



Literature review: Implementation of environmental ethics in the *adiwiyata* school program through adventure-based guidance in guidance and counseling services

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ABSTRACT

Background: Indonesia is a country blessed with abundant natural resources. Therefore, efforts to protect and preserve nature and the environment have become increasingly crucial. However, environmental problems continue to emerge as significant national and global issues, with waste management remaining one of the most pressing challenges. Education plays a central role in fostering environmental awareness among students, making schools an essential platform for developing ecological ethics and sustainable behavior. This study aims to elaborate on the concept of environmental ethics in education, analyze the implementation of environmental ethics within *Adiwiyata* Schools, and explain the contribution of Adventure-Based Guidance in Guidance and Counseling services to fostering students' environmental awareness. **Methods:** The research employs a literature review method, synthesizing theoretical and empirical studies related to environmental education, experiential learning, and school counseling practices. **Findings:** The findings indicate that the integration of Adventure-Based Guidance within Guidance and Counseling services provides an innovative approach to environmental and character education. The Adventure-Based Guidance approach, rooted in experiential learning principles, allows students to learn through direct interaction with natural environments. Through activities such as outdoor counseling, adventure-based group guidance, and school-based environmental projects, students not only gain cognitive understanding of environmental issues but also develop affective and moral sensitivity toward nature. Counselors play a vital role in facilitating reflective sessions, transforming experiential learning into ethical awareness and moral responsibility for environmental preservation. **Conclusion:** The findings reveal that the implementation of Adventure-Based Guidance within Guidance and Counseling services significantly strengthens the *Adiwiyata* Program by fostering students' ecological awareness, moral responsibility, and sustainable environmental character through experiential and reflective learning processes. **Novelty/Originality of this article:** This article offers a distinctive and interdisciplinary contribution to ecological education by integrating environmental ethics, school-based sustainability programs, and counseling psychology into a unified conceptual framework.

KEYWORDS: *adiwiyata* school program; adventure-based guidance; environmental education; environmental ethics; guidance and counseling.

1. Introduction

Indonesia is a country endowed with abundant natural resources. Therefore, efforts to protect and preserve nature and the environment are of paramount importance.

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Environmental problems can be observed through the declining quality of the environment, which affects human health and well-being. Consequently, the value of the environment as a source of various forms of utilization tends to diminish or even disappear due to certain human activities (Azami & Kustanto, 2023).

The decline in environmental quality is not solely caused by excessive exploitation of natural resources but is also influenced by various human activities, uncontrolled population growth, and the low quality of human resources in managing the environment. These conditions have led to various forms of environmental degradation, including increased pollution levels, prolonged droughts, reduced groundwater reserves, and the declining quality and availability of food. Such issues serve as tangible indicators that environmental sustainability is facing serious threats and requires collective attention (Hidayati & Zakianis, 2020).

The increasing environmental problems in Indonesia can be observed through various cases such as illegal logging, waste disposal, and mining activities that pollute water; air pollution in urban areas; the emergence of haze caused by forest fires; permanent forest fires; wildlife poaching; destruction of wildlife sanctuaries; coral reef degradation; the extinction of protected endangered species; the dumping of radioactive waste from developed countries; improper waste disposal without sorting or processing; and acid rain resulting from air pollution (Rokhmah, 2019).

Waste has become one of the most urgent environmental issues today. The waste problem is not only a local issue but has also evolved into a global concern. Almost every country in the world now faces similar challenges in waste management. In developed countries, the main focus tends to be on improving processing and recycling systems, while in developing countries, the main obstacle lies in community-based or participatory waste management (Susanti & Arsawati, 2021). Improper waste management can cause environmental degradation by contaminating water, soil, and air (Susanti & Arsawati, 2021).

In the educational context, the limited involvement and environmental concern of teachers, students, and school staff in managing eco oriented schools have been identified as key factors contributing to environmental degradation within school settings. Such conditions impede the formation of a comprehensive understanding of environmental preservation and protection efforts (Tompodung et al., 2018). Hence, collective actions from multiple stakeholders particularly through the role of education are essential to nurture environmental awareness and promote sustainable behavior from an early age (Alisya et al., 2024).

From a long term perspective, education serves as a fundamental instrument in shaping a generation that is conscious of and committed to environmental sustainability. Environmental Education, in particular, has emerged as a pivotal component of the global movement to cultivate ecological awareness and social responsibility among students (Jamin et al., 2024). Its primary objective is to introduce learners to the fundamental principles of ecology and environmental literacy. Through this understanding, individuals can develop an authentic sense of being acknowledging their intrinsic interdependence with the natural world. Nature plays an indispensable role in sustaining human life. Consequently, the capacity to adapt to environmental dynamics is not merely an ecological necessity but a fundamental requirement for the survival of all living organisms within an ecosystem (Idrus & Novia, 2018).

Formal education serves as an effective medium for fostering environmental awareness and concern among children. Considering that they will eventually face similar environmental challenges in the future, it is essential to instill environmental values from the elementary education level so that such awareness can be widely practiced by individuals in their daily lives (Cahyani, 2020). By developing a deep understanding of environmental issues, students are expected to become agents of change who actively participate in protecting and restoring the environment around them (Asfahani et al., 2023).

Environmental education plays a crucial role in cultivating students' sensitivity and responsibility toward environmental conditions. Through the implementation of

environmental values within the learning process, it is expected that a strong sense of environmental awareness will emerge, creating a comfortable and conducive learning atmosphere that enables optimal educational outcomes (Widiawati et al., 2022). Consistent with Muhtarom (2019), environmental education aims to foster a high level of environmental awareness among students. Such awareness encompasses a deep understanding of the interconnection between humans and the environment, as well as the recognition of the importance of maintaining ecological balance to ensure the sustainability of life on Earth.

According to Gampu et al. (2022), environmental Education aims to integrate knowledge, skills, attitudes, and sustainability values into the learning process. Through interactive and experiential approaches, students not only gain an understanding of environmental issues but are also trained to develop critical thinking, collaboration, and innovation skills in finding solutions to the environmental challenges they encounter.

Environmental Education in schools is directed toward fostering students' awareness and sense of responsibility in maintaining environmental sustainability. Various programs and policies have been implemented across schools, including the integration of environmental topics into science subjects as well as extracurricular activities oriented toward environmental conservation (Alfikro & Drastisianti, 2024). One concrete form of Environmental Education implementation in schools is the *Adiwiyata* program (Indonesian program that aims to create schools that care about and have an environmental culture). This initiative represents the government's recognition of schools that successfully implement environmentally based education. The main objective of the *Adiwiyata* program is to cultivate school communities that are responsible for the preservation and management of the environment through effective school governance systems that support sustainable development. The program is founded on the principles of participation and sustainability (Wisman & Santoso, 2024).

According to Indahri (2020) the *Adiwiyata* program is a form of Environmental Education implementation initiated by the Ministry of Environment and Forestry/*Kementerian Lingkungan Hidup dan Kehutanan* (KLHK) in collaboration with the Ministry of Education and Culture/*Kementerian Pendidikan dan Kebudayaan* (Kemendikbud). The program focuses on four key components: policy, curriculum, participation, and infrastructure. Through this initiative, students are expected to demonstrate positive behaviors and develop habits and attitudes that reflect a genuine love for the environment. These efforts are carried out by instilling environmental awareness from an early age through routine activities, spontaneous practices, role modeling, conditioning, the implementation of school culture, and the maintenance of environmental hygiene (Naziyah et al., 2020).

The *Adiwiyata* school also known as an environmentally conscious and cultured school is regulated under the Minister of Environment Decree No. 2, Article 1 of 2009. The program is managed by the Ministry of Environment and aims to promote education that emphasizes character development among school communities, fostering environmental awareness and responsibility. This environmental awareness is manifested through attitudes of respect and love toward the surrounding environment, such as refraining from littering and engaging in various activities that reflect care and appreciation for nature (Hermawan & Mahmudah, 2023).

The *Adiwiyata* School Program serves as a learning resource that supports students in acquiring meaningful knowledge about the environment. A school environment that upholds the *Adiwiyata* principles fosters students' sensitivity and awareness of their surroundings, thereby shaping environmentally conscious attitudes. The formation of such attitudes requires several stages, including knowledge (knowing), action (acting), and habituation (habit) (Aini 2014). To achieve the objectives of the *Adiwiyata* program, four interrelated components form a unified framework for developing an environmentally oriented school. These components include: (1) environmentally oriented policies, (2) implementation of an environment-based curriculum, (3) environmental activities

involving school community participation, and (4) environmentally friendly management of facilities and infrastructure (Pradini et al., 2019).

Guidance and Counseling (GC) services can make a significant contribution in this context. Through the Adventure-Based Guidance approach, counselors can integrate real-life experiences, self-reflection, and collaborative learning to cultivate students' awareness and responsibility toward the environment. According to Ambarwati & Farozin (2024) adventure-based guidance is recognized as an innovative approach in the implementation of group guidance services. This approach emphasizes experiential learning as the primary medium to foster positive personal development. It combines elements of experiential education, outdoor activities, discussions, and group counseling sessions to promote students' holistic growth. One example of applying adventure-based guidance in schools is camping activities, which are often part of the school's annual program.

According to Ragam & Kartianti (2023), experiential learning is a process through which students acquire knowledge, skills, and values by directly engaging in real life experiences. Similarly, Azizah et al. (2020) explains that experiential learning is a process in which students actively construct and develop their existing skills and values. This approach emphasizes the crucial role of personal experience in fostering positive change and enhancing learning outcomes. Consequently, the application of Adventure-Based Guidance in guidance and counseling services can serve as a bridge between *Adiwiyata's* physical activities and the deeper formation of moral values, particularly in cultivating students' environmental awareness and care.

Based on the explanation above, it can be concluded that the condition of the natural environment is both a shared interest and a collective human responsibility. To foster a sense of patriotism and environmental awareness among students, these values must be instilled from an early age through environmental education programs such as the *Adiwiyata* School initiative, supported by guidance and counseling services that utilize the Adventure-Based Guidance (ABG) approach. Therefore, this study aims to elaborate on the concept of environmental ethics in education, analyze the implementation of environmental ethics within *Adiwiyata* Schools, and explain the contribution of ABG-based guidance and counseling services in fostering students' environmental awareness.

2. Method

The method employed in this study is a literature review. In line with the rapid advancement of scientific knowledge and the increasing depth of methodological discussions, particularly within academic literature, research methods must adapt to these developments to produce up-to-date findings with strong collective evidence (Snyder, 2019). The literature review approach was chosen because scientific knowledge is dynamic and continuously evolving. Research topics and variables have often been examined by previous scholars, enabling researchers to gain new insights and perspectives from earlier studies. Therefore, this study does not represent the first investigation in this field. The primary purpose of this literature review is to develop an article that presents new findings and perspectives on a specific topic to both academic communities and practitioners working in related fields. Moreover, such reviews can be published to make their findings publicly accessible and beneficial for broader audiences (Tjahjono, 2018). The range of references collected for this study spans from 2005 to 2025, selected in accordance with the relevance of the topics and issues discussed by the researcher.

In essence, literature sources refer to a collection of scholarly works that discuss a specific topic. According to Sheppard (2020), literature sources may consist of various forms of credible academic and professional materials. These sources include peer-reviewed journal articles, academic books written or edited by experts in their respective fields, and articles published in professional journals. In addition, literature sources may also comprise statistical data issued by governmental or institutional agencies as well as materials made available through the websites of professional associations. Such sources

are considered important for ensuring the reliability, validity, and comprehensiveness of research findings.

The process of conducting a literature review involves several stages that integrate the researcher's ideas with various reference sources. A literature review requires an in-depth analytical process and can therefore be regarded as a research method encompassing data collection, analysis, and synthesis of final results. In general, the stages of a literature review, as explained by Yam (2024), begin with identifying the research subject or topic to establish the main focus of the study. The next stage involves determining the scope and framework of the review to define the boundaries and direction of the analysis. After that, researchers collect relevant empirical findings from credible sources to support the review process. The collected literature is then critically reviewed and analyzed to identify patterns, gaps, inconsistencies, or emerging perspectives within the existing body of knowledge. Based on these findings, researchers may formulate new theories or propositions that contribute to the development of the field. Finally, the literature review process includes assessing the need for further research in order to address unresolved issues or expand current understanding. The scholarly journals referenced in the development of this study's findings and discussion are as follows Table 1.

Table 1. Journal review

Title	Main Findings
Environmental Ethics (Theory and Learning Practice)	The book emphasizes the importance of internalizing environmental ethics in learning processes, including implementing instructional models that foster ethical decision making, environmental concern, and sustainable behavior. It also proposes the OIIDE model as an effective pedagogical strategy to cultivate ecological responsibility among university students.
Integration of Affective–Cognitive Aspects through Bioresources Learning Oriented to Local Wisdom and System Thinking to Foster Conservation Behavior through Classification Generalization	Bioresources learning oriented toward local wisdom and system thinking can improve reasoning ability, productive thinking habits, and flexibility in decision making. Integrating affective aspects into cognitive processes while embedding local wisdom in science learning is essential for shaping sustainable conservation behavior.
Implementation of the <i>Adiwiyata</i> School Program to Foster Cooperative Character in Elementary School Students	Activities such as weekly clean-ups, recycling crafts, and hydroponic planting effectively nurtured students' cooperative character, demonstrated through collaborative participation and willingness to assist peers.
School Culture–Based <i>Adiwiyata</i> Schools: Developing Environmental Care Character in Elementary Schools	The book concludes that combining the <i>Adiwiyata</i> Program with school culture values, norms, habits, and physical social environments is essential to establish environmentally cultured schools and foster environmental care among students.
Development of Adventure-Based Guidance to Improve High School Students' Self-Management	The service was rated highly feasible by experts and students. Experimental groups showed significant improvement in self-management (from ≈ 26.56 to 72.89), while the control group showed no significant change.
Effective Leadership in Adventure Programming	Effective leadership in adventure programming requires mastery of metaskills such as decision making, facilitation proficiency, problem solving, and environmental ethics. Strong theoretical grounding and risk management are essential for meaningful and safe participant experiences.
Experiential Learning: Experience as the Source of Learning and	Knowledge is created through the transformation of experience via four stages: Concrete Experience, Reflective

Development	Observation, Abstract Conceptualization, and Active Experimentation. Individual learning styles emerge from preferences among these stages.
Improving Students' Participation Interest through Experiential Learning-Based Classical Guidance Services	The developed guidance service was feasible and effective, demonstrating an increase in students' interest in participation.
Project-Based Environmental Action: Strengthening Students' Environmental Awareness and Creative Solutions	The PB-EA program improved students' understanding of pollution, encouraged innovative environmental projects, and gained strong support from teachers, showing effectiveness for middle school contexts.
Environmental Education: A Systematic Review on the Use of Digital Tools for Fostering Sustainability Awareness	Digital tools especially immersive media positively influence students' environmental knowledge and sustainability awareness. However, limitations include small sample sizes, lack of longitudinal studies, and heterogeneous evaluation instruments.
Educational Practice in Education for Environmental Justice: A Systematic Review of the Literature	Most interventions focused merely on ecological knowledge, lacking systemic thinking, critical literacy, and action competence. Integration of environmental justice perspectives remains limited.
Systematic Review of Environmental Education Teaching Practices in Schools: Trends and Gaps (2015–2024)	Most studies used case studies and interviews. Common practices include cross-disciplinary learning, outdoor learning, participatory approaches, and fostering critical thinking. Gaps include dominance of teacher-centered instruction and lack of studies in primary schools and Global South/East Asia.
Implementation of the Participatory <i>Adiwiyata</i> Program in Fostering Character Values in Elementary Schools	The school implemented the program according to standards through environmental maintenance activities, partnerships, and collaborative actions. Character values that emerged include cooperation, environmental care, independence, creativity, discipline, nationalism, religiosity, and responsibility.
Evaluation of the Healthy School Program in a Junior High School Receiving the National <i>Adiwiyata</i> Award	The school had strong potential and role-model status. Program design met diverse student needs, though challenges included funding limitations. Overall, the program achieved its goals yet required improvements.
Teachers' Roles in Developing Environmentally Caring Character in <i>Adiwiyata</i> Elementary Schools	Teachers played a key role by integrating environmental education into classroom and outdoor learning, resulting in the emergence of environmentally caring behavior.
Conceptualizing Adventure-Based Counseling to Enhance EcoWellness: Integrating Nature and Adventure for Holistic Client Well-Being	The review highlights that integrating nature and adventure in counseling is essential for achieving holistic client well-being and provides theoretical implications for counseling practice.
Green Leadership and Environmental Awareness Growing with Indonesia's <i>Adiwiyata</i> Program at a Kotabaru School	Environmentally oriented school leadership significantly shaped program implementation. Students' and teachers' awareness increased through concrete environmental activities, showing <i>Adiwiyata's</i> effectiveness.
Enhancing Academic Hardiness through Adventure: The Impact of Adventure-Based Counseling on Students	There was a significant increase in academic hardiness after the intervention, indicating the effectiveness of Adventure-Based Counseling.
Environmental Literacy and Care Behavior Through the <i>Adiwiyata</i> Program at Elementary School	The <i>Adiwiyata</i> Program was implemented through various environmental activities. Students demonstrated environmental literacy across knowledge, cognitive skills, and attitudes, as well as real environmental care behaviors such as waste management and school maintenance.

3. Results and Discussion

3.1 The concept of environmental ethics in education

Environmental ethics is a relatively new branch of knowledge that explores the interrelationship between philosophy and biology, particularly within the context of the natural environment. Philosophy plays a crucial role in reflecting on various aspects of human existence within nature, while environmental science examines the complex interconnections between the Earth's systems and their biotic (living) and abiotic (non-living) components (Hudha & Rahardjanto, 2018). In the educational context, environmental ethics serves to provide understanding about environmental science, examine ways of living, guide environmentally related decision-making, and encourage reflection on the impact of students' actions. The diverse social and cultural values present within students' environments form the foundation for curriculum planning and the implementation of environmental ethics education. Each educational system may emphasize different objectives and approaches in applying and teaching environmental ethics (Hudha et al., 2019). According to Hudha et al. (2019) there are several applications of environmental ethics in school-based education, such as Figure 1.

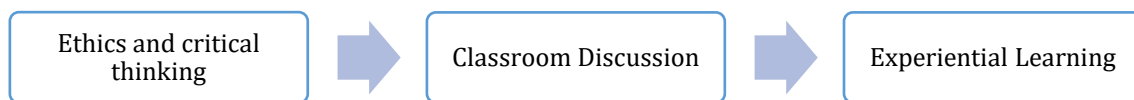


Fig. 1. Environmental in school-based education (Huda et al., 2019)

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Efforts to prevent environmental degradation require ethical awareness, as actions that harm the environment reflect a loss of environmental ethical values. This understanding needs to be instilled in students through environmental ethics education so that they can think critically about environmental issues. The expected critical attitudes include: (a) awareness and responsibility in protecting and conserving flora and fauna; (b) awareness and responsibility in preventing pollution; (c) awareness and responsibility in managing the environment appropriately; (d) awareness and responsibility in refraining from exploiting nature and its resources; and (e) awareness and responsibility in preserving the environment for future generations.

Classroom discussions can help students understand and appreciate the perspectives and ideas of their peers. This activity encourages students to gain new insights, critique, and reassess their own understanding. Teachers act as facilitators by guiding the flow of "structured discussions" within small groups, ensuring that students engage meaningfully and reflectively with environmental issues. Experiential learning is now recognized as an educational method that plays an equally important role alongside direct, active, and

participatory learning. This approach enables students to gain new understanding through personal experiences and discoveries. It is particularly relevant in teaching environmental ethics, as ethical decision-making is inherently personal and subjective; therefore, students need to discover their own ways of interacting with ethical values. According to Rustaman (2015) learning about biological resources (bioresources) that integrates affective and cognitive aspects should ideally be carried out through field-based activities. Prior to such activities, students should be trained in scientific process skills related to biodiversity and be encouraged to understand local wisdom, including the ability to think systematically.

3.2 *Adiwiyata schools as a medium for environmental education*

Adiwiyata Schools, also known as environmentally conscious and cultured schools, are defined in the *Regulation of the Minister of Environment No. 2 of 2009*, Article 1 on the Guidelines for the Implementation of the *Adiwiyata* Program. This program, organized by the Ministry of Environment, aims to develop environmental education by fostering knowledge and awareness among school members regarding environmental conservation. The primary goal is to shape the character of school communities to become environmentally aware, knowledgeable, and culturally sensitive toward sustainability (Ayustina et al., 2023). According to Indra Bayu & Ulfatin (2018) the implementation of the *Adiwiyata* Program is further regulated under Regulation of the Minister of Environment No. 05 of 2013, which serves as a guideline for achieving the program's objectives.

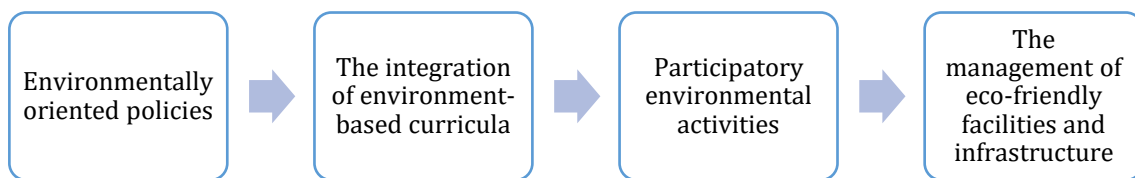


Fig. 2. Four key components of *adiwiyata* program

3.2.1 *Environmentally oriented policies*

The implementation of environmentally oriented policies within the *Adiwiyata School* program encompasses several aspects. The enactment of these policies is strengthened through the establishment of guidelines that emphasize environmental preservation. Such policies are formalized in written regulations and disseminated to all members of the school community. According to Tristiana & Sukartono (2023), several strategies can be implemented to support environmental education initiatives within schools. One important strategy is formulating the school's vision and mission to emphasize environmental awareness and culture. These visions and missions should be reflected in regulations based on environmental preservation principles for all members of the school community, thereby encouraging collective responsibility in protecting the environment through both curricular and extracurricular activities. Another strategy involves developing school policies that integrate educational processes with the core values of environmental education.

In addition, schools can strengthen human resources through capacity-building activities and environmental awareness programs aimed at improving knowledge, attitudes, and participation in environmental conservation efforts. Resource conservation policies should also be integrated into daily school activities to promote sustainable practices within the school environment. Furthermore, schools are encouraged to create clean, healthy, and comfortable surroundings that support the well-being of all school community members. Effective budget management policies aligned with the school's priority needs are also essential to ensure the sustainability of environmental programs. Finally, schools should establish regulations regarding the management of facilities and infrastructure based on eco-friendly principles to support environmentally responsible school governance.

3.2.2 *Implementation of an environment-based curriculum*

The implementation of the curriculum in *Adiwiyata Schools* should be grounded in the principles of holistic curriculum design. The curriculum is developed by taking into account students' potential and characteristics and is carried out through active, contextual, and integrated learning processes that utilize the surrounding environment as a learning resource. Moreover, curriculum implementation is directed toward optimizing the use of natural, social, and cultural resources as integral components of environmental education (Widodo & Etyk, 2022).

According to Tristiana & Sukartono (2023) the strategy for implementing an environment-based curriculum involves applying learning approaches, methods, and techniques that encourage student engagement in the classroom. Instruction is designed to connect conceptual and procedural knowledge in solving everyday environmental problems. In addition, learning innovations are realized through the creation of environment-themed posters and craft activities that utilize natural materials and plastic waste to promote the principles of reduce, reuse, and recycle (3R).

3.2.3 *Participatory environmental activities*

Participatory environmental activities are implemented through the development of curricular programs aimed at enhancing students' knowledge, attitudes, and awareness of the importance of environmental conservation. The implementation of these activities can be carried out through environmental actions that involve collaboration with external stakeholders and the development of strategic partnerships to strengthen environmental education in schools (Widodo & Etyk, 2022). The implementation strategies include organizing environment-based extracurricular activities that encourage students to actively participate in environmental conservation efforts. In addition, all members of the school community are encouraged to take part in maintaining school facilities, infrastructure, and the surrounding environment in order to foster collective responsibility and environmental awareness. Schools can also optimize the use of available land and facilities as green areas, such as gardens, greenhouses, and composting sites, which function both as learning media and as practical examples of sustainable environmental management.

Furthermore, educational slogans can be installed throughout the school area to promote energy-saving behavior and strengthen environmental awareness among students and staff. Creativity and innovation should also be encouraged through recycling activities that enable school members to transform waste materials into useful products. To improve environmental knowledge and institutional capacity, schools are encouraged to actively participate in environmental training programs and workshops organized by external institutions. Finally, strengthening partnerships with external stakeholders is considered important to enhance the effectiveness of environmental learning and to support sustainable environmental management within the school setting.

3.2.4 *Management of environmentally friendly facilities and infrastructure*

Facilities and infrastructure are essential components in the implementation of the *Adiwiyata School* program. This aligns with the statement of the Ministry of Environment, which emphasizes that the availability of environmentally friendly supporting infrastructure is crucial. Such infrastructure includes facilities designed to address environmental issues within schools and to support learning activities related to environmental education. According to Widodo & Etyk (2022), several strategies can be implemented to support the management of environmentally friendly facilities and infrastructure in schools. These strategies include providing an adequate number of waste disposal bins to facilitate waste separation and promote proper waste management practices among school members. Schools are also encouraged to create open green spaces

within the school environment to improve environmental quality and provide a more comfortable learning atmosphere.

In addition, facilities and supporting equipment for environment-based learning activities should be made available to strengthen students' environmental knowledge and practical engagement. Classroom design is also an important consideration, particularly through the use of natural lighting and ventilation systems that can reduce energy consumption while creating healthier learning spaces. Furthermore, schools should apply efficiency principles in the use of energy and natural resources as part of broader efforts to promote sustainability and environmentally responsible behavior within the educational environment.

3.3 The role of adventure-based guidance in the internalization of environmental ethics

Guidance and Counseling play a strategic role in fostering environmental awareness, values, and pro-environmental behaviors among students. One innovative approach that can be applied within counseling services to achieve these objectives is Adventure-Based Guidance. This approach emphasizes experiential learning through challenging, reflective, and collaborative outdoor activities (Ambarwati & Farozin, 2024). According to Priest & Gass (2005) adventure-based activities provide students with opportunities to learn through concrete experiences that promote responsibility, cooperation, and environmental awareness.

The Adventure-Based Guidance approach is grounded in the principles of experiential learning as proposed by Kolb (1984) which consists of four key stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation. In the context of guidance and counseling services, the counselor acts as a facilitator who helps students interpret their adventure experiences into meaningful life values, including environmental ethics. Through this reflective process, students not only gain an understanding of the importance of environmental preservation but also develop a moral commitment to engage in ecologically responsible actions.

The internalization of environmental ethics through the Adventure-Based Guidance approach is carried out by connecting adventure and nature exploration activities with ecological values that reflect harmony between humans and the environment. For instance, activities such as camping, outbound training, tree planting, ecosystem observation, or nature conservation projects serve as concrete mediums for cultivating ecological awareness. According to Edwin (Conel & Avilla, 2022) teaching methods that incorporate experiential-reflective learning through outdoor or nature-based activities can enhance students' understanding of environmental issues, while also fostering the internalization of values related to preservation and the maintenance of ecological balance.

The role of Adventure-Based Guidance in the internalization of environmental ethics can be viewed through three main dimensions. According to Azizah & Nugroho (2020) the cognitive dimension provides students with an understanding of environmental ethical principles such as ecological responsibility, environmental justice, and sustainability. The affective dimension helps students develop caring attitudes, empathy, and emotional connectedness toward nature through direct experience. Meanwhile, the psychomotor dimension fosters concrete skills for environmental preservation, such as recycling, energy conservation, and waste management based on the 3R principles (Reduce, Reuse, Recycle).

The implementation of Adventure-Based Guidance within the context of guidance and counseling can be realized through adventure-based group guidance, outdoor group counseling, and school-based environmental action projects. Supported by Arini et al. (2025) research, this approach has shown positive outcomes in fostering students' environmental awareness and participation, which can be observed through three key indicators: (1) an increase in students' understanding, as evidenced by their active engagement in discussions; (2) the emergence of creative student initiatives in environmental projects such as waste management and eco-enzyme production; and (3) the active involvement of teachers in designing follow-up programs.

Thus, Adventure-Based Guidance functions as an effective medium for the internalization of environmental ethics through direct experience, deep reflection, and the development of ecological character. This approach not only enhances ecological awareness but also fosters sustainable behaviors in everyday life. Within the framework of environmentally oriented education such as the *Adiwiyata* Program, the application of ABG supports the creation of a school culture that is environmentally conscious and ethically grounded.

3.4 Discussion

Environmental education is most effective when grounded in direct experiences in nature, as it provides opportunities for students to emotionally and socially internalize environmental care values. Outdoor activities foster a sense of emotional connectedness with nature, allowing learners to develop empathy toward the environment. Learning in authentic natural settings has proven to be more effective in instilling a sense of ecological responsibility than classroom-based instruction. Furthermore, collaboration between schools and local communities enhances the impact of environmental education (Haji-Hassan et al., 2024).

Effective environmental education should be oriented toward social justice and participation, not merely focused on ecological knowledge. Action-based learning and critical reflection approaches have been shown to strengthen students' empathy, social awareness, and commitment to sustainability. Through critical awareness, students come to understand that environmental problems are closely linked to issues of social inequality. Meanwhile, social engagement achieved through project-based learning and real community action produces a deeper and more lasting impact than theoretical lectures. Finally, value transformation occurs when students begin to perceive environmental issues as human concerns, rather than purely ecological ones (Guevara-Herrero et al., 2024).

Environmental education has become increasingly integrated within school systems worldwide. The implementation of experiential and collaborative learning models, alongside continuous professional training for teachers, ensures the infusion of sustainability values across all subjects. Common pedagogical practices include project-based learning (community environmental projects), outdoor education (learning beyond the classroom), and digital-based learning (the use of interactive applications and media). The outcomes of environmental education have shown significant positive effects on students' awareness, attitudes, and behavioral commitment toward sustainability (Zhang et al., 2025).

The *Adiwiyata* Program is an educational initiative implemented in schools that integrates environmental awareness and sustainability principles into the educational process. The implementation of this program is not limited to classroom instruction but extends to various environmental activities that actively involve the participation of the entire school community. This participation includes students' emotional, physical, and cognitive engagement in initiating and taking part in environmentally responsible actions within the school environment (Nurmansah & Retnowati, 2020). The *Adiwiyata* Program is designed to foster and encourage schools across Indonesia to contribute to government efforts in promoting environmental conservation and sustainable development for the well-being of future generations (Aini et al., 2021).

Efforts to cultivate and strengthen students' environmental awareness through the *Adiwiyata* Program are carried out by teachers through continuous reminders and guidance, both inside and outside the classroom, in direct and indirect ways. Moreover, teachers serve as role models by demonstrating environmentally responsible behaviors, encouraging students to emulate these actions, and ultimately nurturing their sense of care for the surrounding environment (Meika & Putra, 2021).

The Adventure-Based Guidance approach plays a crucial role in reinforcing the implementation of the *Adiwiyata* Program, as it emphasizes experiential learning through real-life outdoor experiences. Activities such as group challenges, collaborative games, and

environmental exploration provide students with opportunities to experience ecological values firsthand within the context of everyday life. Lakadjo (2024) explains that adventure-based counseling integrates physical, emotional, and social experiences that enhance students' eco-wellness, or ecological well-being. This approach aligns with the spirit of the *Adiwiyata* Program, which promotes active participation from all members of the school community in preserving the environment not merely through theoretical understanding, but through meaningful experiences that foster emotional attachment and responsibility toward nature.

Outdoor Adventure-Based Guidance activities have a long-term impact on shaping students' environmental character because such experiences engage the affective domain of learning. Herliana et al. (2025) in her study on green leadership within the *Adiwiyata* Program, found that direct environmental experiences foster stronger ecological awareness compared to conventional classroom methods. Through activities such as coenzyme production projects, waste management, and nature conservation initiatives, students learn that small actions can make a substantial difference in sustaining ecosystems. Therefore, the authentic and reflective experiences provided through ABG serve as an effective medium for instilling lasting environmental care values.

Furthermore, guidance and counseling services act as mediators between students' experiences and the process of internalizing environmental ethics. Counselors facilitate post adventure reflection sessions, helping students connect their experiences with moral values such as responsibility, ecological empathy, and sustainability (Setyowati et al., 2024). his reflective process is essential, as it enables students to reinterpret their experiences and derive moral meaning from them. Hence, ABG activities combined with GC services provide an effective platform for developing students' critical environmental awareness.

Research by Rukaya & Alam (2024), indicates that guidance and counseling services significantly influence students' moral development, including their sense of social responsibility and environmental stewardship. The counselor's role extends beyond psychological support, serving as a vital link in transforming experiences into environmental care values and ethical character formation. The integration of Adventure-Based Guidance and guidance and counseling services within the *Adiwiyata* framework creates a learning environment oriented toward a school wide ecological culture.

Similarly, Sunarto (2023) found that project based learning integrating experience, reflection, and real world action enhances the three key dimensions of environmental literacy knowledge, affect, and behavior. This finding suggests that approaches such as Adventure-Based Guidance not only foster temporary awareness but also lead to sustained behavioral change within the school environment. Thus, combining adventure-based methods with counseling services represents an innovative strategy for realizing the vision of *Adiwiyata* schools as institutions that embody ecological character and sustainability.

4. Conclusion

The findings indicate that the implementation of Adventure-Based Guidance within Guidance and Counseling services makes a significant contribution to strengthening the implementation of the *Adiwiyata* Program in schools. The Adventure-Based Guidance approach, which is grounded in the principles of experiential learning, provides opportunities for students to learn through direct, hands-on experiences in natural environments. Through activities such as adventure-based group guidance, outdoor group counseling, and school-based environmental action projects, students not only develop a cognitive understanding of environmental awareness but also internalize environmental ethics and moral values at the affective level.

The counselor's role in facilitating reflection sessions following adventure activities serves as a key factor in transforming experience into ethical awareness. This reflective process enables students to interpret their ecological experiences as a form of moral responsibility toward environmental preservation. Thus, Guidance and Counseling services

act as a mediator, bridging students' concrete experiences with the formation of sustainable environmental values and attitudes.

The integration of Adventure-Based Guidance and the *Adiwiyata* Program reinforces contextual learning and the cultivation of ecological character within schools. The synergy between these two approaches not only creates meaningful and transformative learning experiences, but also fosters a participatory, reflective, and sustainability-oriented school culture. Therefore, the application of Adventure-Based Guidance within Guidance and Counseling services can be regarded as an innovative strategy in character-based environmental education, supporting the broader goals of national education in shaping learners who are responsible, morally grounded, and environmentally conscious.

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Author Contribution

The author was solely responsible for the conceptualization, data collection, analysis, and writing of the manuscript.

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The data utilized in this study were derived from a systematic collection of scholarly journals and academic books, which were subsequently examined and synthesized in accordance with the analytical needs of the research. This study did not generate new empirical data, as the author faced methodological and contextual constraints that limited the possibility of conducting primary data collection. Consequently, the analysis relies exclusively on secondary sources that are deemed relevant and credible for addressing the objectives of the study.

Conflicts of Interest

The author declare no conflict of interest.

Declaration of Generative AI Use

In the preparation of this work, the author utilized ChatGPT as a supporting tool to enhance language structure, improve clarity, and align the writing style with academic conventions. All outputs generated through this tool were subsequently reviewed and revised by the author, who retains full responsibility for the content and originality of the publication.

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