

The Effect of the Project-Based Learning Model on Enhancing Fourth-Grade Students' Understanding of Cultural Diversity in Pancasila Education at SD Negeri 2 Sukodono

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Keywords

Project Based Learning;
Students' Understanding;
Cultural Diversity

ABSTRACT

Project-Based Learning (PjBL) is an instructional model that involves students directly in project activities. Through these projects, students become more active and engaged in the learning process compared to conventional models, ultimately contributing to improved understanding and memory retention. This study aims to analyze the effect of PjBL on fourth-grade students' understanding of cultural diversity at SD Negeri 2 Sukodono. A quantitative approach with pre-experimental design with a one-group pretest–posttest structure was employed. Data were collected from 42 students using a validated multiple-choice test administered before and after the PjBL intervention. Results revealed a statistically significant improvement in students' understanding of cultural diversity at SDN 2 Sukodono. The paired-samples t-test produced a significance value of 0.000 ($p < 0.05$), leading to rejection of the null hypothesis (H_0) and acceptance of the alternative hypothesis (H_a). The class mean score rose substantially from 71.86 (pretest) to 90.62 (posttest). These findings confirm that the Project-Based Learning model is highly effective in enhancing cognitive mastery of cultural diversity content (traditional musical instruments, regional attire, and customary houses) among elementary students, thereby supporting its wider adoption in Pancasila and civic education curricula.

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INTRODUCTION

Pancasila Education at the elementary school level plays a fundamental role in shaping students' character and providing foundational civic understanding. This subject aims to instill core national values that serve as lifelong guidelines for living in a pluralistic society and nation.¹ Pancasila Education also encourages students to appreciate the diversity that exists in Indonesia. As a subject, Pancasila Education has the potential to cultivate a

¹ Siti Fatmala and others, "Pancasila Multikulturalisme: Implementasi Pada Nilai Pancasila Serta Makna Yang Dikandung Sebagai Pendidikan Karakter," *Basivedu*, 81 (2024), 19–35.

generation that is intellectually competent, morally grounded, and of strong character.² Therefore, it is important to design this subject in effective and innovative ways so that its intended goals can be achieved.

One central topic in elementary Pancasila Education is cultural diversity, which encompasses traditional musical instruments, regional attire, customary houses, and other cultural expressions across Indonesia. The primary objective of teaching this topic is to cultivate tolerance, mutual respect, and awareness of the importance of harmonious coexistence in a heterogeneous society.³ Elementary school age represents a critical period during which children begin to form attitudes and perspectives toward individuals who differ from themselves in culture, language, religion, or socioeconomic background.⁴ In an era of rapid globalization, inadequate understanding of cultural diversity negatively affects students' future ability to engage in cross-cultural educational and professional opportunities.⁵ Early exposure to cultural diversity therefore promotes respect and tolerance toward differences.

Preliminary observations and interviews conducted on 23 and 25 October 2024 with the fourth-grade homeroom teacher at SD Negeri 2 Sukodono revealed unsatisfactory student outcomes in Pancasila Education. On the Mid-Semester Summative Assessment targeting the learning objective "identifying, distinguishing, and appreciating community identities according to their culture," the class average score was only 70 (highest 90, lowest 20). Of the 42 students, only 17 (41%) achieved or exceeded the minimum mastery criterion=75, whereas 25 students (59%) scored below this threshold.

Students reported particular difficulty in comprehending subtopics related to the diversity of musical instruments, traditional clothing, and customary houses. This difficulty stems primarily from the use of conventional, teacher-centered instructional models that lack interactivity and appeal, leading to student boredom, low motivation, and consequently suboptimal conceptual understanding. The existing instructional approach thus proves ineffective in achieving the intended learning objectives and urgently requires innovation.

To address this issue, an innovative instructional model is required. The Project-Based Learning (PjBL) model offers a suitable solution. PjBL actively engages students in authentic, extended projects⁶ and encourages them to participate actively, seek information independently or collaboratively, and solve real-world problems. These principles align closely with Jean Piaget's constructivist learning theory.⁷ According to John W. Thomas and the Buck Institute for Education, the PjBL framework comprises six essential phases: (1) identifying the project, (2) planning the steps, (3) establishing a schedule, (4) implementation and monitoring, (5) presentation of results, and (6) evaluation.⁸ PjBL simultaneously develops students' social skills, creativity, critical thinking, and communication abilities, competencies essential for everyday life and while making classroom activities more engaging and motivating.

² Ikhsan, "Pengaruh Pendidikan Pancasila Dalam Membentuk Karakter Siswa Disd," *Garuda*, 22 (2024), 156–63.

³ Haryono, Firmansyah, and Repelita, "Peran PKn Dalam Pendidikan Multikutular Untuk Peningkatan Toleransi Siswa," *Education Research*, 52 (2024), 2138–44.

⁴ Hamidaturrohman, Fasya, and Wiranti, "Efektivitas Project Citizen Dalam Peningkatan Literasi Budaya Siswa Dipembelajaran Pendidikan Pancasila Kelas V SDN 2 Tahunan," *JPPI*, 43 (2024), 930–42.

⁵ Zamroni, "Cros-Cultural Competen in Multicultural Education in Indonesia and New Zealan High Schools," 14.3 (2021), 597–612.

⁶ Widiyono, Mikhaturohman, and Lailiyah, "Efektivitas PjBL Terhadap Hasil Belajar IPA Disd," *Penelitian Pendidikan*, 82 (2021), 114–26.

⁷ Nawawi, I. (2023). "Inovasi Pendidikan Dan Pembelajaran." CV. Gita Lentera.

⁸ Besa, "PjBL: A Teaching Aproach Where Learning Come Alive," *Teaching English Academic*, 94 (2021), 775–77.

PjBL contributes to enhancing students' understanding and appreciation of cultural diversity. Students engage in projects by gathering information about cultural diversity topics from books or other learning resources. They then work in groups to create a project and present the results to the class. These activities not only improve students' comprehension but also foster a sense of pride and appreciation for Indonesian cultural heritage. Thus, PjBL serves as an effective alternative for addressing learning challenges related to cultural diversity in the fourth-grade classroom of SD Negeri 2 Sukodono.

Furthermore, PjBL positively influences student learning motivation. High motivation directly correlates with optimal academic achievement.⁹ Through meaningful, hands-on projects, students explore personal interests, collaborate with classmates, and witness concrete outcomes of their efforts, thereby experiencing more profound and memorable learning.¹⁰ The present study therefore expects that implementing PjBL at SD Negeri 2 Sukodono will create a more creative, inspiring, and student-centered classroom environment for fourth-grade students.

Several previous studies show that the use of PjBL contributes to improving student learning outcomes. This model is considered suitable for addressing problems related to understanding cultural diversity because it enhances collaborative skills among elementary school students.¹¹ In addition, students' understanding and creativity increase significantly through the implementation of PjBL.¹² The PjBL model also improves student engagement and participation in the learning process compared to conventional models, which ultimately supports the improvement of students' comprehension and memory.¹³ The implementation of PjBL, which involves students in projects connected to the learning material, encourages active participation and consequently deepens students' understanding of the content taught.¹⁴

Although numerous studies have explored the effectiveness of PjBL in science and mathematics subjects, its application in Pancasila Education, particularly regarding cultural diversity at the elementary school level, remains underexplored. The novelty of this study lies in the innovative and creative application of PjBL to the topic of cultural diversity at the elementary level, specifically among fourth-grade students at SD Negeri Sukodono. This research aims to analyze the effect of PjBL on the understanding of cultural diversity among fourth-grade students at SD Negeri 2 Sukodono. Through the implementation of PjBL, students are expected to become more motivated and actively engaged in learning activities, thereby improving their understanding of cultural diversity.

RESEARCH METHOD

This study employed a quantitative approach with a pre-experimental design, specifically the one-group pretest-posttest design.¹⁵ The procedure required administration

⁹ Amalia, "Pengaruh PjBL Untuk Meningkatkan Hasil Belajar PKn Materi Keberagaman Indonesia SDN Tugurejo 2," 009 (2023), 1949–61.

¹⁰ Attalina And Others, "Efektifitas Model PjBL Dalam Peningkatan Minat Serta Hasil Belajar Siswa Disd," 11 (2022), 56–64.

¹¹ Ririn, Adi, and Septina, "Peningkatan Colaboration Skill Peserta Didik SD Melalui PjBL," *Scholaria*, 11 (2024), 1–7.

¹² Anisa Fauziah, "Penerapan Model Project-Based Learning Untuk Meningkatkan Hasil Belajar Materi Keragaman Budaya Di Sekolah Dasar Indonesia," *Jurnal Inovasi Pembelajaran Sekolah Dasar*, 11.11 (2023), 198–211.

¹³ Fuan, Asrin, and Arif, "PjBL Terhadap Keaktifan Belajar Siswa," *Classroom Action Research*, 51 (2023), 347–55.

¹⁴ Nafisyah, Pamungkas, and Ika, "Pengaruh PjBL Terhadap Konsep Literasi Siswa SDN 5 Kota Magelang," *Edukasi Sains*, 52 (2022), 63–71.

¹⁵ Allinda Hamidah, "Penerapan PjBL Untuk Peningkatan Karakter Gotong Madrasah Ibtidaiyah," *Mida*, 72 (2024), 196–212.

of a pretest before the instructional treatment (Project-Based Learning implementation) and a posttest after the treatment had been completed. The population of this study consisted of students at SD Negeri 2 Sukodono. The sampling technique used saturated sampling, resulting in a total sample of 42 fourth-grade students, including 25 boys and 17 girl student within a single class group.

Saturated sampling was selected to ensure that every student contributed to the data collection process so that the findings could provide a comprehensive description of the effect of PjBL on improving students' understanding. Data were collected through direct classroom observations, semi-structured interviews with the homeroom teacher, and test (pre-test and post-test). The primary instrument consisted of a multiple-choice test (30 items) designed to measure students' cognitive understanding of cultural diversity topics (traditional musical instruments, regional attire, customary houses, and related cultural elements). The same instrument was used for both pretest and posttest to allow direct comparison.

Data analysis involved several prerequisite tests, including validity test (content and empirical validity), normality test (Shapiro-Wilk), reliability test (Cronbach's alpha), and homogeneity test (Levene's test). A hypothesis test (t-test/ Paired Samples t-Test) was then employed to determine the effectiveness of PjBL in improving students' understanding of cultural diversity. Because the data met parametric assumptions (confirmed through prerequisite tests), a paired-samples t-test was performed to determine whether a statistically significant difference existed between pretest and posttest mean scores, thereby establishing the effectiveness of the PjBL model in improving students' understanding of cultural diversity.¹⁶ All statistical analyses were conducted using SPSS version 22 at a significance level of $\alpha = 0.05$.

RESULTS AND DISCUSSION

Results

This study was carried out in a systematic sequence of stages. During the instrument testing phase, validity and reliability tests were conducted on the 20 multiple-choice items used for the pre-test and post-test in a fifth-grade class. Fifteen items met the criteria for validity and reliability and were retained for the final instrument. Data collection proceeded as follows: a pretest was administered to measure students' initial understanding of cultural diversity. Subsequently, the Project-Based Learning (PjBL) model was implemented as the instructional treatment over six meetings. At the end of the intervention, an identical posttest was given to assess knowledge gains.

A normality test was subsequently conducted using the Shapiro–Wilk formula. The purpose of this test was to determine whether the data were normally distributed. The data were analyzed using IBM SPSS Statistics version 22.

¹⁶ Abdul Nasar and others, "Uji Prasyarat Analisis," *JEBI: Jurnal Ekonomi Dan Bisnis*, 2.6 (2024), 786–99.

Table 1. Normality Test Results (Shapiro-Wilk)

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
PRE-TEST	.132	42	.114	.949	42	.126
POST-TEST	.201	42	.152	.879	42	.180

Based on Table 1, the significance value for the pre-test was $0.126 > 0.05$, and for the post-test, it was $0.180 > 0.05$, which indicates that both pre-test and post-test scores were normally distributed.

A homogeneity test was then conducted to determine whether the sample had homogeneous variance.

Table 2. Homogeneity Test Results

Test of Homogeneity of Variances			
Levene Statistic	df1	df2	Sig.
10.894	1	82	.242

Based on Table 2, the significance value obtained was 0.242, which is greater than 0.05, indicating that the data met the criteria for homogeneity.

Table 3. Descriptive Statistics of Pretest and Posttest Score

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
PRETEST	42	40	93	71,86	12,548
POSTTEST	42	80	100	90,62	6,503

To further examine the effect of the PjBL model, descriptive statistical analysis was employed. Table 3 displays the descriptive statistics. As shown in Table 3, the 42 fourth-grade students had an average pre-test score of 71.86, with a minimum score of 40, a maximum score of 93, and a standard deviation of 12.548. Meanwhile, after the treatment, the average post-test score increased to 89.71, with a minimum score of 80, a maximum score of 100, and a standard deviation of 6.503. Overall, the average score increased by 17.85 from pre-test to post-test.

A paired-samples t-test was conducted to determine whether the observed improvement was statistically significant. Results are summarized in Table 4.

Table 4. Paired-Samples t-Test Results

Paired Samples Test								
	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 PRE-TEST - POST-TEST	-1.99524	11.50388	1.77509	-23.53724	-16.36752	-11.240	41	.000

Based on Table 4, the hypothesis testing used a Paired Sample t-Test to determine whether the proposed hypothesis was accepted or rejected. The analysis showed a t-value of -11.240 with a significance value of 0.000, which was lower than 0.05. Therefore, H_0 was rejected and H_a was accepted. These findings indicate that PjBL was effective in improving students' learning outcomes on cultural diversity material in the fourth-grade Pancasila Education class at SDN 2 Sukodono.

Discussion

This study was conducted with 42 fourth-grade students at SD Negeri 2 Sukodono during the 2024/2025 academic year. The PjBL model was implemented across three meetings: meeting 1 (diversity of traditional musical instruments): Students worked in ten small groups to create shaded drawings of various instruments and presented their work, meeting 2 (diversity of traditional attire): Groups colored and designed representations of

regional costumes and presented the results, and meeting 3 (diversity of customary houses): Students produced collages of traditional houses in groups and delivered class presentations. These hands on, collaborative projects required students to research, discuss, create tangible artefacts, and communicate findings, and core elements of authentic project-based learning.

Student learning outcomes in terms of cognitive understanding showed substantial improvement. In the pre-test, only 16 students achieved scores ≥ 75 , indicating low initial understanding of cultural diversity. After the PjBL treatment, all 42 students scored ≥ 75 on the post-test. The pre-test results showed a minimum score of 40 and a maximum score of 93, while the post-test results showed a minimum score of 80 and a maximum score of 100. The mean pre-test score was 71.86, and the mean post-test score was 90.62. Thus, the average score increased by 17.85 from pre-test to post-test.

The improvement in student learning outcomes at SDN 2 Sukodono was influenced by external factors. One such factor was the school environment, particularly the learning activities designed by the teacher. When PjBL was implemented in classroom instruction, it improved students' understanding, increased their learning interest, clarified the material, and enhanced students' participation during lessons.¹⁷ This occurred because PjBL required students to create projects, which enabled them to be directly involved in the learning process.

PjBL has been proven to influence students' understanding, as supported by previous studies showing that the implementation of PjBL improved students' learning outcomes on cultural diversity content.¹⁸ This is because PjBL provides opportunities for students to engage actively in the learning process through authentic and meaningful projects. In addition, the use of PjBL enhances student engagement and academic performance in cultural diversity learning.¹⁹ The collaborative activities embedded within the projects encourage deeper involvement, resulting in a more comprehensive understanding of the content.

The implementation of PjBL does not only focus on improving cognitive learning outcomes but also contributes to shaping students' character. PjBL is effective in strengthening cultural inclusion, collaboration, and social skills in multicultural classrooms when supported by competent teachers and appropriate learning content.²⁰ Furthermore, PjBL has strong potential to develop active citizenship skills thinking, acting, and participating, particularly in the digital era, provided that it is implemented with careful and adequate planning.²¹

PjBL also supports students in organizing cultural information visually. The project outputs increase student engagement and help reinforce students' memory of key concepts.²² As a project-based strategy, PjBL promotes both social and cognitive competencies, especially in subjects that emphasize cultural values and national identity, such as Pancasila Education.²³ PjBL is also effective in improving students' understanding of cultural richness.

¹⁷ Siti Rahmah, Ahmad Suriansyah, and Celia Cinanta, "Implementasi PjBL Untuk Peningkatan Minat Motivasi Peserta Didik Disd," *Maras*, 24 (2024), 2104–10.

¹⁸ Verryanjaya, N. (2024). "Peningkatan Hasil Belajar Melalui PjBL Materi Indah Menghargai Keberagaman Pada Kelas 4 SD Swato 1 Tapin." *Darul Ulum*, 15(2), 201–214.

¹⁹ Dela Diana and others, "Peningkatan Hasil Belajar Siswa Kelas III Dalam Pembelajaran Pendidikan Pancasila Melalui Model Project-Based Learning," 10.5 (2025), 67–74.

²⁰ Khusnul. (2025). "Analisis Pendidikan Berbasis Proyek Untuk Mewujudkan Pendidikan Inklusi." *Learning*, 51, 74–82.

²¹ Dina Indriyani and others, "The Impac of PjBL to Build Studen Civic Engagement in Digital," *Atlantis Pres*, (2023).

²² Manalu, "Pendidikan IPS," *Konflik Ukraina-Rusia*, 12 (2022), 39–48.

²³ Elvayana Br Silitonga and others, "Upaya Peningkatan Aktivitas Peserta Didik Menggunakan PjBL Materi Keragaman Budaya Indonesia Di Kelas 5 SD 0666 Medan Denai," 53 (2025), 3352–63.

This demonstrates that integrating project activities into PjBL makes the learning process more engaging and easier for students to comprehend.

On a global level, this study is consistent with international research that highlights the role of PjBL in enhancing students' intercultural competence and cultural awareness. The model emphasizes project-based learning that requires collaboration, reflection, and cultural exploration, allowing students not only to understand the material but also to internalize the values of diversity.²⁴ Thus, the implementation of PjBL is concluded to be effective in improving fourth-grade students' understanding of cultural diversity at SDN 2 Sukodono.

CONCLUSION

Based on the results of the paired sample t-test, this study concludes that a significant difference exists in students' understanding of cultural diversity before and after the implementation of the PjBL model in the fourth-grade class at SDN 2 Sukodono. The comparison between the pre-test and post-test scores shows a significance value of $0.000 < 0.05$, indicating that H_0 was rejected and H_a was accepted. The mean score increased from 71.86 on the pre-test to 90.62 on the post-test, reflecting an overall improvement of 17.85 points. These findings unequivocally demonstrate that the Project-Based Learning model was highly effective in enhancing students' cognitive mastery of cultural diversity topics (traditional musical instruments, regional attire, and customary houses) within Pancasila Education.

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²⁴ Rajae Berkane, "Fostering Cultural Competence: Teaching Intercultural Understanding through Project-Based Learning," *European Journal of Education and Pedagogy*, 6.1 (2025), 39-44.

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