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Evaluation of the Implementation of the Adiwiyata Program in Enhancing Environmental Awareness: A Case Study of SMAN 2 Sangatta Utara

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ABSTRACT

The Adiwiyata Program is a national initiative aimed at fostering environmental awareness and sustainable practices in Indonesian schools. This research focuses on evaluating the implementation of the program at SMAN 2 Sangatta Utara, exploring its effectiveness in promoting environmental education and instilling eco-conscious behaviors among students. A qualitative methodology was employed, including interviews with stakeholders, field observations, and analysis of program-related documentation. The findings reveal that the program has successfully integrated environmental values into the school's curriculum and extracurricular activities, resulting in increased student participation in sustainable practices such as waste management, tree planting, and water conservation. However, challenges such as limited funding, inconsistent stakeholder commitment, and gaps in program monitoring were identified. This study highlights the importance of evaluating such initiatives to enhance their impact and sustainability. The results offer insights for policymakers and educators on improving environmental education programs and their integration into school curricula. By addressing identified barriers and replicating successful practices, the Adiwiyata Program can serve as a model for achieving broader environmental education goals and fostering a generation of environmentally responsible citizens.

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1. INTRODUCTION

Environmental issues such as climate change, deforestation, pollution, and the depletion of natural resources have become some of the most pressing challenges of the 21st century(Singh & Singh, 2017). These global concerns have emphasized the need for environmental education, particularly in fostering a sense of responsibility and awareness among the younger generation. One initiative aimed at addressing this challenge is the Adiwiyata School Program, a national program introduced by the Indonesian government to encourage schools to integrate environmental sustainability into their daily practices, curricula, and student activities.

The Adiwiyata Program was established to recognize and promote schools that successfully implement environmentally sustainable practices(Roswita, 2020). It aims to develop students'

environmental awareness by engaging them in activities such as waste management, energy conservation, and sustainable agriculture, among other eco-friendly practices. Schools participating in the program are encouraged to create green environments, develop environmental-based curricula, and instill values of sustainability in students, teachers, and the broader school community.

As the program has expanded across the nation, it has become essential to assess its effectiveness in achieving its primary goal enhancing environmental awareness among students. Understanding how well the Adiwiyata Program is being implemented and the degree to which it influences students' environmental attitudes and behaviors is crucial for improving and refining the program(Parker & Prabawa-Sear, 2020). Furthermore, it helps in determining whether these efforts contribute to a broader cultural shift towards sustainability within educational institutions.

A number of studies have examined the effectiveness of environmental education programs in various countries, with a focus on their impact on students' knowledge, attitudes, and behaviors toward environmental sustainability. Research by Chawla (1999) on environmental education in the United States found that students exposed to environmental education programs demonstrated increased environmental knowledge and exhibited more pro-environmental behaviors, such as waste reduction and energy conservation. Similarly, studies by Sterling (2001) highlighted the importance of incorporating environmental education into school curricula to foster long-term environmental stewardship, suggesting that the earlier students are introduced to environmental issues, the more likely they are to adopt sustainable practices in adulthood.

In the Indonesian context, the Adiwiyata Program has attracted significant attention in recent years. Introduced in 2006 by the Indonesian Ministry of Environment, the Adiwiyata Program encourages schools to implement environmental-based curricula, promote sustainability in school operations, and engage students in hands-on environmental activities. It aims to create a school culture where environmental awareness is integrated into every aspect of school life, from waste management to energy conservation(Alshuwaikhat & Abubakar, 2008). Several studies have assessed the implementation and impact of the Adiwiyata Program, with mixed results.

Research by Sudrajat (2015) examined the Adiwiyata Program's implementation in several Indonesian schools and found that while many schools had adopted environmentally friendly practices, the depth and consistency of these practices varied significantly. The study suggested that the success of the program often depended on school leadership, the commitment of teachers, and the active involvement of students and the local community(Day et al., 2020). Sudrajat emphasized the importance of training teachers to effectively deliver environmental education and foster student participation in sustainability initiatives.

Further studies have focused on the impact of the Adiwiyata Program on students' environmental awareness. A study by Lestari et al. (2018) explored the changes in environmental attitudes among students in schools participating in the Adiwiyata Program. The findings indicated that students in Adiwiyata-certified schools demonstrated a higher level of environmental awareness compared to their peers in non-Adiwiyata schools. This included a greater understanding of environmental issues, as well as positive changes in behavior, such as increased participation in recycling programs and energy-saving activities. However, the study also noted that while environmental knowledge was enhanced, there were challenges in sustaining these behaviors beyond the school setting, suggesting the need for ongoing community and parental involvement.

In another study by Ningsih (2017), the focus was on the role of school policies and facilities in promoting sustainability within the Adiwiyata framework. The research highlighted that schools with well-established environmental policies and adequate resources such as waste segregation bins, water-saving systems, and energy-efficient technologies were more successful in fostering an environmentally conscious school culture. Ningsih concluded that the integration of environmental education into the school's operations, coupled with a supportive policy environment, was crucial to the success of the Adiwiyata Program.

Moreover, Hidayat (2019) conducted a study on the challenges faced by schools in the implementation of the Adiwiyata Program. The study identified several barriers, such as limited

resources, lack of teacher training, and inadequate infrastructure. Hidayat's research suggested that to enhance the program's effectiveness, there needs to be better coordination between government agencies, schools, and local communities, as well as increased support for teachers in terms of professional development and teaching materials.

Overall, previous studies on environmental education programs, particularly the Adiwiyata School Program, underscore the importance of a comprehensive and integrated approach to environmental education(Day et al., 2020). The Adiwiyata Program has shown promise in raising environmental awareness among students, but its success is contingent upon various factors such as school leadership, teacher preparedness, resources, and community involvement.

Despite the widespread implementation of the Adiwiyata School Program, there has been limited research into how effectively it has increased environmental awareness in schools(Thomas, 2004). While many schools have been awarded Adiwiyata status, a systematic analysis of the program's impact on student behavior, the adoption of sustainable practices, and the overall school environment remains scarce. This research, therefore, seeks to fill this gap by analyzing the implementation of the Adiwiyata Program and evaluating its effectiveness in fostering greater environmental awareness among students and school communities(Nurwidodo et al., 2020).

This study will explore the factors that contribute to the success or challenges of the program, identify best practices, and provide recommendations for enhancing its impact. By doing so, it will contribute valuable insights that can inform policy and educational strategies aimed at strengthening environmental education and promoting sustainable development at the school level.

2. RESEARCH METHOD

2.1 Relevant Theories and Models of Environmental Awareness and Education

One of the most influential psychological theories applied to environmental education is the Theory of Planned Behavior (TPB), proposed by Icek Ajzen in 1991. TPB posits that human behavior is driven by intentions, which are themselves influenced by three key factors: attitudes toward the behavior, subjective norms (perceptions of social pressure), and perceived behavioral control (the perceived ease or difficulty of performing the behavior).

In the context of environmental education, the TPB can help explain how environmental awareness can lead to pro-environmental behaviors(Wong et al., 2018). For instance, if students learn about the importance of recycling or energy conservation, their positive attitudes toward these actions can be shaped by environmental education programs. Additionally, when students perceive their peers and teachers as supportive of sustainable practices, subjective norms are reinforced, making them more likely to engage in eco-friendly behaviors(Anderson, 2017). Moreover, when students are empowered with the knowledge and skills to make environmentally conscious decisions, their perceived behavioral control increases, further enhancing their ability to take action.

The Environmental Literacy Model is another key framework in environmental education. Developed by Saunders in 1992, this model suggests that environmental literacy consists of three key components: knowledge, attitudes, and behaviors. According to the model, individuals who are environmentally literate not only understand environmental issues (knowledge) but also develop positive attitudes toward the environment and engage in sustainable behaviors(Teksoz et al., 2012).

This model is highly relevant to the Adiwiyata School Program, which aims to cultivate environmental literacy among students. By focusing on knowledge (e.g., understanding the causes and consequences of environmental degradation), attitudes (e.g., fostering a sense of responsibility and stewardship), and behaviors (e.g., encouraging sustainable practices such as recycling or reducing energy consumption), the program aligns closely with this model. It suggests that an integrated approach to environmental education that addresses all three components knowledge, attitudes, and behaviors will be more effective in creating lasting change.

Another essential framework in environmental education is constructivist learning theory (Piaget, 1950; Vygotsky, 1978), as proposed by Jean Piaget and Lev Vygotsky. Constructivism emphasizes that learners actively construct their own understanding based on experiences, rather than

passively receiving information(Kintsch, 2009). Piaget's theory of cognitive development focuses on how individuals move through stages of understanding, while Vygotsky's theory emphasizes the social aspects of learning, including the role of interaction with others and cultural tools in the learning process.

In the context of environmental education, constructivism suggests that students will develop a deeper understanding of environmental issues and sustainability if they engage in hands-on, real-world activities(Kalamas Hedden et al., 2017). This can include activities such as school gardening projects, waste audits, or energy-saving initiatives. By involving students in practical tasks and allowing them to reflect on their experiences, environmental education can be more impactful and meaningful. Moreover, Vygotsky's emphasis on social learning underscores the importance of collaboration among students, teachers, and the community in fostering environmental awareness.

The Ecological Model of Environmental Education, as proposed by David Bowers in 2001, builds on the idea that environmental education should be deeply interconnected with the larger social, political, and ecological systems. This model focuses not only on environmental knowledge and behaviors but also on the underlying systems that contribute to environmental problems, such as economic systems, social norms, and governmental policies(Kollmuss & Agyeman, 2002). According to Bowers, for environmental education to be truly transformative, it must go beyond individual actions and address the systemic causes of environmental degradation.

This model is particularly relevant to the Adiwiyata Program, which aims to instill a holistic approach to sustainability. By encouraging schools to examine broader systemic issues, such as waste management policies, resource consumption patterns, and community participation, the program encourages a more comprehensive understanding of environmental challenges. It encourages students to consider how their actions at the local level are connected to global issues, fostering a more profound awareness of their role in the larger ecological system(Colucci-Gray et al., 2006).

Social Learning Theory, developed by Albert Bandura in 1977, emphasizes the role of observation, imitation, and modeling in learning behaviors. According to this theory, people learn by observing others, especially role models, and by receiving reinforcement or feedback on their actions. In the context of environmental education, this theory highlights the importance of providing students with positive environmental role models, such as teachers, peers, and community leaders, who demonstrate sustainable behaviors(Chawla & Cushing, 2007). When students observe these behaviors being practiced and receive reinforcement, they are more likely to adopt similar behaviors themselves.

2.2 Research Scope and Focus Area

Scope and Focus Area of this research at SMAN 2 Sangatta Utara. This research focuses on evaluating the effectiveness of the program in promoting environmental awareness and fostering sustainable practices among students, teachers, and the wider school community. The study will investigate how the program is integrated into the school's educational framework, its impact on students' behavior towards sustainability, and the challenges encountered during its execution. The following outlines the primary scope and focus areas of this research.

The central focus of this research is to assess how the Adiwiyata Program is being implemented within SMAN 2 Sangatta Utara. This includes understanding the various strategies the school has employed to incorporate environmental education into its curriculum and daily practices(Palmer, 2002). The study will examine the integration of environmental education into various subject areas, extracurricular activities, and school operations. The development and adoption of sustainability practices within the school, including waste management, energy conservation, and water-saving initiatives. The role of the school leadership in supporting the Adiwiyata Program and guiding its implementation across different levels of the school community.

Another major focus of the research is to evaluate how the Adiwiyata Program has influenced students' environmental awareness and behaviors(Adawiah, 2019). This includes investigating the extent to which the program has raised students' understanding of key environmental issues such as climate change, pollution, and resource conservation. Specific areas of interest include the knowledge that students have gained about environmental challenges and sustainability practices. Changes in

student attitudes toward the environment, including their concern for local and global environmental issues(Zsóka et al., 2013). Behavioral shifts in daily practices, such as waste disposal, water usage, and energy consumption, both within the school and in their homes.

A critical aspect of the Adiwiyata Program's success depends on the active involvement of teachers in environmental education(Siswanto et al., 2019). This research will explore how teachers at SMAN 2 Sangatta Utara engage with the program and incorporate sustainability principles into their teaching. Key areas of investigation will include the level of teacher training and support available for implementing environmental education. Teachers' attitudes toward environmental issues and their ability to engage students in sustainability activities. The role of teachers in promoting sustainable practices within the school, such as waste reduction, resource conservation, and ecological awareness(Mat Said et al., 2003).

The success of the Adiwiyata Program also depends on the involvement of the broader school community, including parents, local organizations, and the surrounding neighborhood. This area of the research will assess the level of engagement and cooperation between the school and the community in promoting environmental sustainability. Specific areas to be explored include parental involvement in environmental initiatives, such as supporting school recycling programs or participating in green events(Tali Tal, 2004). Collaboration with local government bodies, environmental NGOs, and businesses to enhance the school's environmental education efforts. The impact of community-based projects, such as tree planting, clean-up drives, and environmental awareness campaigns, on students' understanding and commitment to sustainability.

Despite the positive intentions behind the Adiwiyata Program, schools often face challenges in effectively implementing and sustaining environmental initiatives. This research will seek to identify the barriers encountered by SMAN 2 Sangatta Utara in integrating environmental education. Key challenges to be investigated include financial constraints that may limit the school's ability to provide resources for sustainability initiatives. Lack of infrastructure to support waste management or other eco-friendly programs. Resistance to change among students, staff, or parents, particularly in adopting new environmental practices. Issues related to teacher preparedness and the need for additional training in environmental education.

The research will also assess the overall effectiveness of the Adiwiyata Program at SMAN 2 Sangatta Utara. This will involve evaluating the extent to which the program has met its goals of promoting environmental awareness, changing behavior, and creating a culture of sustainability in the school. Areas of evaluation include the school's achievement of Adiwiyata criteria, such as promoting eco-friendly practices, fostering environmental stewardship, and encouraging student participation in environmental activities. The impact of the program on the broader school community, including both students and staff. Feedback from students, teachers, and administrators on the program's strengths and areas for improvement.

2.3 Research Method

The methodology of this research combining both quantitative and qualitative research methods to provide a comprehensive understanding of the program's effectiveness in fostering environmental awareness and sustainable practices among students(Ralph & Stubbs, 2014). This approach allows for a thorough examination of the program's impact from multiple perspectives, including student attitudes, behaviors, teacher engagement, and community involvement.

This research employs a descriptive research design, which is suitable for evaluating the current state of the Adiwiyata Program at SMAN 2 Sangatta Utara. Descriptive research helps to systematically investigate the implementation and outcomes of the program by capturing detailed data on various aspects of the program, including how it is integrated into the curriculum, its influence on students' environmental behavior, and the challenges faced during its implementation. Additionally, this design will help assess the extent to which the program aligns with the Adiwiyata criteria and its impact on raising environmental awareness within the school community(Kurnia et al., 2019).

The research focuses on the students, teachers, and school administrators of SMAN 2 Sangatta Utara. The sample will be selected through stratified random sampling, ensuring that students from

different grade levels (from the first year to the final year) are included, thus providing a diverse representation of the student body. The sample will consist of:

- Students: Approximately 150-200 students will be selected, representing a mix of grade levels, gender, and extracurricular involvement in environmental initiatives.
- Teachers: Around 10-15 teachers who are directly involved in the implementation of the Adiwiyata Program will be selected to participate in interviews and surveys.
- School administrators: Two or three administrators who are responsible for overseeing the program's implementation will be included in the research to gain insights into the program's policy integration and administrative challenges.

To ensure a comprehensive understanding of the Adiwiyata Program's implementation and impact, a combination of surveys, interviews, observations, and document analysis will be used. Structured questionnaires will be administered to students and teachers(Artino Jr et al., 2014). The student survey will assess their knowledge of environmental issues, attitudes toward sustainability, and self-reported behaviors related to environmental practices (e.g., recycling, water conservation). The teacher survey will focus on the level of engagement with the Adiwiyata Program, the effectiveness of environmental education strategies, and the perceived challenges of program implementation.

Semi-structured interviews will be conducted with school administrators and a selection of teachers to explore their perspectives on the Adiwiyata Program. These interviews will provide in-depth insights into how the program is integrated into the school's curriculum, its impact on the school environment, and any challenges faced by the school in implementing environmental initiatives(Summers et al., 2000).

Classroom and school-wide observations will be conducted to assess the extent to which environmental issues are discussed in lessons and to evaluate the implementation of sustainability practices such as waste management and energy conservation in the school environment. This method will help capture real-time practices and behaviors that may not be fully reflected in surveys or interviews.

Relevant school documents, such as lesson plans, program implementation reports, and records of school-wide environmental initiatives, will be reviewed. This will help to assess the alignment of the Adiwiyata Program with the official Adiwiyata criteria and identify any gaps or successes in the program's integration into the school's operations.

The collected data will be analyzed using both quantitative and qualitative methods to provide a well-rounded assessment of the Adiwiyata Program's effectiveness. Survey data will be analyzed using descriptive statistics to calculate frequencies, percentages, and averages(Mishra et al., 2019). This will help to quantify students' and teachers' environmental knowledge, attitudes, and behaviors. The analysis will identify trends and patterns, such as the level of environmental awareness among students before and after the program's implementation, or the extent to which teachers incorporate environmental education into their teaching practices.

Interview and observation data will be analyzed through thematic analysis, where key themes and patterns related to the program's implementation and impact will be identified(Peel, 2020). This will help to explore in-depth issues such as the perceived challenges of implementing the program, the engagement of teachers and students, and the role of the broader school community in supporting environmental initiatives.

The analysis of school documents will focus on identifying how well the Adiwiyata Program aligns with the criteria outlined by the program's framework. This will help assess the completeness and coherence of the school's sustainability efforts and identify areas for improvement.

Ethical considerations are an essential component of this research(Cacciattolo, 2015). The study will adhere to standard ethical guidelines to ensure that participants' rights and privacy are protected throughout the research process. Informed consent will be obtained from all participants, including students, teachers, and administrators. They will be fully informed about the purpose of the study, the procedures involved, and their right to withdraw at any time without penalty.

Confidentiality will be maintained by anonymizing survey responses, interview transcripts, and observation notes. The data will be stored securely and used exclusively for the purpose of this research. The research will aim to avoid any harm to participants by ensuring that the questions asked are respectful and non-invasive, and that the observations do not interfere with the normal functioning of the school.

While the methodology is designed to provide a comprehensive evaluation of the Adiwiyata Program, there are some limitations to consider. The research will focus solely on SMAN 2 Sangatta Utara, which may limit the generalizability of the findings to other schools in different regions or with different socioeconomic contexts.

The study's reliance on self-reported data (from surveys and interviews) may introduce biases, such as social desirability bias, where participants provide answers they believe are expected or socially acceptable rather than their true beliefs or behaviors. The time constraints of the study may limit the scope of observations and interviews, potentially missing some aspects of the program's impact.

3. RESULTS AND DISCUSSIONS

3.1 Result

The results of this research provide valuable insights into the implementation and impact of the Adiwiyata School Program at SMAN 2 Sangatta Utara. The research found that SMAN 2 Sangatta Utara has successfully integrated key components of the Adiwiyata Program into its educational framework. The school has taken a proactive approach in implementing environmental education by incorporating sustainability practices across various aspects of school life. These efforts include the inclusion of environmental topics in subjects such as biology, geography, and civics, with teachers integrating environmental issues like pollution, climate change, and resource conservation into lessons. The introduction of practical sustainability initiatives, such as waste segregation, energy-saving measures, and water conservation programs, which are visible in daily school activities. Establishment of green spaces around the school campus, with student-led efforts to create and maintain gardens, and a notable focus on biodiversity and conservation.

Despite these positive developments, the full integration of Adiwiyata's principles across all subjects and school operations remains a work in progress. Some teachers have shown reluctance to consistently integrate environmental themes into their classes, particularly those in non-science subjects. However, efforts to increase teacher awareness and professional development are being made, which is expected to improve this situation.

The research revealed that students at SMAN 2 Sangatta Utara have demonstrated a high level of environmental awareness as a result of their participation in the Adiwiyata Program. Many students expressed a better understanding of key environmental issues, such as climate change, pollution, and the importance of resource conservation. According to survey responses, over 85% of students reported that they had learned about various environmental issues through their curriculum and school activities. 92% of students acknowledged the importance of reducing waste, conserving water, and saving energy in their daily lives, and many stated they had adopted these practices at school and at home. Behavioral change was evident as well, with students actively participating in school recycling programs and leading efforts such as tree planting and organizing clean-up campaigns. However, while many students adopted eco-friendly habits in the school context, translating these practices consistently into their homes remained a challenge. Encouragingly, some students expressed a desire to promote environmental education within their families, indicating a potential for broader societal impact.

Teacher engagement with the Adiwiyata Program was largely positive, with most teachers expressing strong support for integrating environmental education into their teaching practices. However, there were notable differences in the level of involvement across subject areas. Science teachers, particularly those teaching biology and environmental science, were more actively engaged in delivering environmental education. They used the curriculum as an opportunity to discuss

sustainability issues and encourage hands-on activities like experiments related to recycling and energy conservation.

On the other hand, teachers in non-science subjects were less involved in environmental topics, often due to a lack of professional development opportunities or perceived relevance to their subject areas. The research found that only 60% of non-science teachers had received training or resources related to environmental education. This highlights the need for more holistic training programs that equip all teachers, regardless of their subject specialization, with the tools and knowledge to incorporate sustainability into their lessons.

The research highlighted that the broader school community, including parents and local organizations, played an important role in the success of the Adiwiyata Program. The school engaged parents through events such as parent-teacher meetings and environmental workshops, where parents were encouraged to participate in activities like recycling and energy-saving initiatives. Approximately 75% of parents surveyed expressed strong support for the Adiwiyata Program and actively participated in school-organized environmental events. The school also forged partnerships with local environmental NGOs and government agencies, which provided resources for sustainability projects such as waste management systems and biodiversity conservation programs. These collaborations contributed significantly to the school's ability to implement environmental initiatives effectively.

3.2 Challenges and Barriers in Implementing the Adiwiyata Program

One of the most prominent challenges in implementing the Adiwiyata Program is the lack of sufficient funding and resources. While the program encourages schools to adopt sustainable practices, such as waste management, energy conservation, and water-saving initiatives, many schools face financial constraints that limit their ability to invest in the necessary infrastructure. For example, setting up recycling stations, installing energy-efficient lighting, and implementing rainwater harvesting systems require a significant initial investment. Many schools, especially those in remote or economically disadvantaged areas, do not have access to the resources required to undertake these initiatives. Without adequate funding, the school can only implement basic environmental practices, such as waste segregation, while more advanced initiatives remain out of reach. In addition, resource limitations extend beyond financial constraints to include a shortage of educational materials, such as updated textbooks, lesson plans, and other resources needed to support environmental education. Schools often rely on external funding from the government or local businesses, but this funding is not always consistent, leading to gaps in the implementation of the program.

Another significant barrier to the successful implementation of the Adiwiyata Program is the lack of adequate infrastructure to support environmental initiatives. For instance, while many schools have adopted waste segregation, a comprehensive recycling system is often absent. This means that while students are encouraged to segregate waste, the lack of a functional recycling facility results in much of the waste being sent to landfills. Additionally, schools in urban areas may have access to basic infrastructure, but rural schools or those in remote locations often lack essential resources such as proper sanitation, clean water systems, and waste management facilities. The absence of these basic services makes it challenging to implement sustainable practices effectively. For energy conservation efforts, the installation of energy-efficient lighting or solar panels requires not only capital investment but also the expertise to maintain these systems. Without proper facilities or expertise, many schools are unable to carry out these initiatives, limiting the program's scope.

The effectiveness of the Adiwiyata Program is heavily reliant on the active involvement and commitment of teachers. However, many educators face challenges in integrating environmental education into their existing curricula due to a lack of proper training and professional development in sustainability practices. While some teachers receive initial training on environmental education, the frequency and depth of this training are often insufficient. Teachers may have a basic understanding of environmental issues but may not have the expertise to incorporate them into subjects in a way that engages students meaningfully. This lack of specialized knowledge and skills limits the program's potential to inspire lasting changes in students' attitudes and behaviors toward the environment. Furthermore, limited access to teaching materials and resources that address

environmental issues in an interdisciplinary manner often leaves teachers struggling to design lessons that meet the program's standards. As a result, environmental education may not be consistently integrated into various subject areas, making it harder to cultivate a school-wide culture of sustainability.

In some schools, there is a resistance to change from both staff and students. While many students are enthusiastic about the Adiwiyata Program and its goals, teachers and administrators may be hesitant to adopt new teaching methods or change established school routines. This resistance often stems from a lack of awareness about the importance of environmental education or the perceived difficulty in integrating such practices into the curriculum. Some teachers may feel that their existing workloads are already demanding, and adding sustainability efforts may seem overwhelming. Similarly, administrators may be focused on achieving other educational goals, such as academic performance or administrative efficiency, and may view the Adiwiyata Program as an additional task rather than an essential component of the school's mission. Moreover, in schools where environmental education has not been a priority, there may be a general lack of understanding about the long-term benefits of environmental sustainability. This lack of awareness can undermine the program's success, as without the full support of the school's leadership and staff, the initiative may not receive the attention it deserves.

While the Adiwiyata Program encourages schools to engage with the local community in promoting environmental sustainability, community involvement is often limited. Schools may struggle to collaborate with local businesses, government agencies, and non-governmental organizations (NGOs) due to a lack of networking opportunities or mutual interest in environmental issues. Parents may also be unaware of the program or may not fully understand their role in supporting environmental education at home. As a result, even though students may adopt sustainable practices at school, these behaviors may not be reinforced in the home environment. A lack of community involvement can hinder the broader impact of the Adiwiyata Program, as sustainability requires the collective effort of the entire community, not just the school. Additionally, local businesses that could potentially support sustainability initiatives through donations or partnerships may not be committed to environmental causes, limiting the scope for collaboration. Community-based environmental projects, such as tree planting or clean-up events, may also face low participation rates, further restricting the program's effectiveness.

Even in schools that successfully implement the Adiwiyata Program, the sustainability of long-term efforts remains a concern. Many environmental initiatives require ongoing commitment, and without strong institutional support, these efforts can falter over time. Schools may initiate exciting projects at the start of the program but struggle to maintain momentum once the initial enthusiasm wanes. This can be due to various factors, including changes in leadership, lack of resources, or the absence of a clear sustainability plan. Without a comprehensive strategy that involves all stakeholders teachers, students, the community, and policymakers the long-term success of the Adiwiyata Program is at risk.

4. CONCLUSION

Evaluating the success of the Adiwiyata Program is crucial for understanding its effectiveness in fostering environmental awareness and sustainable practices among students and the broader school community. Such evaluations provide valuable insights into what works well and what needs improvement, ensuring the program remains relevant and impactful. By identifying best practices and challenges, schools can refine their approaches and create replicable models for others to follow. This evaluation contributes to broader environmental education goals by emphasizing the importance of instilling eco-conscious values in young generations, fostering a culture of sustainability that extends beyond the classroom. The findings can also inform policymakers in designing targeted policies to support environmental initiatives in schools, influence curriculum developers to integrate sustainability concepts more effectively, and guide the future development of programs like Adiwiyata to ensure scalability and long-term impact. By aligning these efforts with national and global

environmental priorities, such evaluations can position schools as key players in addressing pressing environmental challenges.

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