

The Effect of Project Based Learning on Thematic Social Studies Learning Outcomes of Fifth-Grade Elementary School Students

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Article History: Received on Mei 2024, Revised on July 2024, Published on August 2024

Abstract

The low learning outcomes of fifth-grade elementary school students were the main focus of this study. The research aimed to analyze the effect of the *Project Based Learning* (PjBL) model on thematic social studies learning outcomes. The study employed a pre-experimental design with a one-group pretest-posttest format. The population consisted of 50 students, with a sample of 25 students selected through purposive sampling. Data collection techniques included tests and non-tests, while data analysis was conducted using simple linear regression. The findings revealed that the application of the PjBL model had a significant effect on social studies learning outcomes, with the mean score increasing from 53.2 (pretest) to 77.6 (posttest). Furthermore, the regression analysis demonstrated that the PjBL model contributed 23.2% to the improvement of learning outcomes.

Keywords: *Learning outcomes, project based learning*

A. Introduction

Education is the fundamental foundation of national development, as it plays a central role in improving the quality of human resources (HR). Learning, whether formal or informal, is an inseparable part of daily life. Therefore, the success of education can serve as an indicator of a nation's progress. Learning outcomes are understood as the achievements gained by students after participating in the learning process, encompassing cognitive, affective, and psychomotor domains (Rahman, 2021). The variation in students' learning outcomes is influenced by both internal and external factors. Internal factors include interest, talent, motivation, and learning styles, while external factors are related to the family environment, school, and social support (Marlina et al., 2021). These differing conditions explain why students' achievements are not uniform.

In the context of elementary education, Social Studies is one of the subjects that often presents challenges. The characteristics of Social Studies, which rely heavily on text and memorization, tend to lower students' motivation (Sudrajat, 2020). Teachers also face difficulties in delivering the material because the subject requires higher cognitive skills, causing many students to struggle in developing meaningful understanding. Yet, according to Jati (2017), Social Studies is essentially an integration of the social sciences and other relevant disciplines, aimed at equipping students with knowledge, skills, values, and attitudes to face real-life social contexts.

To address these challenges, innovative, participatory, and contextual learning models are needed. Learning models not only serve as guidelines for teachers in managing classroom activities but also as tools to create meaningful educational interactions between teachers and students. Without an appropriate model, the learning process tends to be one-directional, making it difficult to achieve learning objectives effectively.

One model that is considered suitable for the characteristics of Social Studies is *Project Based Learning* (PjBL). This model emphasizes the production of tangible outcomes through projects conducted individually or collaboratively. As such, students do not merely understand theoretical content but are also able to apply it in concrete forms. Rahayu et al. (2023) demonstrated that the application of PjBL significantly improves learning outcomes, as reflected in the increased percentage of students achieving mastery. Based on this rationale, the present study focuses on analyzing the effect of the *Project Based Learning* model on thematic Social Studies learning outcomes of fifth-grade elementary school students.

B. Methods

This study employed a quantitative approach with an experimental design. The research applied a *Pre-Experimental Design* in the form of a *One Group Pretest-Posttest Design*. This design was chosen as it is suitable for examining differences in learning outcomes before and after treatment, although it presents limitations in controlling external variables.

The population consisted of all fifth-grade students of SD Negeri 2 Metro Selatan in the 2023/2024 academic year, totaling 50 students. The sample was selected using non-probability purposive sampling, with the criterion based on students' midterm examination (UTS) scores in Social Studies. Class VB was chosen as the experimental class because its average score was below the Minimum Mastery Criteria (KKM). Accordingly, the study sample comprised 25 students.

The independent variable in this study was the *Project Based Learning* (PjBL) model, while the dependent variable was the students' thematic Social Studies learning outcomes. Data were collected using two techniques:

1. **Test** – consisting of a pretest and posttest in the form of 25 multiple-choice questions. The instrument was validated through item validity, reliability, difficulty index, and discrimination index tests.
2. **Non-test** – including classroom observation of student activities during the implementation of PjBL and supporting documentation.

Data analysis was conducted in several stages. First, prerequisite tests, including normality and homogeneity tests, were carried out to ensure the data distribution and consistency. Second, the N-Gain score was calculated to measure the improvement in learning outcomes before and after treatment. Finally, hypothesis testing was conducted using simple linear regression to analyze the effect of the independent variable (PjBL model) on the dependent variable (Social Studies learning outcomes).

C. Results and Discussion

1. Implementation of Project Based Learning (PjBL)

The observation results regarding the implementation of the PjBL syntax are presented in Table 1.

Table 1. Implementation of PjBL Syntax

No	Achievement Level Category	Frequency	Percentage (%)
1	$n > 80$	Very Active 11	44.00
2	$60 \leq n \leq 79$	Active 11	44.00
3	$50 \leq n \leq 59$	Fair 2	8.00
4	$n \leq 50$	Low 1	4.00
Total		25	100

The findings indicate that the majority of students were categorized as *very active* (44%) and *active* (44%), while only 12% fell into the *fair* and *low* categories. These results suggest that the PjBL model was successfully implemented, encouraging active student participation.

2. Pretest and Posttest Results

The comparison of pretest and posttest scores is shown in Table 2.

Table 2. Students' Pretest and Posttest Results

Test	Pretest	Posttest
Highest Score	80	95
Lowest Score	30	50
Total Score	1330	1940
Mean	53.2	77.6

The mean score increased from 53.2 to 77.6, demonstrating that PjBL had a positive impact on students' learning outcomes in social studies.

3. Normality Test

The Shapiro-Wilk normality test (Table 3) revealed that both pretest (0.297) and posttest (0.065) significance values were above 0.05, indicating that the data were normally distributed.

Table 3. Normality Test Results (Shapiro-Wilk)

Test	Statistic	df	Sig.
Pretest	0.953	25	0.297
Posttest	0.924	25	0.065

4. Homogeneity Test

Levene's test indicated a significance value of $0.233 > 0.05$, which means that the data were homogeneous (Table 4).

Table 4. Homogeneity Test Results (Levene Test)

Source of Variance	Levene Statistic	df1	df2	Sig.
Based on Mean	1.462	1	48	0.233
Based on Median	1.169	1	48	0.285

Source of Variance	Levene Statistic	df1	df2	Sig.
Based on Median Adj.	1.169	1	45.053	0.285
Based on Trim. Mean	1.467	1	48	0.232

The main issue addressed in this study was the low learning outcomes of fifth-grade students in thematic social studies at SD Negeri 2 Metro Selatan. To overcome this challenge, the researcher implemented the *Project Based Learning* (PjBL) model as an alternative instructional approach. PjBL emphasizes concrete project-based activities that are directly connected to the learning material, enabling students to actively participate in knowledge construction and produce meaningful outputs rather than passively receiving information.

The results of this study demonstrate that the implementation of PjBL had a significant positive impact on students' thematic social studies outcomes. The improvement in students' mean scores from 53.2 (pretest) to 77.6 (posttest) indicates that the PjBL model is effective in enhancing student engagement and comprehension of social studies material. This increase can be attributed to the nature of PjBL, which emphasizes active participation, collaboration, and the production of contextual projects. By engaging in real-life problem-solving activities, students were able to connect theoretical knowledge with practical application, thereby deepening their understanding.

These findings are consistent with Rahayu et al. (2023), who confirmed that PjBL improves students' academic achievement through meaningful and contextual learning experiences. Similarly, Niswara et al. (2019) highlighted that PjBL supports independent learning and fosters higher-order thinking skills, which align with the observed increase in students' active participation during the learning process.

However, the effectiveness of PjBL in this study was not absolute. Regression analysis revealed that the contribution of PjBL to learning outcomes was 23.2%, suggesting that other factors such as individual motivation, prior knowledge, and the learning environment also influenced achievement. Moreover, some students remained reluctant to present their projects due to a lack of confidence, which limited the overall impact of the model. This is in line with Pamungkas (2022), who noted that students with weak skills in experimentation, information gathering, and collaboration may face challenges in fully benefiting from PjBL.

These findings underscore the importance of teacher facilitation in the implementation of PjBL. Teachers need to provide structured scaffolding, guidance in group work, and strategies to build students' confidence in presenting their ideas. Without adequate support, the potential of PjBL may not be fully realized. Thus, while this study affirms

that PjBL is effective in improving social studies learning outcomes, its success depends on the readiness of both teachers and students.

Future research should further explore strategies to strengthen student confidence, enhance collaborative skills, and integrate PjBL with other innovative approaches. Addressing these limitations will maximize the benefits of PjBL as an innovative and effective learning model in elementary education.

D. Conclusions

Based on the findings and simple linear regression analysis, it can be concluded that the implementation of the *Project Based Learning* (PjBL) model has a significant effect on the thematic learning outcomes of social studies for fifth-grade students at SD Negeri 2 Metro Selatan. This conclusion is supported by the increase in the mean posttest score compared to the pretest score, as well as the hypothesis testing results, which showed that F -calculated was greater than F -table with a significance value below 0.05. Therefore, the alternative hypothesis (H_a) was accepted, and the null hypothesis (H_o) was rejected. These findings confirm that PjBL is an effective instructional model to improve elementary school students' learning outcomes, particularly in social studies.

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