

The Impact of P5 on Students' Environmental Care Character

Supriadin¹, Muhammad Nizaar³, Haifaturrahmah³

^{1,2,3}Education of Elementary School Teachers, Universitas Muhammadiyah Mataram, Indonesia
adinsupriadin85@gmail.com¹, nijadompu@gmail.com², haifaturrahmah@yahoo.com³

Abstract: This study examines the impact of the Pancasila Student Profile Strengthening (P5) program on the development of environmental responsibility among elementary school students. At SDN 2 Sikur in East Lombok, Indonesia, a quasi-experimental design with a non-equivalent control group was employed. The study involved 60 fourth-grade students evenly divided into experimental and control groups. The experimental group participated in collaborative environmental activities (e.g., school cleaning, plant care) as part of the P5 project, whereas the control group received standard environmental education. Students' environmental care attitudes were assessed using pre- and post-test questionnaires. Results indicate that the experimental group experienced a significant improvement in environmental care scores, with average scores rising from 23 (pre-test) to 47.5 (post-test), significantly higher than those of the control group (Mann-Whitney U test, $p < 0.05$). These findings suggest that the P5 project effectively fosters environmental responsibility among students. The study concludes that integrating P5's collaborative environmental action approach into the curriculum can significantly enhance environmental stewardship at the elementary level.

Keywords: Pancasila Student Profile (P5), Environmental Responsibility, Character Education

Article History:

Received: 02-09-2025

Online : 04-10-2025



This is an open access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license

A. INTRODUCTION

The Pancasila Student Profile Strengthening Project (Projek Penguatan Profil Pelajar Pancasila, or P5) is a core innovation of the Indonesian Merdeka Curriculum, officially launched in 2021. This project is designed to cultivate students' holistic development across six interrelated dimensions: faith and piety to God Almighty, global diversity, mutual cooperation, independence, critical reasoning, and creativity (Ismail, 2021). Unlike conventional classroom instruction, P5 applies project-based learning across intracurricular, extracurricular, and cultural activities, emphasizing collaboration and contextual engagement (Sulistiyaningsih & Sujarwo, 2023). By focusing on these dimensions, P5 positions students not only as knowledgeable learners but also as future citizens embodying Indonesian values.

One of the essential outcomes of P5 is character formation, including environmental awareness and responsibility. Environmental care character is defined as attitudes and actions aimed at preventing environmental damage and repairing existing environmental issues (Rahmawati et al., 2023). In school settings, this character manifests through concrete practices such as waste management, cleanliness maintenance, and active participation in ecological preservation activities (Irawati et al., 2022). Developing such values at an early age is critical for ensuring that students internalize ecological responsibility as part of their identity.

The integration of P5 with environmental character education provides a strategic approach to addressing real-world challenges. Schools play a significant role in embedding

environmentally conscious behavior through structured routines and project activities that foster collaboration, responsibility, and ecological sensitivity (Zalukhu et al., 2023). By situating environmental issues within the P5 framework especially through the “mutual cooperation” dimension students not only learn about sustainability but also practice it within their daily school lives. Therefore, connecting P5 with environmental care character offers a practical and value-based educational strategy.

Several studies have explored the implementation of P5 in various contexts. Rachmawati et al., (2022) examined P5 through creative art projects and demonstrated its capacity to strengthen critical reasoning among students. Asiati & Hasanah (2022) found that P5 implementation in elementary schools fosters competence, integrity, and adherence to Pancasila values. Similarly, Juraidah & Hartoyo, (2022) confirmed that P5 significantly influences moral and character development at the junior high level. Collectively, these studies establish that P5 contributes positively to character education, though each research emphasizes different dimensions of student development.

From a theoretical perspective, P5 adopts project-based learning principles, which are holistic, contextual, student-centered, and exploratory (Hamzah et al., 2022). These principles align closely with character education theory, which emphasizes the integration of moral values with lived experience (Laghung, 2023). When directed toward environmental education, these approaches empower students to become active agents in sustainability, combining cognitive understanding with practical action. Thus, the literature positions P5 as a pedagogical tool capable of shaping environmentally responsible behaviors through experiential and collaborative learning.

Despite the growing number of studies on P5, there remains a lack of research specifically examining its impact on environmental care character at the elementary level. Prior studies have focused on cultural understanding critical reasoning or general moral development (Rosmana et al., 2023). However, few have employed a quantitative quasi-experimental approach to directly measure changes in environmental awareness and behavior among young learners. This study therefore addresses a critical gap by empirically testing the influence of P5 on environmental care character using controlled experimental design.

The primary objective of this study is to analyze the influence of the Pancasila Student Profile Strengthening Project on the development of environmental care character among fourth-grade elementary school students. By investigating this relationship, the study aims to provide empirical evidence supporting P5 as an effective strategy for fostering environmental responsibility in early education. Ultimately, the findings are expected to contribute to both theoretical discourse in character education and practical recommendations for implementing P5 in Indonesian schools.

B. METHOD

1. Research Design

This study adopted a quantitative research approach with a quasi-experimental method, specifically a non-equivalent control group design. In this design, both an experimental class and a control class were involved, where the experimental class received treatment through the Pancasila Student Profile Strengthening Project (P5), while the control class followed conventional instruction. Each group was administered a pre-test to assess their initial environmental care character, followed by a post-test after the intervention. This model was selected because random assignment was not possible due to administrative constraints within the school. Nonetheless, the design still enabled the researcher to examine cause-and-effect relationships between P5 implementation and improvements in students' environmental care character.

2. Research Site and Duration

The research was conducted at SD Negeri 2 Sikur, located in Sikur District, East Lombok Regency, West Nusa Tenggara, Indonesia. The school was chosen purposively because preliminary observation revealed low environmental awareness among students, as reflected in habits of littering, neglecting classroom cleanliness, and lack of cooperation between students and teachers in maintaining a healthy school environment. The study was carried out during the odd semester of the 2024/2025 academic year, ensuring sufficient time for pre-tests, treatment implementation, and post-tests. Conducting the research within a regular semester also guaranteed that the intervention was aligned with the official school timetable and learning structure.

3. Population and Sample

The population of this research consisted of all fourth-grade students at SDN 2 Sikur, with a total of 60 individuals. Because the population size was relatively small, the study employed a saturated sampling technique, meaning that the entire population was included as participants. The students were divided into two groups: Class IVA served as the experimental group, and Class IVB as the control group, with 30 students in each class. This balance ensured comparability across groups, thereby enhancing the validity of the results. By involving the entire population, the study avoided sampling bias and provided a comprehensive picture of P5's influence on environmental care character at this grade level.

4. Variables of the Study

This research involved two key variables. The independent variable (X) was the Pancasila Student Profile Strengthening Project (P5), operationalized through project-based learning activities emphasizing the value of mutual cooperation (gotong royong). The dependent variable (Y) was environmental care character, defined as the attitudes and actions that reflect responsibility in preserving and improving environmental conditions. Indicators of the dependent variable included responsible waste disposal, cleaning facilities, maintaining plants, and active participation in collaborative activities for environmental sustainability. The operationalization of these variables was critical to ensure that the concepts could be observed and measured quantitatively in the classroom context.

5. Data Collection Techniques

The study employed three data collection techniques to ensure validity and reliability of findings. First, observation was carried out to directly monitor students' behaviors related to environmental care during the implementation of P5 projects. Second, a questionnaire using a Likert scale was distributed, where students responded to structured statements ranging from "Strongly Agree" to "Strongly Disagree." This instrument allowed quantitative measurement of environmental character indicators. Third, documentation such as photographs, class records, and teacher notes was gathered to provide supporting evidence and triangulation of data. Using multiple techniques enhanced the credibility of findings and minimized the risks of bias inherent in a single method approach.

6. Research Instruments

The main instrument in this research was the environmental care character questionnaire, consisting of 11 items. The items were designed to assess three dimensions: (1) environmental responsibility, such as waste management and cleaning, (2) cooperation, such as group work in maintaining school cleanliness, and (3) proactive participation, such as caring for plants and supporting school-wide cleanliness programs. Prior to use, the instrument underwent validity testing using the product moment correlation in SPSS 26, which confirmed that all 11 items were valid because the correlation coefficients exceeded the r -table threshold. Furthermore, a reliability test using Cronbach's Alpha produced a coefficient of 0.967, indicating that the instrument had excellent internal consistency and could be trusted to produce consistent results (Rindiasari et al., 2021).

7. Data Analysis Techniques

The data analysis process consisted of several stages. First, descriptive statistics were used to summarize students' responses from pre-tests and post-tests in both experimental and control groups. Second, prerequisite tests were performed, including the Shapiro-Wilk and Kolmogorov-Smirnov tests for normality and Levene's test for homogeneity, to assess whether the data met the assumptions required for inferential testing. Since some distributions were not fully normal, the researcher employed a non-parametric test, namely the Mann-Whitney U test, which is suitable for comparing two independent groups under such conditions. The significance level was set at 0.05. A significance value below this threshold indicated that P5 had a statistically significant effect on environmental care character. This rigorous analysis procedure ensured that the results were not only reliable but also generalizable to similar contexts in other schools.

C. RESULTS AND DISCUSSION

1. Research Description

This study was conducted at SD Negeri 2 Sikur, located in Sikur District, East Lombok Regency, West Nusa Tenggara, during the odd semester of the 2024/2025 academic year. The participants consisted of 60 fourth-grade students, divided into two intact classes: Class IVA (experimental group) and Class IVB (control group). The experimental group was exposed to the Pancasila Student Profile Strengthening Project (P5) with the theme of gotong royong (mutual cooperation), while the control group was taught using conventional methods without P5 intervention. The distribution of the participants is presented in Table 1.

Table 1. Distribution of Research Participants

Group	Class	Number of Students	Treatment Applied
Experimental	IVA	30	P5 project activities with gotong royong theme
Control	IVB	30	Conventional teaching (no P5 intervention)
Total	-	60	-

Both groups were administered a pre-test in the form of a questionnaire measuring environmental care character before the treatment phase. The experimental group then engaged in project-based activities such as collaborative cleaning, waste sorting, and plant care, while the control group continued learning through conventional instruction. At the end of the intervention, a post-test was conducted for both groups using the same instrument. The equal distribution of students between the two groups (30 each) ensured that the study design

was balanced and comparable. This minimized sampling bias and allowed a fair assessment of the intervention effect. Furthermore, the implementation of pre-test and post-test procedures provided a reliable basis to measure changes in environmental care character attributable to the P5 project.

2. Instrument Test (Validity and Reliability)

Before being used to measure students' environmental care character, the research instrument in the form of a questionnaire underwent validity and reliability testing. The instrument consisted of 11 items designed to assess indicators of environmental care character such as responsibility, cooperation, and active participation. The validity test was carried out using the product moment correlation in SPSS 26. The results are presented in Table 2.

Table 2. Validity Test Results

Item	r-count	r-table	Interpretation
1	0.835	0.254	Valid
2	0.925	0.254	Valid
3	0.834	0.254	Valid
4	0.742	0.254	Valid
5	0.922	0.254	Valid
6	0.844	0.254	Valid
7	0.916	0.254	Valid
8	0.940	0.254	Valid
9	0.819	0.254	Valid
10	0.903	0.254	Valid
11	0.901	0.254	Valid

As shown in Table 2, all items had correlation coefficients greater than the r-table value of 0.254, which means all 11 items were valid and suitable for use. Furthermore, the reliability of the questionnaire was tested using Cronbach's Alpha, with results displayed in Table 3.

Table 3. Reliability Test Result

Cronbach's Alpha	N of Items	Interpretation
0.967	11	Very Reliable

The Cronbach's Alpha coefficient of 0.967 exceeds the minimum threshold of 0.60, indicating that the instrument has excellent reliability. The validity test confirmed that each questionnaire item appropriately measured aspects of environmental care character, while the reliability test showed high internal consistency. Thus, the instrument was both valid and reliable, ensuring the accuracy of data collection in this study.

3. Data Analysis

a. Descriptive Statistics

Descriptive analysis was carried out to observe students' environmental care character before and after the treatment. The experimental group, which participated in the P5 project, showed a considerable improvement compared to the control group.

Table 4. Descriptive Results of Pre-test and Post-test

Group	Minimum	Maximum	Mean (pre-test)	Mean (post-test)	Difference (%)
Experimental	11	55	23.0	47.5	+24.5%
Control	13	34	23.0	23.6	+0.6%

The table shows that the experimental group's mean increased from 23.0 to 47.5, while the control group remained relatively unchanged, from 23.0 to 23.6. This indicates that the P5 project had a substantial impact on students' environmental care character.

b. Normality Test

The Shapiro-Wilk test was used because the sample size in each group was fewer than 50 students.

Table 5. Shapiro-Wilk Normality Test Results

Group	Test	Statistic	Sig.	Interpretation
Experimental	Pre-test	0.894	0.037	Not Normal
Experimental	Post-test	0.950	0.200	Normal
Control	Pre-test	0.962	0.195	Normal
Control	Post-test	0.947	0.200	Normal

The pre-test data of the experimental group did not meet the assumption of normality (sig. = 0.037 < 0.05). Therefore, a non-parametric test was required for hypothesis testing.

c. Homogeneity Test

Levene's test was applied to determine whether the variances of the two groups were equal.

Table 6. Homogeneity Test Result

Levene Statistic	df1	df2	Sig.	Interpretation
2.191	1	58	0.144	Homogeneous

The significance value of 0.144 (> 0.05) indicates that the data from both groups were homogeneous, allowing a fair comparison.

d. Hypothesis Testing

The Mann-Whitney U test was used to test the hypothesis due to the non-normal distribution in one dataset.

Table 7. Mann-Whitney U Test Result

Test Statistic	Value
Mann-Whitney U	0.000
Wilcoxon W	465.000
Z	-6.666
Asymp. Sig. (2-tailed)	0.000

The significance value of 0.000 (< 0.05) indicates a significant difference between the experimental and control groups. Thus, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted. This confirms that the P5 project significantly influenced students' environmental care character.

4. Discussion

The results of this study demonstrate that the implementation of the Pancasila Student Profile Strengthening Project (P5) significantly improved students' environmental care character. The experimental group exhibited a sharp increase in post-test scores, while the control group showed only a negligible change. This finding confirms that project-based learning provides students with more meaningful opportunities to practice values, rather than merely understanding them at the conceptual level. By engaging directly in activities such as waste management, plant care, and collaborative cleaning, students in the experimental group developed stronger responsibility and awareness toward their school environment. These results align with earlier studies highlighting the positive role of P5 in shaping character. Nugroho et al., (2023) reported that P5 activities enhanced students' critical reasoning and creativity, while Pratomo et al., (2023) found that the program strengthened cultural literacy and ethical behavior. Similarly, Shibgho et al., (2022) revealed that P5 positively influenced students' moral reasoning and cooperation at the junior high level. The present study adds to this body of research by demonstrating that P5 is equally effective in promoting ecological responsibility, an area less explored in prior works. From a theoretical standpoint, the findings support the character education model, which emphasizes the integration of moral values within authentic contexts. According to Mery et al., (2022) character education is most effective when moral values are practiced in daily life and linked to real-world experiences. In this research, environmental care character was not taught as an abstract concept but developed through direct practice in the P5 project. The students' behavioral improvement reflects how contextualized learning can foster sustainable attitudes and habits.

Practically, this research suggests that teachers should integrate environmental themes into P5 implementation more systematically. Rather than focusing solely on cognitive outcomes, project activities can be designed to instill responsibility and cooperation through environmental practices. Schools should provide facilities and support to sustain such programs, ensuring that environmental care becomes part of the school's culture. At a policy level, the results reinforce the importance of embedding environmental education in the P5 framework, as it prepares students not only to be academically competent but also to be environmentally responsible citizens. The novelty of this study lies in its quantitative approach to assessing the impact of P5 on environmental care character, an aspect that has not been widely examined in previous research. While most studies have explored cultural, moral, or cognitive dimensions, this study provides empirical evidence of P5's effectiveness in fostering ecological responsibility among elementary students. This contribution is timely and relevant, given the urgency of environmental issues globally and the critical role of schools in promoting sustainable values from an early age.

D. CONCLUSIONS AND SUGGESTIONS

This study concludes that the implementation of the Pancasila Student Profile Strengthening Project (P5) has a significant effect on improving students' environmental care character. The experimental group demonstrated a substantial increase in post-test scores compared to the control group, confirming that project-based learning under P5 is effective in instilling ecological awareness, responsibility, and sustainable habits. These findings validate

the theoretical perspective that character education is most effective when values are internalized through contextual and experiential practices. The results also extend previous research on P5 by providing empirical evidence of its contribution to environmental education at the elementary school level.

Based on the findings, several recommendations can be proposed. Teachers are encouraged to integrate environmental themes into P5 projects more systematically, ensuring that activities such as waste management, plant care, and school cleanliness become routine practices that foster long-term behavioral change. School administrators should also provide adequate support and resources to sustain these initiatives. For policymakers, it is suggested that environmental care be emphasized as a key dimension of P5 implementation nationwide, so that character education aligns with global sustainability goals. Future research may build on this study by applying longitudinal designs or exploring different school contexts to further validate and expand the role of P5 in character formation.

REFERENCES

- Asiati, S., & Hasanah, U. (2022). Implementasi Projek Penguatan Profil Pelajar Pancasila Di Sekolah Penggerak. *Jurnal Lingkar Mutu Pendidikan*, 19(2), 61–72. <https://doi.org/10.54124/Jlmp.V19i2.78>
- Hamzah, M. R., Mujiwati, Y., Khamdi, I. M., Usman, M. I., & Abidin, M. Z. (2022). Proyek Profil Pelajar Pancasila Sebagai Penguatan Pendidikan Karakter Pada Peserta Didik. *Jurnal Jendela Pendidikan*, 2(4), 533–559. <https://doi.org/10.57008/Jjp.V2i04.309>
- Irawati, D., Iqbal, A. M., Hasanah, A., & Arifin, B. S. (2022). Profil Pelajar Pancasila Sebagai Upaya Mewujudkan Karakter Bangsa. *Edumaspul: Jurnal Pendidikan*, 6(1), 1224–1238. <https://doi.org/10.33487/edumaspul.v6i1>
- Ismail, M. J. (2021). Pendidikan Karakter Peduli Lingkungan Dan Menjaga Kebersihan Di Sekolah. *Jurnal Pendidikan Dan Pembelajaran*, 4(1), 59–68. <https://doi.org/10.31970/Gurutua.V4i1.67>
- Juraidah, & Hartoyo, A. (2022). Peran Guru Dalam Menumbuhkembangkan Kemandirian Belajar Dan Kemampuan Berpikir Kritis Siswa Sekolah Dasar Melalui Proyek Penguatan Profil Pelajar Pancasila. *Jurnal Pendidikan Dasar Perkhasa*, 8(2), 105–118. <https://doi.org/10.31932/jpdp.v8i2.1719>
- Laghung, R. (2023). Pendidikan Karakter Sebagai Upaya Mewujudkan Profil Pelajar Pancasila. *CENDEKIA: Jurnal Ilmu Pengetahuan*, 3(1), 1–9. <https://doi.org/10.51878/Cendekia.V3i1.1950>
- Mery, M., Martono, M., Halidjah, S., & Hartoyo, A. (2022). Sinergi Peserta Didik Dalam Proyek Penguatan Profil Pelajar Pancasila. *Jurnal Basicedu*, 6(5), 7840–7849. <https://doi.org/10.31004/Basicedu.V6i5.3617>
- Nugroho, Setyo, A., Sumardjoko, B., & Dessty, A. (2023). Penguatan Karakter Peduli Lingkungan di Sekolah Dasar Melalui Karya Seni Ecoprint. *Jurnal Elementaria Edukasia*, 6(2), 762–777. <https://doi.org/10.31949/jee.v6i2.5120>
- Pratomo, W., Nadziroh, N., Chairiyah, C., & Andini, A. (2023). Peran Guru dalam Menanamkan Nilai Karakter Peduli Lingkungan Pada Pembelajaran PPKn Kelas V Sekolah Dasar. *Sistem-Among : Jurnal Pendidikan Sekolah Dasar*, 3(1), 15–25. <https://doi.org/10.56393/Sistemamong.V3i1.1563>
- Rachmawati, N., Marini, A., Nafiah, M., & Nurashia, I. (2022). Proyek Penguatan Profil Pelajar Pancasila Dalam Impelementasi Kurikulum Prototipe Di Sekolah Penggerak Jenjang Sekolah Dasar. *Jurnal Basicedu*, 6(3), 3613–3625. <https://doi.org/10.31004/Basicedu.V6i3.2714>
- Rahmawati, E., Wardhani, N. A., & Ummah, S. M. (2023). Pengaruh Proyek Profil Pelajar Pancasila Terhadap Karakter Bernalar Kritis Peserta Didik. *Jurnal Educatio FKIP UNMA*, 9(2), 614–622. <https://doi.org/10.31949/Educatio.V9i2.4718>
- Rindiasari, Hidayat, Y., Rindiasari, P., Hidayat, W., & Yuliani, W. (2021). Uji validitas dan reliabilitas angket kepercayaan diri. *FOKUS (Kajian Bimbingan & Konseling Dalam Pendidikan)*, 4(5), 367. <https://doi.org/10.22460/Fokus.V4i5.7257>
- Rosmana, P. S., Iskandar, S., Fauziah, A. N., Illahi, A. M., & Sarizaen, F. K. (2023). Proyek Profil Pelajar Pancasila Dalam Penguatan Pembentukan Karakter Peserta Didik Di Sekolah Dasar. *INNOVATIVE: Journal Of Social Science Research*, 3(2), 178–187.

- Shibgho, Shinta, A., & Alfiansyah, I. (2022). Model Pembelajaran Berbasis Proyek Dalam Mewujudkan Profil Pelajar Pancasila Di Madrasah Ibtidaiyah. *Jurnal Pendidikan Dan Keislaman*, 5(2), 239–254.
- Sulistiyaningsih, ., & Sujarwo, S. (2023). Penguatan Profil Pelajar Pancasila Melalui Pembelajaran Berbasis Proyek Di Taman Kanak-Kanak. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 7(3), 3205–3214. <https://doi.org/10.31004/Obsesi.V7i3.4456>
- Zalukhu, B., Napitu, U., Zalukhu, Y., & Hulu, N. S. (2023). Pengaruh Proyek Penguatan Profil Pelajar Pancasila Terhadap Pembentukan Karakter Dan Moral Peserta Didik Di Sekolah Menengah Pertama. *Asiati, S., & Hasanah, U. (2022). Implementasi Projek Penguatan Profil Pelajar Pancasila Di Sekolah Penggerak. Jurnal Lingkar Mutu Pendidikan*, 19(2), 61–72. <https://doi.org/10.54124/Jlmp.V19i2.78>
- Ismail, M. J. (2021). Pendidikan Karakter Peduli Lingkungan, 3(6), 2102–2115.