and homogeneity tests were performed to ensure that the data met parametric assumptions (Ghozali, 2018). Subsequently, an independent sample t-test was applied to compare posttest scores between the experimental and control groups, with a significance level set at 0.05. A significance value below 0.05 indicated a statistically significant difference in learning outcomes, confirming the effectiveness of the Project-Based Learning model in enhancing students' understanding and internalization of Pancasila principles, and providing empirical evidence to support the use of student-centered, project-based approaches in elementary Civics education (Field, 2013).

3. Result and Discussion

The results of this study indicate that the implementation of the Project-Based Learning (PjBL) model has a significant effect on students' learning outcomes in learning the principles of Pancasila. Statistical analysis of pretest and posttest scores revealed that the experimental group, which received instruction using the PjBL model, demonstrated a higher level of improvement compared to the control group that was taught using conventional teacher-centered methods. Specifically, the independent sample t-test produced a significance value of 0.003, which is below the 0.05 threshold, confirming that the null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) was accepted. These findings clearly demonstrate that PjBL contributes positively to students' cognitive achievement,

enabling learners to not only remember and recall theoretical concepts but also to apply the principles of Pancasila in meaningful and practical ways, thus supporting more holistic educational outcomes in Civics learning.

The improvement observed in the experimental group can be largely attributed to the inherent characteristics of Project-Based Learning, which emphasize a student-centered approach, active engagement, collaboration, and problem-solving through authentic and real-life projects. During the learning process, students were actively involved in planning, executing, and presenting projects that required them to analyze, synthesize, and apply information. This approach promotes higher-order thinking skills such as critical thinking, creativity, and decision-making. Students are encouraged to explore and reflect on the learning material through discussion, peer feedback, and hands-on tasks, which facilitates deeper conceptual understanding. As Thomas (2000) argues, PjBL provides a framework for meaningful learning experiences, where learners construct knowledge actively rather than passively receiving information, leading to sustained engagement and improved academic achievement.

Furthermore, the study shows that the PjBL model is particularly effective in the context of Pancasila education because the values embedded within Pancasila such as social justice, mutual cooperation, democracy, and humanity are closely related to students' daily life experiences. By involving learners in projects that simulate real-life situations, such as creating community-based initiatives or collaborative problem-solving tasks, students are able to internalize these values more concretely. This learning process transforms abstract concepts into tangible experiences, allowing students to understand the relevance and applicability of moral and civic principles in their lives. Observational data collected during the study indicated higher levels of student enthusiasm, participation, and motivation compared to traditional learning environments. These findings align with Krajcik and Blumenfeld (2006), who highlight that project-based approaches enhance contextual learning by bridging classroom content with real-world applications.

In contrast, students in the control group experienced conventional learning methods dominated by teacher explanations, lecture-style instruction, and limited interactive opportunities. As a result, learners were less active and more reliant on teacher input, which constrained their ability to critically engage with the material and apply Pancasila principles in practice. This observation supports previous research by Prince (2004), who noted that teacher-centered approaches often fail to develop higher-order thinking skills and meaningful comprehension among students. In comparison, the PjBL model fosters a learning environment where students are responsible for their own learning, actively seek knowledge, collaborate with peers, and solve complex problems, resulting in improved cognitive and affective learning outcomes.

Comparisons with prior research demonstrate that the findings of this study are consistent with broader educational literature on Project-Based Learning. For instance, Bell (2010) reported that PjBL enhances students' academic performance and engagement by providing authentic, hands-on learning experiences, while Sari and Wahyudi (2019) found that its implementation in elementary education significantly improves learning motivation and knowledge acquisition. This study extends these findings by offering empirical evidence specifically in the context of Civics education, demonstrating that PjBL is equally effective in enhancing understanding of national values and moral principles. Moreover, it highlights that integrating project-based activities into value-oriented subjects can simultaneously improve students' academic competence and ethical awareness.

The novelty of this research lies in its focus on applying the PjBL model to the learning of Pancasila principles at the fourth-grade level, a topic that has received limited attention in previous studies. While PjBL has been widely studied in science, mathematics, and general civic education, few investigations have explored its use in value-based education, particularly in teaching abstract principles such as those contained in Pancasila. This study provides evidence that PjBL not only enhances cognitive outcomes but also supports the development of character, moral reasoning, and social responsibility. By connecting learning

content with meaningful projects, teachers can simultaneously foster intellectual growth, civic awareness, and ethical behavior, offering a more holistic approach to elementary education.

Based on the results and discussion, it can be concluded that Project-Based Learning provides significant benefits in improving students' learning outcomes and experiences in Pancasila education. The model encourages active participation, peer collaboration, critical thinking, and contextualized problem-solving, which together strengthen both conceptual understanding and value internalization. Practically, elementary school teachers are recommended to adopt innovative, student-centered learning strategies such as PjBL, particularly in Civics education, to enhance student engagement and academic performance. The findings also emphasize the importance of designing learning activities that relate closely to students' real-life experiences, making moral and civic values more accessible and meaningful.

Theoretically, this study contributes to the development of instructional models in elementary education by providing empirical evidence that Project-Based Learning is effective in value-based subjects. It bridges cognitive achievement with character development and moral education, demonstrating that educational interventions can simultaneously support knowledge acquisition and ethical growth. By applying PjBL in Pancasila learning, teachers can create learning environments that not only improve academic performance but also foster the internalization of social and moral principles, promoting holistic development in young learners and preparing them to become responsible, ethical, and engaged citizens in society.

4. Conclusion

Based on the results of this study conducted at SDN Tlelsa Pamekasan, it can be concluded that the implementation of the Project-Based Learning (PjBL) model has a substantial and statistically significant positive effect on fourth-grade students' learning outcomes in Pancasila education. The experimental group demonstrated a remarkable improvement, with average scores rising from 47.8 in

the pretest to 76 in the posttest, reflecting a clear enhancement in both understanding and retention of the learning material. The independent sample t-test further confirmed this effect, producing a significance value of 0.003, which is well below the 0.05 threshold, indicating that the observed improvement is not due to chance. In addition to cognitive gains, the fidelity of implementation was high, with an average learning execution score of 88.9%, demonstrating that the Project-Based Learning model was applied systematically and effectively. This consistency ensured that students engaged fully in collaborative projects, problem-solving activities, and the practical application of Pancasila values, enabling them to internalize abstract civic concepts into concrete behaviors and actions within both classroom and daily life contexts.

These findings also underscore the broader pedagogical implications of employing student-centered, project-based approaches in elementary education. The PjBL model not only enhances academic achievement but also promotes deeper engagement, critical thinking, creativity, and interpersonal skills, as students actively participate in planning, executing, and reflecting on projects that connect learning material to real-life situations. Furthermore, it supports the internalization of moral and civic values, transforming Pancasila from theoretical concepts into meaningful guiding principles for behavior. This study provides robust empirical evidence that innovative, interactive instructional strategies like Project-Based Learning can simultaneously improve cognitive outcomes, value education, and the overall quality of learning experiences. Practically, the results encourage teachers to design learning activities that are engaging, collaborative, and contextually relevant, fostering holistic student development and preparing learners to become responsible, ethical, and socially aware citizens.

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