



Integrating School Cleanliness into Environmental Character Development

Syamsiati Arifah¹

¹ Universitas Sarjanawiyata Tamansiswa, Yogyakarta, Indonesia

Abstract

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School cleanliness plays a vital and multidimensional role in shaping students' environmental care character and overall moral development. A clean and well-maintained school environment not only improves physical health and learning comfort but also functions as a living laboratory for fostering responsibility, discipline, and environmental awareness. This study aims to explore in depth the relationship between school cleanliness and the formation of environmental care character among elementary school students. Using the Systematic Literature Review approach, the research synthesizes findings from various empirical and theoretical studies published within the past five years to identify effective strategies, influencing factors, and challenges related to cleanliness-based character education. The results indicate that consistent and well-structured cleanliness programs, teacher role modeling, and active student engagement significantly contribute to strengthening students' sense of environmental stewardship. Moreover, integrating character values into curricula, extracurricular activities, and school management systems has proven to be an effective approach for cultivating environmentally responsible behavior from an early age.



1. Introduction

Education holds a strategic role in shaping the character of the younger generation to possess environmental awareness as well as clean and healthy living habits. Schools, as formal educational institutions, bear a great responsibility in creating a learning ecosystem that supports the internalization of moral values and social responsibility, including concern for cleanliness and environmental sustainability. A school environment whose cleanliness is maintained can create a comfortable learning atmosphere, increase student concentration, and support the physical and mental health of students (Widiastuti et al., 2020). Therefore, school cleanliness is not only viewed as a physical condition but also as an integral part of sustainable and transformative character education.

The formation of environmentally conscious character at the primary school level is the main foundation for the development of children's morals and ethics. As stated by Nadlifah et al. (2023), the habituation of maintaining cleanliness from an early age can foster a sense of responsibility, discipline, and social awareness of the impact of behavior on the surrounding environment. This aligns with the mandate of national education goals, which emphasize developing the potential of students to become individuals who are faithful, devoted, have noble character, and possess high social concern. Through routine activities such as class cleaning schedules, waste management, and school greening programs, the values of discipline, cooperation, and responsibility can be internalized naturally and continuously.

Furthermore, environmentally conscious behavior does not emerge spontaneously but is formed through a process of consistent learning and role

modeling from the surrounding environment. Suarlin (2023) emphasize that teacher behavior in maintaining school cleanliness has a significant influence on student motivation to participate in environmental care. This role modeling shows that character education is not only taught through theory but is also transmitted through real actions and daily habits. Meanwhile, Liang et al. (2022) add that a contextual learning approach that links academic material with students' real lives can strengthen ecological awareness and a sense of responsibility towards nature. Therefore, environmental education strategies need to be designed not merely as additional activities but as an essential part of the learning process in schools.

School cleanliness also has direct implications for the health and academic achievement of students. A learning environment where cleanliness is not maintained can be a source of various infectious diseases and reduce students' learning spirit, whereas a clean environment creates a safe, healthy, and productive atmosphere (Al Kaabi et al., 2023). In addition, school cleanliness reflects the level of discipline and social concern of the school community, which is an important indicator in shaping student character. Through cleanliness activities, students not only learn about the importance of protecting the environment but also develop the values of responsibility, mutual cooperation and empathy towards others (Casmana et al., 2023).

This research attempts to comprehensively examine the role of school cleanliness in shaping environmentally conscious character through a Systematic Literature Review (SLR) approach. This approach allows researchers to identify, analyze, and synthesize various research findings related to cleanliness education

practices in primary schools within a certain time frame. Thus, this research can reveal the extent to which the implementation of school cleanliness programs contributes to strengthening environmentally conscious character, as well as the factors that influence it, such as teacher role modeling, curriculum support, and active student participation. Suarlin (2023) state that the integration of character values into school activities can strengthen students' ecological awareness and shape sustainable behavior. Therefore, the results of this study are expected to provide a theoretical contribution to the development of character education and serve as a practical reference for schools in implementing effective cleanliness programs oriented towards the formation of environmentally conscious character.

2. Methods

This research method uses the Systematic Literature Review (SLR) approach, which aims to review, evaluate, and synthesize various previous research findings in a structured and comprehensive manner. This approach was chosen because it can provide a comprehensive overview of the relationship between school cleanliness and the formation of environmentally conscious character in primary school students. Through SLR, this research not only identifies previous findings but also integrates diverse academic perspectives to obtain a deeper understanding of the concepts, implementation, and challenges of character education based on environmental cleanliness. The SLR process was carried out through several systematic stages, which include literature identification, source selection, content analysis, and synthesis of review results.

The first stage is literature identification, where the researcher collected data from various scientific databases, such as Google Scholar or Research Gate with a publication year limit of the last five years. The selection of this period is intended so that the review obtained remains relevant to the latest developments in the field of character education and school cleanliness. The search process used a combination of keywords such as “school cleanliness”, “character education”, “environmental consciousness”, “primary education, and “behavior formation”. From the initial search results, 46 articles were obtained that were considered relevant to the research topic.

The second stage is literature selection, which aims to filter the articles so that only quality sources that meet the criteria are analyzed further. Inclusion criteria included: (1) articles are empirical research or conceptual reviews focusing on the context of primary education; (2) publications are published in accredited or reputable scientific journals; and (3) articles are written in Indonesian or English. In addition, research that has empirical data related to student behavior, learning strategies, or the implementation of school cleanliness programs was prioritized in the selection. After a careful screening process based on relevance and methodological quality, several articles were declared to meet the criteria and were used in the next analysis stage.

The third stage is content analysis, where each selected article was analyzed to identify the main themes that emerged. The focus of the analysis was directed at issues such as cleanliness practices in the school environment, strategies for forming environmentally conscious character, and the role of teachers and the school

community in supporting value-based learning. The analysis was carried out using a descriptive and interpretative approach, which allowed the researcher to understand the relationships between variables and reveal general patterns as well as differences found in the literature. This stage also became the basis for finding research gaps and formulating theoretical and practical recommendations.

The final stage is results synthesis, which serves to integrate findings from various studies to produce a complete and focused understanding. At this stage, all findings were analyzed comparatively to answer the main research question: how does school cleanliness contribute to the formation of environmentally conscious character in primary schools. The synthesis process not only highlighted the cause-and-effect relationship between cleanliness and character but also identified the supporting and inhibiting factors for the implementation of school cleanliness programs oriented toward character education.

3. Results

The results of this literature review show that school cleanliness practices play a fundamental role in shaping environmentally conscious character in primary school students. A number of studies confirm that the application of structured cleanliness programs such as rotation of class cleaning schedules, waste management activities, and environmental cleanliness campaigns significantly contributes to the internalization of the values of responsibility and discipline in students (Alkaabi et al., 2023). These activities not only foster the habit of maintaining cleanliness but also strengthen character learning sustainably. These habits gradually develop into

reflective behavior inherent in students' daily routines, reflecting the success of integrating character education with cleanliness practices in schools.

In terms of health and learning comfort, several studies show that the application of high cleanliness standards has a positive impact on the quality of the learning environment. Studies examining the implementation of classroom cleaning protocols found that increasing the intensity and quality of cleanliness directly reduced the level of microbial contamination on the surface of learning facilities, such as tables, chairs, and stationery (Shaughnessy et al., 2022). With the reduced risk of exposure to pathogenic microorganisms, students tend to experience fewer health problems related to the environment, such as respiratory infections or allergies. This condition ultimately affects the increase in student attendance and participation in the learning process. A clean school environment not only supports physical health but also creates a more comfortable and calming atmosphere, which in turn increases students' focus and learning motivation.

A review from Building Better Behavior (2025) confirms that a clean, organized, and well-designed classroom environment directly contributes to increased learning focus and decreased negative student behavior. The results of this study underscore the link between the quality of the physical environment and the psychological and social dimensions in the educational process. Students who study in a clean and well-arranged environment tend to show higher levels of concentration, better emotional involvement, and more positive social behavior. This indicates that school cleanliness not only impacts physical health but also has implications for the cognitive, emotional, and social development of students.

Besides physical environmental factors, the role of the teacher as a model or role model for environmentally conscious behavior also emerges as a significant mediating variable in a number of studies. Liang (2022) emphasizes that the pro-environmental behavior shown by teachers such as the habit of disposing of trash in its place, conserving water use, or caring for school plants can influence students to imitate and adopt similar behaviors. In this context, teacher role modeling has a stronger influence compared to the delivery of verbal instructions alone. Through real actions, teachers show concrete examples of the importance of maintaining cleanliness and the environment, which then become a positive social norm in the school. This behavioral model strengthens the culture of a clean environment and supports the continuous internalization of character values in students.

Furthermore, environmental education interventions that involve direct contact with nature have also proven effective in shaping environmentally conscious behavior. Research conducted by Teixeira et al. (2023) shows that the nature-contact environmental education approach can enhance students' pro-environmental behavior through strengthening attitudes, ecological empathy, and a sense of responsibility towards the environment. Through activities such as gardening, ecosystem observation, or school plant care, students gain authentic and meaningful learning experiences. This direct experience allows students to understand the connection between human actions and environmental sustainability, thereby triggering a more fundamental change in behavior (Teixeira et al., 2023). Thus, educational strategies that involve direct interaction with nature play an important

role in fostering ecological awareness and long-term commitment to environmental cleanliness.

The literature review also reveals a link between students' perception of the school environment and the formation of environmentally conscious character. When students view their school as a clean, orderly, and tidy environment, an internal impulse arises to participate in maintaining that cleanliness. This positive perception functions as a motivational driver that encourages students to take real action in maintaining the cleanliness and sustainability of the environment (Utomo et al., 2023). The mediating path often found in empirical research illustrates the pattern “cleanliness practice → positive perception → character internalization”, where direct experience plays an important role in building consistent attitudes and behavior towards the environment. Thus, the formation of environmentally conscious character depends not only on formal instruction but also on the sensory and emotional experiences gained by students from interacting with the school environment.

Other supporting factors frequently mentioned in various studies include the availability of adequate cleanliness facilities, such as sorted trash bins, handwashing sinks, drainage systems, and well-organized school waste management. Adequate cleanliness infrastructure allows students to actively participate in maintaining school environment cleanliness (Maba et al., 2022). Studies also show that the success of cleanliness programs depends on a clear and well-planned school management system, including internal policies that support a culture of cleanliness and the involvement of the entire school community, including teachers, students, and

administrative staff. Schools that are able to create mechanisms for regular cleanliness supervision and evaluation show a higher level of success in instilling environmentally conscious values in students. Conversely, without strong facility and policy support, cleanliness practices are often superficial and unsustainable, only carried out as a formal routine without the meaning of character values within them.

However, some constraints were also found in the implementation of school cleanliness programs. One of the main challenges that often arises is the context of local culture and community habits around the school that do not support cleanliness behavior (Zulela et al., 2022). In a social environment where awareness of cleanliness has not become a dominant value, the school's efforts to instill environmentally conscious behavior often face cultural resistance. Students who are accustomed to a home or community environment that pays less attention to cleanliness require more time to internalize these values. In addition, most of the analyzed research is still descriptive or short-term case studies, so it has not yet provided strong empirical evidence regarding the cause-and-effect relationship between school cleanliness and the formation of environmentally conscious character. The lack of long-term experimental research is a gap that needs to be filled by subsequent studies to obtain a more comprehensive and valid understanding.

Overall, the results of this literature review show that school cleanliness that is managed systematically and sustainably, and supported by teacher role modeling and adequate infrastructure, has significant potential in shaping the environmentally conscious character of primary school students. The integration of cleanliness practices, interactive environmental education, and school policies that favor

character formation can create a learning environment that is not only physically healthy but also rich in moral and social values. In addition, the factor of student perception of environmental cleanliness and the influence of the local cultural context are important variables that mediate the success of this program. Therefore, future environmental education strategies need to be designed by considering a holistic approach that combines physical, social, psychological, and cultural dimensions so that the formation of environmentally conscious character can be realized effectively and sustainably.

4. Conclusion

School cleanliness is an important element in the formation of environmentally conscious character among primary school students. Through a clean, healthy, and comfortable learning environment, students not only gain physical benefits in the form of health but also experience the internalization of moral values such as responsibility, discipline, and cooperation. School cleanliness practices become an effective vehicle for developing sustainable positive behavior.

Teacher role modeling plays an important role in shaping environmentally conscious behavior through consistent real examples, while school policy support and adequate facilities become supporting factors for the success of cleanliness programs. Experience-based learning and active student involvement in maintaining cleanliness are proven to increase ecological awareness and an attitude of caring for the surrounding environment. Thus, the formation of environmentally conscious character through school cleanliness is not merely the responsibility of students but

the result of synergy between teachers, schools, and the community. This effort must be carried out sustainably in order to form a generation that is not only intellectually smart but also has a moral and social responsibility towards the sustainability of the living environment.

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