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THE EFFECT OF THE PROJECT-BASED LEARNING MODEL ON FOURTH-GRADE STUDENTS' SOCIAL STUDIES LEARNING OUTCOMES

Muhammad Jefri Efendi[1]

[1]STKIP PGRI Bangkalan, Indonesia; jefri012@gmail.com (coresponden)

ABSTRACT

BACKGROUND

Social Studies plays an important role in developing students' social understanding and critical thinking skills, and improved student achievement can be achieved through the implementation of Project-Based Learning (PJBL)

PURPOSE

This study aims to determine the effectiveness and influence of the PJBL model on students' Social Studies learning outcomes and to evaluate students' learning achievement at State Elementary School Pangilen 3 Sampang.

RESEARCH METHODOLOGY

This quantitative experimental study employed a one-group pretest–posttest design. Data were collected through tests and observations, and analyzed using normality, homogeneity, and t-tests to measure the statistical effectiveness of PJBL.

RESULT

The results show that the overall implementation of PJBL was categorized as adequate, though improvement is needed in the aspects of reflection and collaboration. Among 16 fourth-grade students, 43.75% achieved the minimum mastery criterion of 70 on the pre-test, with an average score of 69.25. After the implementation of the learning model, 93.75% of students achieved the criterion, with the average score increasing to 72.38, and the distribution of scores becoming more uniform, indicating improved mastery of Social Studies content. The normality and homogeneity tests were fulfilled. The p-value of 0.017 obtained from the partial test indicated a significant difference, suggesting that PJBL had a significant effect on students' Social Studies achievement.

CONCLUSION

The implementation of the Project-Based Learning model was moderately effective in improving students' mastery of Social Studies content, although the aspects of reflection and collaboration require further enhancement.

KEYWORDS

Project-Based Learning, Social Studies, Elementary School, Students

INTRODUCTION

Social Studies in Indonesia originated from the adaptation of the *Social Studies* concept developed in the United States, which focuses on the study of society and serves as an educational program rather than an independent scientific discipline within the philosophy of science (Gunawan, 2016). At the elementary and secondary education levels, the simplified social sciences aim to equip students with integrated social concepts and theories to solve social problems and foster good citizenship (Soemantri in Miftahuddin, 2016). Social Studies plays a crucial role in developing knowledge, positive attitudes, and twenty-first-century skills through thematic activities and discussions of relevant social issues (Riadi et al., 2023; Anjasmira et al., 2024). The discipline is interdisciplinary in nature, encompassing the interrelations among history, geography, politics, economics, and culture from local to global contexts (Tasrif in Rahmad, 2016). In addition, Social Studies serves as a medium for character education to cultivate moral values and behaviors aligned with national educational goals (Sari, 2021), strengthen personal, social, emotional, and intellectual intelligence (Sudrajat & Hernawati, 2020), and promote critical thinking and social awareness in a pluralistic society (Sapriya, 2014).

The development of Social Studies in Indonesia is rooted in the *Social Studies* framework from the United States but adapted to align with national educational goals and the nation's sociocultural context (Nurjanah et al., 2021). Social Studies is taught from elementary to lower secondary education by integrating geography, history, sociology, and economics to develop democratic and responsible citizens (Aulia & Wandini, 2023). The main objectives of Social Studies learning include developing critical thinking and decision-making abilities in a global context (Setyowati & Firmansyah, 2018). At the elementary level, the learning process is implemented through a thematic approach in grades I–III and integrated Social Studies in grades IV–VI (Nofiaturrahmah, 2015). The effectiveness of learning depends on the teacher's ability to connect social concepts to students' real-life experiences (Novianti et al., 2023). Beyond instilling values of democracy, responsibility, and peace (Triana, 2017), Social Studies also aims to foster social, moral, and cooperative character (Nurena, 2019; See, 2022).

Learning outcomes represent the final achievements of students after participating in the learning process, which involves teacher–student interaction and is influenced by internal and external factors (Ummah et al., 2021). Learning outcomes reflect students' success in achieving educational goals through behavioral changes in cognitive, affective, and psychomotor domains (Sudjana & Ibrahim in Yandi et al., 2023). The competencies acquired by students, as stated in the curriculum, include knowledge, attitudes, and skills measured through evaluation (Mboa & Ajito, 2024). Furthermore, students' participation in exams, assignments, and learning interactions serves as indicators of academic achievement, although grades alone do not fully represent learning outcomes (Somayana, 2023). Behavioral changes resulting from learning occur across various domains in accordance with educational objectives (Yuli, 2017). Bloom's taxonomy supports this framework by categorizing cognitive, affective, and psychomotor domains as the foundation for comprehensive assessment of learning outcomes (Andryannisa et al., 2023). The psychomotor domain includes physical skills and coordination developed through stages from imitation to naturalization (Zainudin & Ubabuddin, 2023). Therefore, learning outcomes reflect behavioral changes and student achievement that represent the overall attainment of educational objectives (Wicaksono & Iswan, 2019).

One solution to the low achievement in Social Studies learning is to apply innovative, student-centered learning models such as Project-Based Learning (PJBL). This model positions students as the core of learning activities by engaging them in real projects that promote active participation, critical thinking, collaboration, and the application of knowledge in practical contexts (Aprina et al., 2024). Implementation of this model has proven effective in enhancing students' motivation and problem-solving skills, although evaluation results show varying levels of understanding among students (Megalia et al., 2024). The Problem-Based Learning (PBL) model has also been shown to improve students' critical thinking and problem-solving abilities through learning based on real-life contexts (Nuarta, 2020). Furthermore, PBL enhances students' learning motivation and logical reasoning by involving them actively in finding solutions to authentic problems relevant to their daily lives (Aisyah et al., 2023; Fauzan et al., 2017; Hermuttaqien et al., 2023; Sari & Rosidah, 2023).

The Project-Based Learning (PJBL) model promotes learning through complex and challenging projects that encourage students to think critically, make decisions, and work independently (Made Wena, 2020). The model is characterized by features such as solution design, collaboration, accountability for information, process reflection, and tolerance for mistakes (Nurasiah, 2022). It is also based on the principles of realism, autonomy, constructive inquiry, and problem centrality, which provide authentic and relevant learning experiences (Putra, 2017). PJBL implementation consists of six main stages as developed by The George Lucas Educational Foundation (Alhayat et al., 2023). The first stage begins with an essential question designed to motivate and arouse students' curiosity (Lestari & Yunono, 2022). This is followed by collaborative project planning between teachers and students to build responsibility (Alhayat et al., 2023). Subsequent stages include scheduling activities, monitoring progress, assessing products, and conducting joint reflection to improve learning outcomes (Dahri, 2022; Lestari & Yunono, 2022).

Problem-Based Learning (PBL) is considered more effective than traditional lecture methods because it requires students to be more active, think critically, and collaborate in solving learning problems, thus significantly improving learning outcomes (Guswan & Learning, 2020). Research indicates that PBL enhances student achievement in Social Studies at State Junior High School 2 Tolitoli, demonstrating its effectiveness in improving conceptual understanding and student engagement (Jacub et al., 2019). Furthermore, PBL has been shown to increase students' motivation through student-centered learning that focuses on real-world problems relevant to their lives (Suari, 2018). In practice, students are actively involved in using problems from their school, home, or community environments as the basis for developing critical thinking and problem-solving skills (Anugraheni, 2018).

A study conducted by Nikmatul Fadilah, Fenny Roshayanti, and Fine Reffiane found that the implementation of the Project-Based Learning model in Social Studies effectively improved the learning outcomes of fifth-grade students at State Elementary School Peterongan Semarang, as shown by a significant *paired sample t-test* result (Fadilah, Roshayanti, & Reffiane, 2023). Another study by Rega Miftakhul Jannah, Muh. Waskito Ardhi, and Sri Hartuti reported an improvement in fifth-grade students' Science learning outcomes at State Elementary School Pilangbango Madiun from 44% to 92% through classroom action research based on the Kemmis and McTaggart spiral model conducted in two cycles (Jannah, Ardhi, & Hartuti, 2024). Moreover, a podcast-based Project-Based Learning model significantly enhanced students' creativity in Social Studies at State

Junior High School 1 Jatinangor, Sumedang Regency (Darwan, Iqbal, & Kurniawati, 2024). However, a study at State Senior High School 1 Pekanbaru found that this model did not significantly affect students' Economics learning outcomes (Sari & Zakir, 2023). Meanwhile, research at State Elementary School 48 Bengkalis demonstrated a significant improvement in students' creativity and learning outcomes through a quasi-experimental approach (Juanda, Daulay, & Hanafi, 2024).

This research arises from the gap between the importance of Social Studies learning in developing students' social understanding and critical thinking skills and the reality that learning outcomes at State Elementary School Pangilen 3 Sampang remain low due to the dominance of conventional teaching methods that inadequately engage students. This limitation underscores the need for innovative learning models that enhance students' engagement, creativity, and learning responsibility. The novelty of this research lies in the application of the Project-Based Learning (PJBL) model in elementary-level Social Studies learning to measure its effectiveness in improving students' learning outcomes. The objectives of this study are to analyze the success and influence of PJBL on Social Studies learning outcomes and to evaluate the improvement in learning mastery following the model's implementation. The study's findings are expected to enrich the theoretical framework of project-based learning, provide alternative teaching strategies for educators, and significantly enhance students' motivation, collaboration, and learning outcomes.

RESEARCH METHODOLOGY

This study employed a one-group pretest–posttest design to observe changes in students' learning outcomes following the implementation of the Project-Based Learning (PjBL) model in Social Studies. A single experimental group was administered a pretest prior to the PjBL intervention, followed by the application of the PjBL instructional model, and concluded with a posttest to measure improvement in learning outcomes. The research was conducted at the UPTD State Elementary School Pangilen 3 Sampang, involving a sample of 16 fourth-grade students selected through purposive sampling, as the class was considered relevant to the learning content and model applied. The independent variable in this study was the PjBL instructional model, while the dependent variable was students' learning outcomes, measured through pretest and posttest assessments. Data were collected through classroom observations of the PjBL implementation and students' achievement tests, which consisted of 20 multiple-choice questions and 5 short-answer items. The observation used a structured guideline assessing the implementation of the six stages of PjBL on a three-point Likert scale to systematically evaluate the quality of the model's execution.

Data analysis consisted of two stages: descriptive analysis and inferential analysis. The descriptive analysis presented a systematic summary of the research data by calculating the mean scores of the pretest and posttest, along with minimum, maximum, and standard deviation values to examine data distribution. For the inferential analysis, data validity was tested using SPSS with a significance criterion of less than 0.05. Subsequently, the normality of the data was tested using the Kolmogorov–Smirnov test, and homogeneity of variance was examined using Levene's test, both at a significance level of 0.05. If the data met the assumptions of normality and homogeneity, hypothesis testing was performed using a paired-sample t-test with the assistance of SPSS version 26. The decision criterion was based on a one-tailed significance value of 0.05; a significance value

(sig.) ≤ 0.05 indicated a significant effect of the PjBL model on students' Social Studies learning outcomes, while a value > 0.05 indicated no significant effect.

Table 1. Social Studies Learning Outcome Test Instrument

Question Item	Multiple Choice / Short Answer
The Hindu kingdom known for King Purnawarman and the Tugu Inscription was located in the region of …	a. East Kalimantan b. West Java c. Central Java d. South Sumatra
The Tukmas Inscription and Angin Temple are relics from the Kingdom of …	a. Kutai b. Tarumanegara c. Kalingga d. Majapahit
Borobudur Temple is a relic of the Buddhist kingdom called …	a. Sriwijaya b. Buddhist Mataram c. Kediri d. Singosari
The Islamic kingdom on the island of Java famous for the Great Mosque of Demak is …	a. Demak b. Banten c. Ternate d. Aceh
The historical relic in the form of the tombstone of Sultan Malik As-Salih indicates the spread of Islam in …	a. Demak b. Samudera Pasai c. Banten d. Tidore
Bamboo in Bima Regency is widely used as a material for …	a. Household furniture and musical instruments b. Ships and vehicles c. Bricks and cement d. Jewelry and stationery
Coffee from the region famous for its distinctive flavor is … coffee	a. Gayo, Aceh b. East Java c. Central Kalimantan d. South Sulawesi
Cultural diversity in a region can occur because …	a. Indigenous people always preserve old traditions b. There are no new settlers c. A mixture of migrant and local cultures d. The local government forbids foreign cultures
If a region does not have a certain product, that product is usually obtained through …	a. Importing from abroad b. Interregional trade c. Making it at home d. Searching in the forest
The main factor influencing the potential of a region's natural resources is …	a. Community traditions b. Geographical location and natural conditions c. Population size d. Government policy
The change in people's occupation from farmers to factory workers usually occurs because of …	a. Climate change b. Industrial development in the area c. Loss of interest in farming d. Religious conversion
New business opportunities that may emerge in a developing area are …	a. Agriculture and fisheries b. Shops, restaurants, and lodging services c. Animal husbandry and mining d. Hunting and logging
Changes in people's lifestyles can be seen from …	a. The shape of houses b. The language used c. Clothing styles and daily activities d. The number of schools
Living in a civilized society means …	a. Respecting one another and following common rules b. Only following old traditions c. Prioritizing personal interests d. Avoiding change
An example of a behavior that reflects a civilized society is …	a. Helping neighbors in need b. Littering c. Causing disturbances d. Ignoring the surrounding environment
Written regulations usually have sanctions in the form of …	a. Verbal warnings b. Fines or legal punishment

	c. Shame d. Rewards
Unwritten regulations are based on …	a. Legislation b. Customs and community traditions c. School decisions d. Government instructions
The proverb "Where the earth is stepped on, there the sky is upheld" teaches us to …	a. Respect the customs and norms of the place we are in b. Reject the rules of a foreign place c. Create new rules d. Forget local customs
Social sanctions for violating norms are usually in the form of …	a. Imprisonment b. Social exclusion or shame c. Monetary fines d. Rewards
When visiting another region with different customs, we must …	a. Respect and comply with local customs b. Ignore their rules c. Change the existing rules d. Persuade them to follow our rules

Table 2. Short Essay Questions

No.	Question
1	Mention three Hindu kingdoms that once existed in Indonesia along with one of their relics.
2	Explain the role of the Sriwijaya Kingdom in Indonesian history.
3	Why does each region have different natural resources? Provide examples.
4	How does the arrival of migrants influence the culture of our local area?
5	Mention three ways that people can build a civilized life within their community.

RESULT AND DISCUSSION

Descriptive Analysis of the Project-Based Learning (PJBL) Model in Social Studies at SDN Pangilen 3 Sampang

Based on classroom observations conducted during the Social Studies learning process using the Project-Based Learning (PJBL) model, the following results were obtained:

Table 3. Observation Results of PJBL Activities

PJBL Stage	Observation Indicator	Score 3 (Good)	Score 2 (Fair)	Score 1 (Poor)
Initial Questioning	The teacher presents essential questions that stimulate group discussion.	✓		
Project Design by Group	Groups collaboratively design project steps and divide tasks.		✓	
Preparation of Group Activity Schedule	Groups create a work timeline and determine project deadlines.		✓	
Project Monitoring	The teacher regularly monitors and guides the group work process.	✓		
Group Product Assessment	Each group presents project results and receives feedback.		✓	
Evaluation and Reflection	Students and the teacher conduct reflection on the discussion process and project outcomes.			✓

Based on the observation results of the Project-Based Learning (PJBL) model in the Social Studies class at SDN Pangilen 3, a total score of 13 out of a maximum of 18 was obtained. The stages that received a score of 3 (good) namely *initial questioning* and *project monitoring* indicate that the teacher successfully stimulated discussion and actively guided students throughout the project process. Meanwhile, three stages *project design*, *activity scheduling*, and *product assessment* received a score of 2 (fair), suggesting that these components were implemented adequately but not optimally. The *reflection stage* received a score of 1 (poor), indicating a need

for improvement in the final evaluation and reflective process of the project. Overall, the implementation of the Project-Based Learning model can be categorized as fair, showing that while the basic structure of PJBL has been applied, further strengthening is required, particularly in the collaborative and reflective aspects of learning.

Descriptive Analysis of Students' Learning Outcomes in Social Studies at SDN Pangilen 3 Sampang

The results of the pre-test for the fourth-grade Social Studies class at SDN Pangilen 3 Sampang are presented as follows:

Table 4. Pre-Test Results

No	Student Name	Minimum Mastery Criterion (MMC)	Pre-Test Score
1	Ach. Riyadi	70	68
2	Camelia Safitri	70	70
3	Dimas	70	68
4	Imroatun Soleha	70	75
5	Inaya Turrohmah	70	72
6	Jamal Ardiansyah	70	66
7	Kutrotun Nada	70	65
8	Moh Abbas	70	70
9	M. Irfan Sauki	70	73
10	Moh. Dimyati Yasin	70	74
11	Moh. Hadikil Fahimi	70	60
12	Moh. Faizullah	70	65
13	Muhammad Albarizy	70	70
14	Rahmawati	70	70
15	Safiudin	70	75
16	Sulhan Al Aziz	70	67

Based on the pre-test scores of 16 students, it was found that prior to the implementation of the learning treatment, students' mastery of Social Studies material was still relatively low. This was evidenced by the number of students who had not yet achieved the Minimum Mastery Criterion (MMC) score of 70. A total of 56.25% (9 out of 16 students)scored below the MMC, while 43.75% (7 students) successfully met or exceeded the minimum mastery standard.

The results of the post-test for the fourth-grade Social Studies class at SDN Pangilen 3 Sampang are presented as follows:

Table 5. Post-Test Results

No	Student Name	Minimum Mastery Criterion (MMC)	Post-Test Score
1	Ach. Riyadi	70	72
2	Camelia Safitri	70	75
3	Dimas	70	70
4	Imroatun Soleha	70	72
5	Inaya Turrohmah	70	75
6	Jamal Ardiansyah	70	70
7	Kutrotun Nada	70	72
8	Moh Abbas	70	75
9	M. Irfan Sauki	70	75
10	Moh. Dimyati Yasin	70	75
11	Moh. Hadikil Fahimi	70	72
12	Moh. Faizullah	70	70
13	Muhammad Albarizy	70	75
14	Rahmawati	70	65
15	Safiudin	70	72
16	Sulhan Al Aziz	70	73

The post-test results show a significant improvement in students' Social Studies learning outcomes. A majority of the students, 15 out of 16 (93.75%), achieved or exceeded the MMC score of 70, while one student (6.25%) remained below the mastery threshold. This indicates that after the implementation of the Project-Based Learning (PJBL) model, students demonstrated a substantial increase in their understanding and mastery of the Social Studies content. The overall learning achievement improved from the pre-test stage, where less than half of the students met the MMC, to the post-test stage, where nearly all students achieved mastery.

Descriptive Analysis of Pre-Test and Post-Test Results of the Study

Table 6. Descriptive Analysis of Pre-Test and Post-Test Results

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test	16	60.00	75.00	69.2500	4.10690
Post-Test	16	65	75	72.38	2.754
Valid N (listwise)	16				

The number of students analyzed was 16. The Pre-Test scores had a mean of 69.25, with a minimum score of 60 and a maximum score of 75, and a standard deviation of 4.11, indicating a relatively high variation in scores prior to the intervention. After the implementation of the instructional model, the Post-Test scores increased with a mean of 72.38, a minimum score of 65, a maximum score still at 75, and a decreased standard deviation of 2.75. This reflects a more uniform distribution of student scores following the instructional intervention. These findings indicate an improvement in student learning outcomes.

Inferential Analysis of the Effect of the Project-Based Learning Model on Student Learning Outcomes in Social Studies at Pangilen 3 Public Elementary School, Sampang

Data Validity

Table 7. Data Validity

Correlations

		Pre-Test	Post-Test
Pre-Test	Pearson Correlation	1	.419*
	Sig. (2-tailed)		.017
	N	32	32
Post-Test	Pearson Correlation	.419*	1
	Sig. (2-tailed)	.017	
	N	32	32

*. Correlation is significant at the 0.05 level (2-tailed).

With a significance value of 0.017 (two-tailed), which is below the threshold of 0.05, the research instrument demonstrates good validity. This suggests a statistically significant correlation between the pre-test and post-test scores, with a Pearson correlation coefficient of 0.419, indicating a moderate positive relationship.

Data Normality

Table 8. Data Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Post-Test	Statistic	df	Sig.	Statistic	df	Sig.
Pre-Test	Pre-test Eksperimen	.135	16	.200*	.955	16	.570
	Post - Test Eksperimen	.205	16	.072	.832	16	.007

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The pre-test and post-test data are considered to be normally distributed, as the significance values (Sig.) are 0.200 and 0.072 respectively, both greater than 0.05. Therefore, the data meet the assumptions required for parametric statistical analysis, such as the t-test. The normality test was conducted using the Kolmogorov-Smirnov method.

Data Homogeneity

Table 9. Data Homogeneity

		Levene Statistic	df1	df2	Sig.
Pre-Test	Based on Mean	2.461	1	30	.127
	Based on Median	1.926	1	30	.175
	Based on Median and with adjusted df	1.926	1	26.879	.177
	Based on trimmed mean	2.193	1	30	.149

Since the significance values from Levene's Test for the pre-test data—based on the mean (0.127), median (0.175), adjusted degrees of freedom (0.177), and trimmed mean (0.149)—are all greater than 0.05, the data exhibit homogeneity of variance. Thus, the distribution of data across groups is uniform, satisfying the assumption for parametric testing.

Hypothesis Testing (t-Test)

Table 10. t-Test Results

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower	Upper
Pre-Test	Equal variances assumed	2.461	.127	-2.528	30	.017	-3.12500	1.23637	-5.64960	-.60040
	Equal variances not assumed			-2.528	26.229	.018	-3.12500	1.23637	-5.66495	-.58505

It was found that the significance value (two-tailed) from the Independent Samples t-Test was 0.017, which is less than 0.05. This indicates a statistically significant difference between the pre-test and post-test results. These findings support the positive effect of the Project-Based Learning model on student achievement in Social Studies at Pangilen 3 Public Elementary School, Sampang. The implementation of this model appears to provide an initial stimulus that differentiates students' performance even before the full instructional intervention is applied

The Project-Based Learning (PjBL) Model in Social Studies at Pangilen 3 Public Elementary School, Sampang

The implementation of the Project-Based Learning (PjBL) model at Pangilen 3 Public Elementary School received a score of 13 out of 18. The strong phases included essential questioning and project monitoring (score of 3). Moderate phases were project design, scheduling, and assessment (score of 2). The reflection phase was identified as weak (score of 1). Overall, the implementation of the PjBL model was considered sufficient, though improvements are needed in

the areas of reflection and collaboration. The PjBL model engages students in determining a project framework, solving real-life problems, thinking critically, collaborating, and taking responsibility for their learning. This process includes continuous evaluation, reflection, and the creation of diverse products within a learning environment that embraces errors and change (Nurasiah, 2022). The model is based on five core principles: project centrality, driving questions, constructive investigation, student autonomy, and authenticity. These principles emphasize the importance of real-world problems, independent learning, and relevant educational experiences (Putra, 2017). Project-Based Learning begins with essential questions relevant to students' lives, designed to motivate and guide deep investigation (Alhayat, 2023). Instructional design is carried out collaboratively between teachers and students to promote a sense of project ownership and responsibility (Dahri, 2022). Scheduling project activities involves timeline planning, task distribution, and teacher guidance to ensure alignment with learning objectives (Lestari, 2022).

Student Learning Outcomes in Social Studies at Pangilen 3 Public Elementary School, Sampang

Learning outcomes are the final achievements of students in the cognitive, affective, and psychomotor domains, influenced by both internal and external factors, and evaluated by teachers through the learning process (Ummah et al., 2021). These outcomes represent behavioral changes encompassing all three domains, serving as indicators of educational success (Sudjana & Ibrahim, as cited in Yandi et al., 2023). They also reflect competencies acquired through instruction and evaluation based on the applicable curriculum (Mboa & Ajito, 2024). Academic achievement is measured through exams, assignments, and active student participation (Somayana, 2023), and is influenced by specific domains aligned with educational goals (Yuli, 2017). An analysis of fourth-grade Social Studies learning outcomes at Pangilen 3 Public Elementary School showed that among 16 students, only 43.75% met the minimum passing grade (70) on the pre-test, while 56.25% did not. The average pre-test score was 69.25 with high score variability. After the instructional intervention using a specific model, the post-test results improved significantly. A total of 93.75% of students achieved or exceeded the minimum standard, the average score increased to 72.38, and the scores became more uniform as indicated by a lower standard deviation. This indicates an improvement in students' mastery of Social Studies material following the instructional treatment. Social Studies is an interdisciplinary subject that explores societal aspects, including history, geography, politics, and the interactions between culture, politics, and economics at local and global levels (Tasrif, as cited in Rahmad, 2016). This subject can instill character education to help students develop in accordance with national values and educational goals (Sari, 2021). Character education within Social Studies is also essential for developing personal, social, emotional, and intellectual intelligence (Sudrajat & Hernawati, 2020).

The Effect of the Project-Based Learning (PjBL) Model on Student Learning Outcomes in Social Studies

The pre-test and post-test data were normally distributed (Kolmogorov-Smirnov > 0.05) and demonstrated homogeneous variance (Levene's Test). An independent samples t-test showed a statistically significant difference ($p = 0.017$), confirming the positive effect of the Project-Based Learning (PjBL) model on Social Studies learning outcomes at Pangilen 3 Public Elementary School. Significant improvements in fifth-grade students' Social Studies outcomes after applying the PjBL model indicate its effectiveness in enhancing academic performance (Fadilah et al., 2023). Similar

results were found in Science subjects, where students at Pilangbango Public Elementary School showed improved learning outcomes following the implementation of PjBL (Jannah et al., 2024). The PjBL model, particularly when integrated with podcast media, was also effective in enhancing student creativity in Social Studies, particularly in terms of fluency, flexibility, originality, and elaboration (Darwan et al., 2024). Furthermore, the application of the PjBL model at Public Elementary School 48 Bengkalis led to significant improvements in both creativity and academic achievement, making it a recommended approach for instructional practices (Juanda et al., 2024).

CONCLUSION

The implementation of the Project-Based Learning (PjBL) model at Pangilen 3 Public Elementary School demonstrated fairly good results, particularly in the phases of posing initial questions and project monitoring, which were rated as strong. However, the areas of project design, scheduling, and product assessment still require improvement. The final reflection stage was identified as the weakest component and needs greater attention in future implementations. An analysis of fourth-grade students' learning outcomes revealed a significant improvement following the application of PjBL. Initially, less than half of the students achieved the minimum passing criteria, with varied average scores. After the intervention, nearly all students met the required standards, and the scores were more evenly distributed, indicating enhanced mastery of Social Studies material. Statistical tests confirmed that the pre-test and post-test data were normally distributed and homogeneous, and there was a statistically significant difference between the two sets of scores. These findings affirm that the implementation of the PjBL model had a tangible positive impact on students' learning outcomes in Social Studies at Pangilen 3 Public Elementary School. At the same time, the results highlight the need to strengthen the reflection and collaboration components within the learning process. Recommendations, future studies are encouraged to focus on the development and enhancement of the reflection phase in the Project-Based Learning model, in order to optimize final project evaluations and deepen students' understanding of the subject matter. It is also recommended to conduct research involving larger samples and a variety of schools to test the effectiveness of the PjBL model across diverse learning contexts in Social Studies. Moreover, further studies should investigate the supporting factors that enhance student collaboration throughout the learning process

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AUTHORS' CONTRIBUTION

Author 1 : The author contributed to conceptualization, methodology design, conducting investigation, data curation, result validation, writing the initial draft, and project administration to ensure the research process ran smoothly and effectively.

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