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The Role of Nature Education in Developing Student Character in Building an Environmentally Caring Generation

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ABSTRACT

1 This study aims to explore the role of nature education in the development of students' character and its impact on environmental concerns. In the face of urgent environmental challenges, such as climate change and declining biodiversity, education is key to forming a generation that cares about the environment. To achieve this goal, the study uses the Systematic Literature Review (SLR) approach, which collects and analyzes a variety of relevant related studies. This method includes the identification, evaluation, and synthesis of previous research, so as to uncover emerging patterns and themes in the context of nature education. The results of the study showed that nature education significantly increased students' ecological awareness. Active involvement in outdoor activities—such as tree planting, beach cleanups, and conservation projects—encourages students to adopt eco-friendly behaviors. Through hands-on experience, students not only gain theoretical knowledge, but also build an empathetic and responsible attitude towards environmental sustainability. These findings emphasize the importance of integrating nature education in the curriculum, which not only shapes the character of students, but also prepares them to become responsible leaders in efforts to safeguard and preserve the environment. With this approach, it is hoped that future generations can be more active in overcoming global environmental challenges.

Keywords: Nature Education, Student Character, Environment

INTRODUCTION

In the modern era marked by climate change and environmental degradation, education has a very important role in shaping a generation that cares about the environment. Many environmental problems that we face today, such as pollution, declining biodiversity, and global warming, require serious attention from the younger generation. Nature education can be one solution to overcome these problems, because it can provide students with direct experience and contextual learning about the importance of protecting and preserving the environment (Rahmayanti, H., & Feryll Ilyasa, SKM, 2022).

Nature education, in particular, can provide an effective approach to addressing this issue. With direct experience in nature, students can learn contextually about the importance of ecosystems, sustainability, and the need to maintain environmental balance. (Rahayu, S et al., 2024). Outdoor activities, such as nature observation, environmental restoration projects, and resource management, can build empathy and responsibility for the environment (Fadhilah, MN, 2022). In addition, education that is integrated with environmental issues can encourage students to innovate and create sustainable solutions. They can engage in discussions about environmental policies and



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the impacts of decisions made, and learn how to contribute to collective action to protect the planet.

In the modern era marked by climate change and environmental degradation, education has a very important role in shaping a generation that cares about the environment (Mangunjaya, FM, 2022). In the modern era marked by climate change and environmental degradation, education plays a very important role in shaping a generation that cares about the environment. Issues such as pollution, loss of biodiversity, and global warming require serious attention, and the younger generation is the key to facing these challenges (Basri, SKM, 2024). Environmental Awareness education can increase students' awareness of environmental issues. By understanding the impact of human actions on nature, students can develop a sense of responsibility for the environment (Kusuma, EM V et al., 2023). Experience-Based Education through nature education and outdoor activities, students can learn directly about ecosystems and the importance of sustainability. This experience can foster an emotional attachment to the environment (Saputra, E. E et al., 2024). Educational skills and innovations that focus on environmental issues encourage students to think critically and innovatively in finding solutions. This includes learning about green technology, resource management, and sustainable practices (Tapung, M. et al., 2024). Collective Action Education can encourage students to engage in community activities and collective action. They can learn how to participate in environmental movements and public policies that support sustainability (Shabrina, A et al., 2023, November). Future Leadership Young people who are educated about environmental issues will be better prepared to become leaders who are committed to environmental protection. They can influence better policies and practices in the future.

The role of nature education in developing students' character to build a generation that cares about the environment focuses on efforts to instill environmental values comprehensively from an early age. This education aims to develop ecological awareness, empathy for nature, environmentally friendly habits, and environmental ethics in students (Jayadinata, A. K et al., 2024).

Programs such as Adiwiyata, initiated by the Ministry of Environment, aim to make schools a learning environment that strengthens students' character to care about the environment, through waste management activities, plastic selection, and maintaining cleanliness. With this implementation, it is hoped that students will be able to understand the relationship between humans and nature and the importance of maintaining ecosystem balance for future generations (Irawati, T et al., 2024).

Through activities such as waste management, plastic selection, and maintaining cleanliness, students are taught to understand the importance of maintaining ecosystem balance and the relationship between humans and nature. Schools are encouraged to implement an effective waste management system, including separating organic and non-organic waste and recycling programs (Andriani, ZJD, 2023). In addition, students are encouraged to reduce the use of single-use plastics and replace them with environmentally friendly alternatives. With this approach, it is hoped that students will not only gain knowledge about the environment, but also internalize the values of sustainability, so that they can become a responsible generation in protecting the environment for a better future. The Adiwiyata program also emphasizes the importance of collaboration between schools, parents, and the community in creating a broader culture of environmental care.

Many environmental problems that we face today, such as pollution, decreasing biodiversity, and global warming, require serious attention from the younger generation. Nature education can be one solution to overcome these problems, because

it can provide direct experience and contextual learning to students about the importance of protecting and preserving the environment. Currently, we are facing various serious environmental problems, such as pollution, decreasing biodiversity, and global warming, which require special attention from the younger generation. Nature education has emerged as one effective solution to overcome these challenges (Sembiring, TB, & SH, M., 2024). By providing direct experience and contextual learning, nature education can help students understand the importance of protecting and preserving the environment. Through outdoor activities, such as ecosystem exploration, observation of flora and fauna, and participation in conservation activities, students can feel the direct connection between themselves and their surroundings. This experience not only increases environmental awareness but also builds a sense of responsibility to protect natural resources. With nature education, the younger generation is expected to become active agents of change, contributing to environmental conservation efforts and developing sustainable solutions to problems facing the world today (Mudaningrat, A., et al., (2023). In addition, nature education focuses on experiential learning, where students are directly involved in activities outside the classroom related to nature. This approach not only enriches students' academic knowledge but also shapes their positive attitudes and behaviors towards the environment. Activities such as tree planting, visits to national parks, and waste management can increase students' sense of empathy and responsibility for the surrounding environment (Darmawati, NM, & Marliana, N., 2024). In many countries, educational curricula are beginning to integrate elements of environmental education, but much still needs to be done to improve their effectiveness. Many students do not yet have sufficient awareness of environmental issues and their impacts on their lives. Therefore, it is important to explore more deeply how nature education can be utilized to increase students' concern for the environment.

Character education that focuses on environmental values can have a long-term impact on students. By internalizing these values, students not only become intelligent individuals, but also become active agents of change in society. In this context, nature education has the potential to create significant change by equipping students with the knowledge and skills needed to address environmental challenges.

With this background, this study aims to explore the role of nature education in developing students' character, as well as its impact on their concern for the environment. Through a systematic approach in reviewing existing literature, this study will identify effective strategies that can be applied in nature education.

METHOD

This study uses a Systematic Literature Review (SLR) approach to collect and analyze data related to the role of nature education in developing students' character. SLR allows researchers to systematically identify, evaluate, and synthesize previous studies (Suprpto, N. L.). In the SLR process, researchers first define inclusion and exclusion criteria to select relevant articles. The literature search process is carried out in various academic databases, such as Google Scholar and JSTOR, using appropriate keywords. After collecting articles that meet the criteria, each study is evaluated based on its methodology, data reliability, and contribution to understanding the topic. The findings from these studies are then synthesized to identify emerging patterns and themes, as well as a critical analysis of existing research gaps. The results of the synthesis are presented in narrative form, which describes the relationship between nature education and character development, as well as its implications for creating an environmentally responsible generation. With this approach, the study aims to make a significant contribution to understanding the importance of nature education in shaping

students' character (Hadi, A et al., 2024). Furthermore, the selected studies are evaluated based on their methodology, findings, and quality. By synthesizing information from multiple sources, SLR provides deeper insights into the impact of nature education on character development, such as increased empathy, responsibility, and environmental awareness. This approach helps ensure that conclusions are based on strong and reliable evidence, making significant contributions to the field of education and the environment.

The process began with determining the inclusion and exclusion criteria for selecting articles, which included studies published in the last five years and relevant to the topic of nature education and character development. Next, data obtained from various sources, including scientific journals, books, and research reports, were analyzed qualitatively to identify key themes. Through this process, researchers were able to gain insights into the effectiveness of various nature education methods in building students' character and increasing their awareness of environmental issues.

RESULTS AND DISCUSSION

The results of this study indicate that nature education has a significant positive impact on students' character development. Through direct experience with nature, students can understand the importance of maintaining environmental sustainability. Many studies have shown that students involved in nature education programs are more likely to adopt environmentally friendly behaviors, such as reducing plastic use and engaging in conservation activities.

Research shows that students who engage in nature education are more likely to reduce their plastic use and choose more environmentally friendly alternatives. For example, they may start carrying reusable shopping bags or choosing products without plastic packaging. Additionally, involvement in conservation activities, such as tree planting, beach cleanups, or recycling programs, helps students feel a direct responsibility for their environment. These hands-on experiences not only increase students' awareness of environmental issues but also shape values and attitudes that support sustainable behavior. Thus, nature education plays an important role in shaping a generation that is not only aware of environmental issues but also active in taking positive actions to preserve it. (Nasution, UJ, 2024).

Nature education plays a significant role in developing students' character with an approach that integrates nature-based learning activities. In this model, students are invited to interact directly with the environment, which not only helps them get to know nature but also builds values such as responsibility, care, and respect for the environment. Through activities such as planting trees, walking in nature, or caring for animals, students can develop naturalist intelligence that serves as the basis for a lifelong love and respect for nature. In addition, nature-based learning also encourages students to make connections between subject matter and real-world situations, which enriches their understanding and encourages the formation of stronger and more responsive characters to the surrounding environment (Maksum, AN, 2023), (Hartati, S., 2022).

One of the key findings of this study is the importance of active student involvement in the learning process. Activities that involve exploration, such as field trips and community projects, have been shown to be effective in increasing student motivation and awareness (Franiva Saffitri, ZHEV A et al., 2023). Students who are actively involved not only learn about environmental issues but also experience their impacts directly, leading to increased ecological awareness. When students are directly involved in activities, they not only gain information about environmental issues but

also experience their impacts directly. For example, when students participate in tree planting or beach cleanup projects, they witness the positive changes they make in their surroundings. These experiences strengthen their sense of ownership and responsibility towards nature.

When they participate in these projects, students can see the tangible results of their efforts, such as planted trees growing well or beaches becoming cleaner and more beautiful. This experience allows them to understand the relationship between the actions taken and their impact on the environment (Anjali, SN, 2024). Seeing the positive changes resulting from their efforts strengthens their sense of ownership and responsibility towards nature. Students become more aware of their role as individuals in protecting and preserving the environment, which in turn motivates them to continue engaging in environmentally friendly activities. This not only shapes their character but also instills values that will guide them in making more responsible decisions in the future. Thus, hands-on experience in these activities is essential to building a deep and sustainable ecological awareness. When students are actively involved in these activities, they not only gain knowledge about environmental issues but also experience their impacts firsthand. For example, when students participate in tree planting or beach cleanup projects, they can see the results of their efforts and the positive changes they make in the surrounding environment. These experiences not only provide theoretical information but also strengthen their sense of ownership and responsibility towards nature.

Through this involvement, students develop a higher ecological awareness, where they begin to understand how important it is to protect the environment for the sustainability of life. The sense of responsibility formed through this direct experience can encourage students to take further action in protecting and preserving the environment, making them active and responsible agents of change in society.

This active involvement contributes to increasing students' ecological awareness, where they begin to understand the interaction between human actions and environmental conditions (Zahro, Z. F et al., 2023). Thus, students who participate in exploratory activities tend to be more concerned and motivated to take sustainable actions, thus forming their character as individuals who are responsible for the environment (Sari, N et al., 2024). These findings emphasize the importance of interactive and participatory learning approaches in environmental education.

Students' active involvement in nature education activities contributes significantly to increasing their ecological awareness. Through direct experience, students begin to understand the complex interactions between human actions and environmental conditions (Labobar, J et al., 2023). For example, when they participate in habitat restoration projects or recycling programs, students can see firsthand how their actions impact the ecosystem, such as reducing pollution or increasing biodiversity.

With this experience, students involved in exploratory activities tend to become more concerned about environmental issues. They not only learn about the negative consequences of human actions, but also feel the urgency to make positive changes. This awareness encourages them to take sustainable actions, such as reducing plastic use, saving energy, or participating in conservation activities.

Moreover, this experience shapes the character of students as individuals who are responsible for the environment. They learn that every small action can have a big impact, and this builds a sense of responsibility and commitment to protecting the environment. This finding emphasizes the importance of an interactive and participatory learning approach in environmental education, where students are not

only recipients of information, but also active actors who contribute to sustainability. This approach helps create a younger generation that is more aware and empowered in facing environmental challenges in the future.

Additionally, research shows that nature education can help develop students' social and leadership skills. In group activities, students learn to collaborate, communicate, and take responsibility, all of which are important aspects of character building. These skills are invaluable in facing complex environmental challenges, where collaboration between individuals and communities is essential.

Furthermore, the nature education approach also contributes to students' mental and physical health. Interaction with nature has been shown to reduce stress and improve overall well-being. Students who are regularly outdoors and interact with natural environments show increased focus and creativity, which can contribute to their academic success.

However, challenges remain in the implementation of nature education. Several factors, such as lack of support from schools and communities, and limited resources, can hinder the effectiveness of the program. Therefore, it is important for educators and stakeholders to work together to create an environment that supports nature education, so that students can feel its benefits optimally.

CONCLUSION

Overall, nature education plays a very important role in developing students' character and building a generation that cares about the environment. Through direct experience and active involvement in nature activities, students not only gain theoretical knowledge about environmental issues, but also develop attitudes and behaviors that support sustainability. Activities such as tree planting, beach cleanups, or ecosystem exploration provide opportunities for students to feel the direct impact of their actions on the environment. This not only increases ecological awareness but also fosters a sense of responsibility and care for nature. When students feel connected to their environment, they are more likely to take sustainable actions and become agents of change in society.

Therefore, the integration of nature education into the curriculum is highly recommended. By adopting an interactive and participatory approach, schools can create individuals who are more environmentally aware and have relevant skills to face global challenges in the future. Nature education not only shapes students' characters, but also prepares them to become caring and responsible leaders in efforts to protect and preserve the environment. This integration will produce a generation that not only has knowledge, but also a commitment to creating a more sustainable world.

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