



Implementation and Impact of Environmentally Sound Schools and Adiwiyata Program in East Java Province: A Literature Review

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ARTICLE INFO	ABSTRACT
<p>Article history: Received 13 February 2023 Received in revised form 6 May 2023 Accepted 14 June 2023 Available online 30 June 2023</p> <p>Keywords : Implementation, Environment, Adiwiyata school, Environmental friendly school, Study of literature</p>	<p><i>The purpose of this data gathering endeavor is to discern and scrutinize empirical research works that have been published in academic journals from 2010 onwards, with a specific emphasis on the execution of ecologically sustainable schools in the East Java Province. The review encompasses a variety of research methodologies, such as quantitative, qualitative, mixed methods, and literature review studies. The Sinta database, which is a Science and Technology Index, is employed for the purpose of conducting literature research. Through the examination of various articles, it has been determined that the introduction of ecologically sustainable schools in the region of East Java has yielded favorable results. Educational institutions have developed all-encompassing initiatives that prioritize ecological factors to cultivate and augment ecological consciousness among their constituents. The aforementioned programs comprise a range of endeavors, including but not limited to waste management, energy efficiency, preservation of biodiversity, and implementation of sustainable practices. The results emphasize the importance of the school's function and the proactive engagement of the school community in achieving an ecologically sustainable educational institution. The present literature review offers significant perspectives on the execution of ecologically sustainable schools in East Java Province and underscores the significance of incorporating environmental principles and practices into the educational milieu. The aforementioned serves as a fundamental basis for prospective investigations and bolsters the continuous endeavors towards establishing ecologically aware educational institutions that foster sustainable progress within the area.</i></p>

1. INTRODUCTION

Humans have a role towards the environment, namely a positive role and a negative role (Chamidah, 2020). Incorrect human activities are frequently cited as a contributing factor to environmental issues. Frequently encountered issues stemming from human activities encompass the overconsumption of natural resources and the illicit felling of trees, both of which can lead to the occurrence of flooding or landslides. The contemporary discourse frequently revolves around the issue of environmentalism, encompassing apprehension regarding the escalating prevalence of ecological degradation and apprehension regarding the prospects of humanity's future. The impact of environmental degradation on fundamental aspects can be attributed to the failure to properly account for the interdependent relationship between humans and the environment. Divergent perspectives on the environment render it an entity that necessitates maximal exploitation, irrespective of its resultant impacts. The improper approach towards evaluating the environment can lead to detrimental impacts on the environment. The most pressing issues facing humanity in the future are global warming and climate change, which result in rising air temperatures, unpredictable precipitation patterns, heightened risk of flooding, reduced agricultural yields, and the potential for the spread of life-threatening illnesses. The impact of contemporary human conduct. Individuals are exhibiting a reduced level of responsibility towards the environment. The acquisition of knowledge and skills related to environmental issues is imperative for students, and thus, environmental education is deemed necessary. The Adiwiyata program has been implemented in Indonesia with the objective of promoting the adoption of environmentally sustainable practices in educational institutions.

Sustainable development encompasses two crucial dimensions, namely education and the environment. The promotion of environmental protection and ongoing education has fostered the acceptance of the notion of eco-friendly schools. The notion of an environmentally conscious educational institution, commonly referred to as a sustainable school or school environment, integrates educational principles with environmentally-friendly measures to establish a salubrious and sustainable atmosphere for learning. Environmental education is a pedagogical approach aimed at imparting knowledge and awareness of environmental issues to students within the school setting. The establishment of an ecologically sustainable educational institution involves a comprehensive institutional dedication to crafting initiatives that integrate environmental principles into all aspects of school operations. (Amrullah & Nurcahyo, 2021). Educational institutions that adopt an environmental perspective have the potential to foster an optimal environment for learning and promote awareness among their constituents. The Indonesian government has implemented environmental education as a measure to prevent future environmental degradation. In addition to the Indonesian government's efforts to prioritize environmental education, a multitude of global entities are actively implementing initiatives aimed at promoting environmental sustainability. Thus, The Adiwiyata program was instigated by the Ministry of Environment of the State in 2006.

The Adiwiyata Program is a holistic initiative that engages all relevant parties, including educational institutions and the wider community, to foster environmental consciousness, particularly among students. (Nugroho & Hadilinatih, 2016). The application of Adiwiyata in the realm of education facilitates the acquisition and implementation of diverse knowledge, norms, and ethics, thereby enabling the attainment of sustainable development objectives. As per the Adiwiyata Guide of 2011, out of the total 251,415 schools (comprising of primary,

junior high, senior high, and vocational schools) in Indonesia, merely 1,351 schools were recognized under the Adiwiyata program. Among these, only 56 schools were granted independent Adiwiyata status, while 113 schools were categorized as Adiwiyata schools, and 103 schools were identified as Adiwiyata candidates. Consequently, the total number of schools that received the Adiwiyata award was 103. A total of 272 educational institutions, including primary, junior high, senior high, and vocational schools, were covered across Indonesia.

The Adiwiyata program has been implemented in several schools across the East Java Province, which is recognized as one of the largest provinces in Indonesia (Nurhafni et al., 2019; Waqidah et al., 2020). The objective of this program is to encourage the adoption of eco-friendly behaviors, impart knowledge on environmental issues, and facilitate the acquisition of sustainable learning skills within educational institutions. The program aspires to establish schools in East Java Province as exemplars in the advancement of sustainable education and preservation of the environment.

Notwithstanding the execution of the Adiwiyata program and endeavors to establish ecologically sustainable schools in East Java Province, it is imperative to conduct a thorough review of literature concerning the implementation and ramifications of this program. The purpose of this literature review is to enhance comprehension of optimal methodologies that have been executed, obstacles encountered, and outcomes attained within the framework of East Java Province. The Adiwiyata program, as outlined in Environmental Regulation (ministerial regulation) Number 5 of 2013, endeavors to establish schools that exhibit environmental awareness and concern. The program's implementation is founded upon three fundamental principles: educative, participatory, and sustainable. The Adiwiyata initiative, aimed at cultivating a school ethos that prioritizes environmental awareness, has yielded favorable outcomes in the realm of education. There exists a correlation between the degree of involvement of students in environmental initiatives and the cultivation of their personality, sense of responsibility, conduct, and aptitude for administration.

The objective of this article is to perform a comprehensive analysis of the scholarly literature pertaining to the execution and outcomes of eco-friendly educational institutions and the Adiwiyata initiative in the region of East Java Province. The purpose of this literature review is to gather and evaluate prior research studies in order to gain a more comprehensive understanding of the advancements, accomplishments, and challenges associated with the implementation of this program within the specified region.

This article aims to enhance comprehension of the achievements, obstacles, and prospects encountered in the pursuit of sustainable education and environment in East Java Province by furnishing an all-encompassing literature review on the implementation and impact of environmentally friendly schools and the Adiwiyata program. This literature review aims to provide valuable recommendations for the government, educational institutions, and other stakeholders to enhance the implementation of the Adiwiyata program and promote eco-friendly schools in East Java Province. Therefore, the present article has the potential to significantly contribute to the attainment of sustainable development and enhance environmental consciousness across the region.

2. METHOD

The author employs Cooper's (1998) recommended literature review methodology to amalgamate the existing literature. The objective of this literary methodology is to perform the following steps: a) define the problem, b) gather data, c) assess the viability of the data, d) scrutinize and construe the pertinent data, and e) structure and exhibit the outcomes. The problem at hand pertains to the identification of the implementation of environmentally sustainable high schools in the province of East Java. The implementation of policies pertaining to environmentally sustainable schools is crucial for facilitating stakeholder engagement.

Collecting data aims to find empirical studies including quantitative, qualitative, mixed methods, and literature reviews published from 2010 to the present to identify the implementation of environmentally sound schools at the secondary school level in East Java. The keywords used are environmentally sound schools and adiwiyata schools. Evaluation and data analysis was carried out on the 10 articles found. 1 article focuses on environmentally sound schools and 9 articles focus on adiwiyata schools. Only articles that are directly related to the implementation of environmentally sound schools are included in this review.

3. RESULTS AND DISCUSSIONS

Schools with an environmental perspective are schools that implement four important components in their management including policies, curriculum, activity programs, and facilities and infrastructure. If students' knowledge about the environment increases, then environmental care behavior also increases and will reduce environmental damage in the future (Amrullah & Nurcahyo, 2021). For this reason, schools with an environmental perspective need to be continuously developed.

The manifestation of an ecologically responsible school culture is evidenced by the presence of policies, curricula, initiatives, and physical facilities that uphold the values and practices of such a culture (Permana & Ulfatin, 2018). The establishment of an environmentally sustainable school culture is characterized by the allocation of responsibilities, communication with external stakeholders, execution of initiatives, and assessment and analysis of outcomes. An environmentally sustainable school culture is characterized by the values of environmental care, environmental appreciation, and a culture of achievement. Preservation is achieved through the implementation of traditional practices and techniques. The Principal's Decree has the potential to provide guidance for the implementation of school policies within a refined educational setting. The factors that facilitate the implementation of policies include: a) the unwavering commitment of the school principal; b) the collective awareness and comprehension of the significance of environmental conservation among all members of the school community; and c) the presence of a well-organized adiwiyata team that focuses on an engaging environmental theme (Isnaeni, 2014).

The decision letter of the principal is formulated with the purpose of subsequent integration into every subject. One potential strategy to foster a culture of environmental sustainability within the school community is to engage students in key activities aimed at promoting eco-friendly practices. By encouraging student involvement and garnering their support, it may be possible to establish a shared understanding and commitment to the school's environmental goals. The ecological leadership of a school principal has a significant influence on the development of an environmentally conscious school culture. This can manifest in various ways, such as the cultivation of an environmentally responsible mindset,

the promotion of a hygienic and healthful lifestyle, the establishment of an ecologically sound school environment, and the attainment of notable accomplishments in the realm of environmentalism (Azmi et al., 2018). Moreover, the implementation of *adiwiyata* is still impeded by several problematic scenarios, including untimely task units, groups of students who lack awareness regarding the concept of an environmentally sustainable school, financial constraints, and inadequate support from the community and other organizations (Landriany, 2014). This principal's decision letter needs to be supported by all parties because one of them is to shape the character or behavior of students.

Formation of environmental care behavior by applying three concepts of developing national character according to the Research and Development Center of the Ministry of National Education (Balitbang Kemendiknas), namely first Subject Integration, namely through integrating environmental material into all subjects at least one KD in each semester (Rahmawati & Suwanda, 2015). Obstacles faced by the school in forming environmental care behavior are student turnover every new school year, socio-economic conditions, and educator concerns. The formation of the character of school members with an environmental perspective cannot be separated from the *Adiwiyata* program that has existed so far.

To reach an *Adiwiyata* school, it is necessary to carry out programs related to *adiwiyata* including forming a working group of environmental cadres, carrying out clean, healthy, and shady Saturday activities, carrying out a garbage collection movement 3 minutes before learning begins, forming green police, holding environmental action activities, holding basic training environmental awareness, and cooperate with related parties (Sumiati, 2018). For this reason, the *adiwiyata* program aims to create school members who are responsible for efforts to protect and manage the environment by employing good school governance.

The *adiwiyata* program in its implementation has shown a positive side from the beginning until now (Alhamda & Megawati, 2021). The *Adiwiyata* program has demonstrated satisfactory outcomes in terms of achievement objectives. The incorporation of original concepts from the school has contributed to the distinctiveness of the institution and the establishment of sustainable maintenance practices to ensure the upkeep of *Adiwiyata*. These efforts have been aimed at fostering a conducive environment for all stakeholders. One of the objectives of the *Adiwiyata* program is to cultivate a sense of responsibility among school constituents towards safeguarding and administering the environment. This is achieved through the adoption of sound school governance practices that promote sustainable development (Karimah & Rosdiana, 2017). In implementing the four important components of an environmentally sound school, namely policy, curriculum, activity programs, and facilities and infrastructure, can be implemented in programs designed by the school. The substance of environment-based curriculum policies can be in the form of components and development models that have suitability or relevance in two respects (Nihlawati, 2011).

Initially, it is imperative to consider the alignment between the educational program and the requisites, necessities, circumstances, and evolution of the community. The second aspect pertains to the coherence among the different components of the curriculum, including the alignment between the content and objectives, the congruence between the process and content and objectives, and the consistency between the evaluation and process, content, and curriculum objectives. Apart from being implemented in curriculum policies, additional implementations can also be achieved through extracurricular activities. The promotion of environmental attitudes and insights among students can be facilitated through the implementation of extra-curricular activities and mandatory *adiwiyata* days, during which

students can engage in the upkeep of the school environment and develop a sense of environmental responsibility (Nuzulia et al., 2020).

4. CONCLUSION AND SUGGESTION

The findings of the analysis conducted on multiple sources indicate that the adoption of ecologically sustainable schools in the East Java Province has yielded favorable outcomes. Sustainable school programs encompass a diverse array of initiatives, such as waste reduction and management, energy conservation, preservation of biodiversity, and the implementation of other sustainable measures. It is recommended that educational institutions and affiliated entities persist in the advancement and amplification of these endeavors, while also upholding their durability. The significance of educational institutions in achieving ecological sustainability is contingent upon the involvement of schools and the active participation of the school community. Effective promotion of environmental education, cultivation of eco-friendly behavior, and establishment of a sustainable learning environment can be facilitated through collaboration among school administrators, teachers, students, parents, and the local community. The present literature review offers significant perspectives on the execution of ecologically sustainable schools in East Java Province and underscores the significance of incorporating environmental principles and practices within the educational milieu. The aforementioned can serve as a robust foundation for subsequent investigations and reinforce the continuous endeavors towards establishing educational establishments that prioritize environmental awareness and foster sustainable development within the locality.

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