



Exploring Environmental Character through Elementary Students' Lived Experiences in the Adiwiyata Program

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ABSTRACT

Keywords:

*Environmental Character;
Adiwiyata Program;
Character Education;
Lived Experiences;
Elementary School Students.*

Abstract: *This study explores how fourth-grade students develop environmental character through the Adiwiyata Program in elementary schools. This study adopted a qualitative phenomenological approach. All fourth-grade students were observed to select information-rich participants through sampling. The final participants consisted of one Adiwiyata coordinator and three students representing different levels of environmental character. Data were collected through observation, semi-structured interviews, and documentation; interview data were analyzed using thematic analysis; The reliability of the findings was reinforced through triangulation and member checking. Students develop an environmentally conscious character through experiences and concrete actions to preserve the environment. Unlike previous research that emphasized program outcomes, this study explains how students internalize environmental values and apply them in sustainable actions through their life experiences. The findings suggest that environmental education is more effective when schools embed environmental values in daily learning experiences and provide ongoing opportunities for students to practice environmental responsibility.*

Kata Kunci:

Karakter Peduli Lingkungan;
Program Adiwiyata;
Pendidikan Karakter;
Pengalaman Hidup;
Siswa Sekolah Dasar.

Abstrak: Penelitian ini mengkaji bagaimana siswa kelas empat mengembangkan karakter peduli lingkungan melalui Program Adiwiyata di sekolah dasar. Studi ini menggunakan pendekatan fenomenologi kualitatif. Seluruh siswa kelas empat diamati untuk memilih partisipan yang kaya informasi melalui proses pengambilan sampel. Partisipan akhir terdiri dari satu orang koordinator Adiwiyata dan tiga orang siswa yang mewakili tingkat karakter peduli lingkungan yang berbeda. Data dikumpulkan melalui observasi, wawancara semi-terstruktur, dan dokumentasi; data wawancara dianalisis menggunakan analisis tematik; reliabilitas temuan diperkuat melalui triangulasi dan pemeriksaan oleh partisipan. Siswa mengembangkan karakter peduli lingkungan melalui pengalaman dan tindakan nyata melestarikan lingkungan. Berbeda dengan penelitian sebelumnya yang lebih menekankan pada hasil program, penelitian ini menjelaskan bagaimana siswa menginternalisasi nilai-nilai lingkungan dan menerapkannya dalam tindakan berkelanjutan melalui pengalaman hidup mereka. Temuan penelitian menunjukkan bahwa pendidikan lingkungan lebih efektif ketika sekolah menanamkan nilai-nilai lingkungan dalam pengalaman belajar sehari-hari serta memberikan kesempatan berkelanjutan bagi siswa untuk mempraktikkan tanggung jawab terhadap lingkungan.

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A. INTRODUCTION

Environmental degradation represents a critical global challenge, threatening ecological sustainability, human well-being, and the attainment of the Sustainable Development Goals (SDGs) (UNESCO, 2020; United Nations, 2015). Although international initiatives to advance environmental education have increased, persistent issues such as climate change, biodiversity loss, pollution, and unsustainable resource consumption continue to intensify. This trend suggests that environmental knowledge alone is insufficient to promote enduring pro-environmental behavior (IPBES, 2019; UNESCO, 2020). Consequently, environmental education has shifted from solely enhancing

environmental literacy to cultivating environmental character, thereby empowering individuals to translate knowledge into responsible attitudes and sustainable actions (Alem, 2025). This evolution underscores the necessity of fostering environmental responsibility from an early age, as childhood is widely regarded as a formative period for establishing values and behavioral tendencies that often persist into adulthood (Lickona, 2019). Orr (1992) emphasizes that ecological literacy is vital for preventing the future exploitation of natural resources. Therefore, it is essential for educational institutions to instruct students about the limitations of Earth's resources, enabling them to develop the awareness and capacity to sustain ecological balance.

In Indonesia, the development of environmental character has been established as a national educational priority, as human behavior is identified as a significant factor contributing to environmental degradation under Law No. 32 of 2009 on Environmental Protection and Management. In response, the government implemented the Adiwiyata Program, a nationwide environmental education initiative that incorporates environmental values into school governance, curriculum, daily practices, and community engagement (Puspitasari, 2021). The program is further supported by the Regulation of the Minister of Environment of the Republic of Indonesia No. 5 of 2025, which highlights institutional guidance, environmental action programs, environmentally supportive facilities and infrastructure, and collaborative partnerships as fundamental elements of environmentally responsible schools (Nurbayan & Yuliana, 2025). Instead of positioning environmental education as an isolated subject, the Adiwiyata Program aims to foster environmental responsibility through students' daily experiences within the school setting. According to Palmer (2002), environmental education in schools is instrumental in shaping students' moral character regarding the environment. Effective environmental education needs to encompass not only knowledge of environmental protection but also practical actions to preserve the environment and mitigate environmental degradation. This comprehensive approach is intended to cultivate a sense of moral responsibility and promote positive environmental behavior among students.

Elementary schools play a vital role in developing environmental values and habits, as these are more effectively established during childhood. Lickona (2019) states that character formation requires integrating moral knowledge, feeling, and action, which together transform understanding into consistent behavior. In environmental education, these elements underpin environmental character, reflected in individuals' willingness to protect and enhance the environment through sustained pro-environmental behavior (Permatasari et al., 2022). Therefore, elementary education should help students understand environmental issues, internalize values, and practice responsible behavior in daily life (Alem, 2025). The development of environmental awareness as a character trait depends on students' moral sensitivity, knowledge, and willingness to act to preserve nature (Hungerford & Volk, 1990). Chawla (1998) notes that students' concrete environmental actions can foster moral sensitivity, which may help reduce future exploitation of natural resources.

The effectiveness of the Adiwiyata Program has been widely studied. Research shows that successful implementation depends on strong institutional commitment, clear environmental policies, active teacher involvement, adequate facilities, and consistent environmentally responsible behavior (Agustina et al., 2024; Fajar & Putra, 2021; Hariandi et al., 2023; Utari et al., 2025). Other studies report that participation in the program increases students' environmental awareness, strengthens pro-environmental attitudes, and encourages responsible practices (Bariyah et al., 2026; Triaji et al., 2026). Together, these findings indicate that the Adiwiyata Program significantly contributes to environmental education and school sustainability.

Although previous research confirms the positive impact of the Adiwiyata Program on environmental education and students' character (Bariyah et al., 2026; Triaji et al., 2026), most studies have focused on implementation, management, teacher roles, facilities, or habituation (Agustina et al., 2024; Fajar & Putra, 2021; Hariandi et al., 2023; Utari et al., 2025). While these studies provide

valuable insights into program success factors, they offer a limited understanding of how elementary students experience environmental learning and internalize values through daily school activities. Thus, the development of environmental character from students' lived experiences remains underexplored.

Research shows that the development of environmental awareness within the Adiwiyata Program is influenced by teacher involvement, school regulations, and available facilities (Agustina et al., 2024; Fajar & Putra, 2021; Utari et al., 2025). Hariandi et al. (2023) found that some students had not fully developed environmental awareness, partly due to limited guidance and supervision from teachers. This study, therefore, examines students' environmental awareness in the school context to support efforts to prevent future environmental degradation. Understanding this process is essential because character development goes beyond participation in programs or compliance with regulations. Lickona (2019) explains that character forms through the integration of moral knowledge, feeling, and action, meaning responsible behavior results from internal value formation. Examining students' lived experiences helps reveal how environmental values are recognized, interpreted, and translated into responsible actions in real school settings. A phenomenological approach is well-suited for this purpose, as it explores how individuals construct meaning from their experiences (Creswell & Poth, 2024; Flick et al., 2022). By focusing on students' perspectives, phenomenology allows researchers to explain not only whether environmental character is present but also how it develops through daily educational experiences.

To investigate this phenomenon, the study was conducted at an elementary school that consistently implemented the Adiwiyata Program, integrating environmental values into policies, classroom learning, routines, management, and community partnerships. This created an information-rich environment where students regularly engaged in environmental practices as part of daily school life. Such a context offered valuable opportunities to explore how environmental character develops through authentic interactions with the school environment, rather than isolated activities. Unlike previous studies focused on implementation and outcomes, this study emphasized the experiential processes behind environmental character development. Clarifying how students' values become responsible actions from their perspectives, the study advances understanding of environmental character education and offers practical guidance for designing more meaningful and sustainable learning experiences in elementary schools.

B. METHOD

A qualitative phenomenological design was employed to examine how elementary school students experienced and interpreted environmental character within the Adiwiyata Program. Phenomenology investigates the meanings individuals derive from lived experiences and the essence of a shared phenomenon (Creswell & Poth, 2024; Flick et al., 2022). The study prioritized understanding how students internalized environmental values and applied them in their daily practices, rather than quantitatively assessing the program's effectiveness. The study took place from February to April 2026 at an elementary school in Tulungagung Regency, East Java, Indonesia. The school was purposively selected for its active Adiwiyata Program and its 2025 Provincial Adiwiyata Award, which reflect the integration of environmental values into governance, curriculum, daily practices, and community partnerships. This information-rich context aligns with purposive sampling in qualitative research (Patton, 2014). Through stratified purposeful sampling to capture variation in students' environmental character (Patton, 2014). All fourth-grade students were initially observed using an environmental character checklist. Fourth grade was selected because students had experienced the Adiwiyata Program for an extended period and were considered able to articulate their environmental experiences during interviews. The observation served solely to identify variations for participant selection, not to generate quantitative findings. Students were classified

into four categories: Excellent, Good, Fair, and Poor. As no student was classified as Poor, three students representing the remaining categories were selected as primary participants. The Adiwiyata Program coordinator was also purposively selected as a key informant due to her involvement in planning, implementing, and supervising environmental activities. This approach enabled the study to capture diverse student experiences and utilize the coordinator's account for contextualization and triangulation (Creswell & Poth, 2024; Flick et al., 2022). Informed consent was obtained prior to data collection.

Data collection involved an environmental character observation checklist, semi-structured interviews, and documentation. The checklist, adapted from established indicators (Arikunto, 2013; Permatasari et al., 2022), encompassed five dimensions: environmental management, conservation, natural resource management, school sanitation, and participation in environmental activities. Each indicator was rated on a four-point scale from 1 (Poor) to 4 (Excellent) to identify participant variation. The semi-structured interview guide was based on Lickona's (2019) framework of moral knowing, moral feeling, and moral action, enabling exploration of students' environmental understanding, emotions, and practices (Creswell & Poth, 2024). The documentation included school records, photographs, and audio recordings of interviews to corroborate primary data (Sugiyono, 2023). Experts in environmental education and qualitative research reviewed the instruments, and revisions were made to enhance clarity, relevance, and suitability.

Data collection followed a sequence: observation, participant selection, and individual interviews with the three students and the Adiwiyata coordinator. Interviews addressed participants' environmental experiences, values, emotions, and daily practices, while documentation was gathered throughout the fieldwork to support data verification. This sequence ensured that participant selection was based on observed variation and that subsequent interviews provided in-depth exploration of students' lived experiences (Creswell & Poth, 2024).

Interview data were analyzed thematically using NVivo 12 Pro. The analysis followed five stages: familiarizing with transcripts, coding meaningful statements about environmental experiences, grouping codes into categories and themes, reviewing and refining themes, and defining and interpreting final themes in relation to the research objectives and Lickona's (2019) framework (Ardi et al., 2023). The five research indicators guided the initial organization of data, while themes emerged from patterns across participants' accounts. NVivo supported systematic coding, organization, and visualization through a mind map, while interpretation remained researcher-led (Creswell & Poth, 2024; Najmah et al., 2023).

Trustworthiness was addressed through triangulation, member check. Trustworthiness was ensured through triangulation, member checking, an audit trail, and analytical memos. Methodological triangulation compared observations, interviews, and documentation, while source triangulation compared students' accounts with the coordinator's information. Participants were invited to verify interview transcripts and preliminary interpretations. An audit trail documented coding and theme development decisions, and analytical memos and supporting documents enhanced transparency and confirmability (Creswell & Poth, 2024; Flick et al., 2022).

C. RESULT & DISCUSSION

1. Environmental Character among Fourth-Grade Students

The analysis revealed that students' lived experiences were represented by two interconnected dimensions. The first dimension explains how environmental character was gradually developed through everyday experiences within the school environment, whereas the second demonstrates how these internalized values were translated into concrete environmental actions both inside and outside the school. These dimensions illustrate that environmental responsibility was experienced

not as isolated environmental activities but as a continuous process of value formation and everyday practice.

The classroom observations indicate that environmental character was evident among most fourth-grade students. More than half of the students (58%) were categorized as demonstrating Good environmental character, 37% as Excellent, and only 5% as Fair. No students were categorized as Poor. This distribution suggests that environmentally responsible behavior has become a common feature of students' everyday school experiences. Although differences in the degree of environmental character remained apparent, environmental values appeared to have been consistently practiced throughout the school community.

Rather than constituting the primary findings of this phenomenological study, the observation results served as an initial mapping of students' environmental character and informed the participant selection process. Consistent with the principles of stratified purposive sampling, one student from each observed category (Excellent, Good, and Fair) was selected for the interview stage to ensure the study captured diverse environmental experiences while focusing on information-rich participants. Following participant selection, the characteristics of the interview participants are presented to provide context for interpreting the phenomenological findings, as shown in Table 1.

Table 1. Participant Characteristics

Partici-pant	Role	Gender	Age	Selection Category
N1	Adiwiyata Coordinator	Female	40	-
N2	Student	Female	10	Excellent
N3	Student	Female	10	Good
N4	Student	Female	10	Fair

As shown in Table 1, the study involved one teacher serving as the Adiwiyata Program coordinator and three fourth-grade students representing different levels of environmental character identified during the observation stage.

2. Environmental Character Was Cultivated through Daily School Practices

Participants consistently described environmental character as evolving through repeated experiences rather than through formal environmental instruction alone. Daily routines, interactions with teachers and classmates, and continuous involvement in environmental activities collectively shaped how students understood, valued, and practiced environmental responsibility. Four interconnected subthemes emerged from the analysis: environmental habits, environmental awareness, peer encouragement, and positive emotional engagement. These subthemes reveal the experiential process through which environmental values became embedded in students' everyday school lives.

Environmental habits emerged as one of the most prominent experiences described by the participants. Rather than being developed through isolated environmental lessons, these habits evolved through continuous exposure to environmental messages, school routines, and teacher guidance embedded in students' daily lives. Participants explained that repeated interactions with these environmental cues gradually shaped their behavior toward their surroundings. Participants consistently described environmental habits as developing through continuous exposure to environmental messages embedded throughout the school environment. Posters, environmental slogans, and school policies served as constant reminders that encouraged environmentally responsible behavior during students' everyday activities.

"Because there are always messages encouraging us to care for the environment, I read them frequently. If I do not follow them, I feel guilty." (N2)

This excerpt illustrates that environmental messages functioned not merely as informational displays but as continuous reminders that encouraged students to reflect on their own behavior. Repeated exposure to these messages appeared to transform environmental responsibility from an external expectation into a personally meaningful routine. The participant's feeling of guilt further suggests that environmental values had begun to influence personal judgment rather than simply regulating behavior through school rules. Participants also emphasized the importance of teacher guidance in reinforcing environmentally responsible habits. Teachers consistently reminded students to maintain the cleanliness of their classrooms and school environment, particularly during routine daily activities.

"I feel something is missing, and I'm afraid the teacher will scold me." (N4)

Although environmental behavior was initially associated with teacher supervision, participants explained that these repeated reminders gradually became integrated into their everyday routines. Over time, caring for the environment was no longer experienced solely as compliance with teachers' expectations but as an ordinary part of daily school life. These experiences suggest that repeated practice played a crucial role in transforming environmentally responsible behavior into enduring habits.

The participants' narratives collectively indicate that environmental habits were not formed by a single instructional activity but by continuous interaction with environmental routines embedded in the school culture. These everyday experiences provided repeated opportunities for students to practice environmental responsibility until such behavior became increasingly natural and self-directed.

Beyond forming daily habits, participants described a growing awareness of why maintaining a clean environment was important. Their experiences demonstrate that environmental responsibility extended beyond personal cleanliness and reflected an understanding of how individual actions affected the well-being of others within the school community.

"So that it doesn't smell and stays clean when other people want to use the bathroom." (N3)

"I clean the school environment together with my friends because it feels more comfortable when everything is clean." (N4)

These excerpts reveal that students perceived environmental cleanliness as a shared responsibility rather than an individual obligation. Their concern was directed not only toward maintaining a pleasant environment for themselves but also toward ensuring that others could benefit from clean and comfortable school facilities. Environmental awareness, therefore, emerged as an understanding of the broader social consequences of individual environmental behavior. Rather than viewing environmental care as compliance with school regulations, participants described it as an expression of consideration for the collective well-being of the school community. Such awareness indicates that environmental responsibility has gradually become a socially meaningful value guiding students' everyday decisions.

Participants further emphasized that environmental responsibility was strengthened through interactions with their classmates. Instead of relying solely on teachers' supervision, students described how they regularly reminded one another to maintain classroom cleanliness and complete environmental responsibilities before leaving school.

"Before going home, we usually remind each other to check whether there is any rubbish around us." (N4)

This excerpt suggests that environmentally responsible behavior was continuously reinforced through everyday peer interactions. Students did not perceive environmental responsibility as an individual task but as a collective commitment shared among classmates. Mutual reminders created opportunities for students to support one another while reinforcing common expectations regarding environmental behavior.

Participants explained that peer encouragement extended beyond routine classroom interactions. Collaborative environmental activities organized by the school also provided opportunities for students to support one another in maintaining environmental responsibility. Working together during environmental programs reinforced cooperation, shared responsibility, and mutual encouragement among peers. These experiences indicate that environmental character developed within a social context in which classmates actively helped sustain environmentally responsible practices. Through repeated peer interactions, environmental responsibility became embedded in the classroom culture rather than relying exclusively on teacher supervision. In addition to routines and social interaction, participants consistently associated environmental activities with positive emotional experiences. Rather than perceiving environmental programs as compulsory school obligations, students reported feeling enjoyment and a sense of togetherness when participating in environmental activities with their classmates.

"When everyone is cleaning together, and I don't join, I feel like I'm missing the fun with my friends." (N3)

The participant's statement illustrates that participation in environmental activities was encouraged not only by school expectations but also by positive emotional experiences generated through collaborative activities. Students associated environmental responsibility with enjoyment, friendship, and a sense of belonging rather than obligation alone. These positive emotions appeared to strengthen students' willingness to participate repeatedly in environmental activities. Consequently, environmental responsibility was experienced not merely as a behavioral expectation but also as an enjoyable social experience that encouraged sustained participation in environmental practices.

The findings show that environmental character develops not only from instruction, rules, or programs, but also from students' repeated practice and emotional engagement with environmental values in daily school life. Previous studies have found that Adiwiyata supports environmental character through policies, activities, routines, and teacher involvement (Aprilia et al., 2024; Fajar & Putra, 2021; Hariandi et al., 2023), but these often focus more on the program parts than on the experiences that make them meaningful. The real impact of Adiwiyata comes from giving students ongoing chances to experience and practice environmental responsibility.

This experiential perspective extends Lickona's (2019) conceptualization of character as the integration of moral knowledge, emotion, and action. In the present study, these elements functioned synergistically within students' daily environmental practices, rather than as discrete stages. Environmental messages enhanced understanding, repeated practices facilitated the translation of understanding into action, and positive emotional and social experiences promoted sustained participation. This approach aligns with the emphasis on knowledge, sensitivity, and action in environmental education (Chawla, 1998; Hungerford & Volk, 1990), as well as the significance of ecological literacy for fostering responsible environmental relationships (Orr, 1992). The findings indicate that environmental character develops through a reciprocal process in which knowledge informs action, action reinforces values, and meaningful experiences maintain responsible behavior.

Institutional structures also help shape environmental character. Rules, educational materials, school policies, and Adiwiyata activities all help build environmental awareness and character (Agustina et al., 2024; Nurbayan & Yuliana, 2025). These structures work best when students see

them often in their daily routines. Posters, environmental messages, and standard operating procedures do more than set expectations; they provide consistent reminders that connect school values to concrete actions. This matches research showing that routines and the school environment are important for building character (Ningsih et al., 2023). The main point is that it's not just about seeing environmental messages, but about turning them into repeated, visible actions.

This finding gives a clearer picture of how personal traits and environmental character connect. Students start with varying levels of awareness and personalities, but a stable school environment can set clear expectations and provide opportunities for responsible action (Agustina et al., 2024; Azis et al., 2022). Rather than relying solely on students' motivation, the Adiwiyata program creates an environment in which responsible behavior becomes the norm. This supports Orr's (1992) idea that ecological literacy should lead to responsible environmental relationships, and Hungerford and Volk's (1990) focus on moving from knowledge and sensitivity to action. The findings show that this shift happens through repeated environmental practices at school.

Teacher and peer interactions are key to building environmental responsibility. Earlier studies indicate that teachers model and reinforce good behavior (Fajar & Putra, 2021; Triaji et al., 2026), and that the school environment and social interaction also matter (Hariandi et al., 2023; Ningsih et al., 2023). However, these findings show that teachers alone are not enough. Students also motivate one another to keep things clean and to join in activities, making environmental responsibility a shared norm. This shows that peer interaction is important for turning school expectations into everyday habits.

Positive emotional engagement helps sustain these practices. While previous studies emphasize program implementation through policies, facilities, and activities (Aprilia et al., 2024; Puspitasari, 2021; Utari et al., 2025), these factors alone do not fully explain ongoing student participation. The findings show that enjoyment and a sense of belonging make environmental activities meaningful, encouraging voluntary and sustained involvement. This supports the importance of environmental sensitivity and affective engagement in shaping behavior (Chawla, 1998; Hungerford & Volk, 1990). Positive emotional experiences help maintain the repeated actions needed to strengthen environmental character.

Theme 1 shows that the Adiwiyata Program shapes environmental character in ways that extend beyond policies, facilities, activities, and messages alone. Earlier research highlights the value of these parts (Agustina et al., 2024; Nurbayan & Yuliana, 2025; Utari et al., 2025) and emphasizes the roles of knowledge, experience, social interaction, and action (Chawla, 1998; Hungerford & Volk, 1990; Lickona, 2019). This study finds that students internalize environmental character through repeated experiences with knowledge, practice, social support, and positive feelings. The main point is not just whether Adiwiyata promotes environmental character, but also how students internalize these values through their daily experiences. This view builds on earlier research by showing how hands-on experiences help make environmental responsibility part of students' everyday identity and actions.

3. Environmental Actions through the Adiwiyata Program

While Theme 1 explained how environmental character gradually developed through students' everyday experiences, Theme 2 illustrates how those internalized values were translated into concrete environmental actions. Participants consistently described environmental responsibility as something they practiced in their daily lives rather than merely understood as an environmental principle. Their experiences demonstrate that environmental responsibility became evident in routine actions both within the school and in the wider community. Five interconnected forms of environmental action emerged from the analysis: resource conservation, environmental stewardship,

sustainable waste management, plastic reduction, and community participation. These subthemes reveal how environmental values became embedded in students' everyday behavior.

One of the most frequently described environmental actions concerned the responsible use of natural resources. Participants explained that conserving water and electricity had become part of their everyday routines rather than activities performed only during environmental campaigns or under teacher supervision.

"Turn off the water tap after washing hands and don't play with water." (N2)

"Turn off the lights, fans, or other electrical devices when they are not being used." (N1)

These excerpts suggest that participants perceived water and electricity as shared resources that should be used responsibly. Conserving resources was not described as a compulsory school rule but as an everyday responsibility that reflected students' awareness of environmental sustainability. Through repeated practice, simple actions such as turning off taps and electrical appliances became meaningful expressions of environmental responsibility rather than isolated environmental behaviors. Beyond conserving natural resources, participants described environmental responsibility through their commitment to maintaining the cleanliness and quality of the school environment. Caring for classrooms, school gardens, and shared facilities was experienced as an integral part of everyday school life.

"If there isn't a rubbish bin nearby, I keep the rubbish first and throw it away when I find one." (N4)

Rather than allowing environmental conditions to determine their behavior, participants demonstrated a willingness to take personal responsibility for maintaining environmental cleanliness. Keeping waste until an appropriate disposal facility became available illustrates that students prioritized environmental responsibility over convenience. Participants also described routine involvement in classroom cleaning duties, caring for school gardens, and maintaining green spaces. These activities enabled students to interact directly with their physical environment while strengthening their sense of responsibility toward shared environmental resources. Environmental stewardship, therefore, emerged not as occasional participation in environmental programs but as a routine practice embedded within everyday school life. Another important aspect of students' environmental actions involved managing waste responsibly. Participants explained that disposing of waste required thoughtful consideration of its characteristics rather than simply placing it into the nearest rubbish bin.

"Usually, plastic food packaging is inorganic waste, while leftover food and fallen leaves are organic waste because they decompose easily." (N2)

"First, we identify the type of waste. Plastic goes into the inorganic bin, while leftover food goes into the organic bin." (N4)

These experiences indicate that waste management was understood as a decision-making process rather than a mechanical routine. Before disposing of waste, participants consciously differentiated between organic and inorganic materials and selected the appropriate disposal method. Such practices demonstrate that environmental responsibility was supported by both an understanding of the environment and consistent daily action. Participants further described recycling as an extension of responsible waste management.

"We make flower pots from used plastic bottles." (N2)

Instead of viewing discarded materials as useless waste, students recognized their potential for creative reuse. Recycling activities, therefore, encouraged participants to perceive environmental

responsibility not only as reducing waste but also as extending the usefulness of materials through creative environmental practices. The findings indicate that the Adiwiyata Program extends beyond environmental education by translating values into consistent actions. Students demonstrated responsibility by conserving resources, maintaining their school environment, managing waste, and creatively reusing materials. Their environmental responsibility was evident in daily habits rather than only in learned knowledge. This supports previous research showing that Adiwiyata integrates policies, routines, and hands-on activities to encourage responsible behavior (Agustina et al., 2024; Aprilia et al., 2024; Hariandi et al., 2023; Nurbayan & Yuliana, 2025). The program is most effective when these elements are embedded in students' everyday routines rather than limited to formal activities.

This change is especially evident in how students handle waste. Rather than just throwing things away, they found creative ways to reuse materials. This shows a shift from simply disposing of waste to being more careful with resources. The findings suggest that environmental education can help students become more responsible by raising their awareness of their impact and encouraging concrete actions (Hungerford & Volk, 1990; Orr, 1992; Palmer, 2002). Recycling is important not only for reducing waste but also for changing how students see and use the materials around them.

The findings challenge the idea that environmental knowledge must come before action. Students' experiences show that knowledge and action developed together through repeated participation in environmental routines. Activities such as conserving water, turning off unused appliances, maintaining cleanliness, sorting waste, and reusing materials provided practical opportunities for students to develop environmental responsibility. This supports the view that meaning is built through everyday practices (Creswell & Poth, 2024; Flick et al., 2022) and aligns with educational perspectives that link knowledge, experience, and action (Chawla, 1998; Palmer, 2002). In the Adiwiyata context, action itself became a means for students to develop an understanding of the environment.

Repetition of these practices is essential for moving beyond simple rule compliance. While previous studies highlight the importance of policies, infrastructure, teacher support, and organized activities in the Adiwiyata Program (Agustina et al., 2024; Fajar & Putra, 2021; Utari et al., 2025), these elements alone do not guarantee lasting behavioral change. The findings show that repeated participation in environmental actions helps form habits. Daily exposure to environmental expectations led students to normalize conservation, cleanliness, and waste management. This aligns with research on habit formation and school culture, which emphasizes the role of repetition in embedding environmental behaviors (Hariandi et al., 2023; Ningsih et al., 2023).

The findings also indicate that positive engagement in environmental activities helped students form lasting habits. Students viewed these actions as enjoyable and meaningful, not just as obligations. This distinction matters, as sustained responsible behavior is unlikely to be sustained if driven only by external requirements. Environmental sensitivity, meaningful participation, and direct involvement increase students' willingness to act (Chawla, 1998; Hungerford & Volk, 1990; Palmer, 2002). The Adiwiyata Program is most effective when students see environmental activities as valuable parts of their school experience, rather than as compulsory tasks.

Theme 2 demonstrates that the Adiwiyata Program is effective because it transforms environmental values into repeated, meaningful actions that become routine over time. While earlier studies highlight the importance of policies, school culture, teacher support, and activities (Agustina et al., 2024; Fajar & Putra, 2021; Utari et al., 2025), these findings clarify how these elements influence students' daily behaviors. The process follows a pathway: school structure leads to repeated practice, which forms habits and results in lasting environmental action. This perspective explains not only whether students act in environmentally friendly ways, but also how these actions become a normal and meaningful part of school life.

D. CONCLUSIONS AND RECOMMENDATIONS

This phenomenological study examined how environmental character develops among fourth-grade students in the Adiwiyata Program. The findings show that sustained participation in authentic environmental practices, integrated into daily school routines, is more influential than formal instruction. Consistent routines, meaningful interactions with teachers and peers, and active involvement in environmental activities help students internalize environmental values, as reflected in their consistent actions. The results indicate that environmental character is built through ongoing experience and daily practice, rather than isolated knowledge or behaviors. This study contributes to environmental education research by clarifying the experiential processes that shape environmental character. The findings suggest that environmental education should prioritize authentic, participatory, and experience-based learning environments, allowing students to practice environmental responsibility as part of school culture.

Future studies could examine students' experiences in different school settings, educational levels, or cultural backgrounds to broaden understanding of environmental character development. Longitudinal phenomenological research may also provide insights into how environmental values evolve and persist throughout students' education. Additionally, the study shows that students' environmental awareness is shaped by moral knowledge and emotions that encourage ecological balance. The Adiwiyata Program's concrete actions and adequate facilities support students' engagement in environmentally responsible activities. Further research should explore environmental awareness as a character trait within the Adiwiyata Program using varied research designs and methodologies.

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