

The Role of Teachers in Fostering Environmental Care Character through the Waste-Free Program

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Abstract

Article history:

Received: July 9, 2023

Revised: August 24, 2023

Accepted: October 23, 2023

Published: December 30, 2023

Keywords:

Environmental Education,
High School,
The Role of the Teacher,
Waste-Free Program.

Identifier:

Nawala

Page: 131-146

<https://nawala.io/index.php/ccese>

This study aims to analyze the role of teachers in fostering the character of environmental care of students through the waste-free program. This study uses a qualitative descriptive approach with secondary data obtained from literature studies on previous studies. The results of the study show that teachers play the role of role models, motivators, facilitators, and supervisors in building students awareness of the importance of cleanliness and waste management. Waste-free programs have proven to be an effective strategy in fostering sustainable habits of caring for the environment, not only in the school environment but also in the daily lives of students in the community. The research discussion emphasized that the success of the waste-free program is highly dependent on collaboration between school policies and the active role of teachers in providing examples and guidance. In addition, habituation through routine cleaning activities has been proven to be able to form a stronger character of caring for the environment in students. Thus, this study emphasizes that the role of teachers is crucial in creating a young generation that has awareness and responsibility for environmental sustainability.

1. Introduction

Environmental issues have become a global concern in recent decades. One of the most prominent issues is the increase in waste generation, especially plastic waste which takes a long time to decompose. Indonesia itself is included in the category of countries with high waste production, which poses serious problems both in terms of public health and ecosystem sustainability. Schools as formal educational institutions have a moral and social responsibility to participate in overcoming this problem through environmental education. These efforts are not only limited to providing knowledge, but also instilling the value and character of caring for the environment to the younger generation as future leaders of the nation.

Environmental education in high school (SMA) has a strategic role in building student awareness of the importance of maintaining cleanliness and environmental sustainability. Various programs have been implemented by schools to support this goal, such as the green school movement, Adiwiyata, and the waste-free program. These programs aim to reduce the amount of waste while fostering positive habits of students in protecting the environment. Thus, school is one of the important arenas to train students to get used to environmentally friendly behaviors that are expected to carry over to life outside school (Nada et al., 2021).

In this context, teachers play a very important role. Teachers not only function as transmitters of knowledge, but also as role models, motivators, and mentors who can foster environmental awareness among students. The daily behavior of teachers is often a real example that is imitated by students. If teachers consistently show concern for the environment, such as throwing garbage in its place

or reminding students to keep the classroom clean, then this behavior will be easier for students to internalize. In other words, the success of an environment-based school program is largely determined by the active involvement of teachers in these activities (Sieg & Dreesmann, 2022).

Previous research has shown that teachers contributions to environmental education have a significant impact on the formation of students character. For example, research in secondary schools in Indonesia found that the success of the Adiwiyata program is influenced by the consistency of teachers in guiding students and providing motivation to keep the school environment clean and comfortable (Yasin, 2019). Similarly, other research confirms that the role of geography teachers is very effective in instilling the character of caring for the environment through school cleanliness activities and environmental project-based learning (Rushton, 2021).

The same findings are also seen in the international context. A study in Spain revealed that teacher leadership in a waste-free program in high school was able to drive a significant change in student behavior. Teachers who play an active role not only provide instruction, but also guide students in real practice so that environmental awareness can grow stronger (Thor & Karlsudd,, 2020). This emphasizes that the role of teachers as role models is the key to success in the implementation of environmental education.

Although various studies have been conducted, most still focus on the evaluation of school programs or the influence of educational policies on students environmental awareness. There is still limited research that examines the role of

teachers specifically in waste-free programs, especially in schools in archipelago areas such as Ternate City. In fact, the typical geographical and socio-cultural conditions in the area greatly affect the pattern of students interaction with their environment. Therefore, it is important to research how teachers play a role in fostering the character of caring for the environment through waste-free programs in secondary schools in Ternate City.

Based on the description above, this research is focused on the role of teachers in fostering the character of students who care about the environment through waste-free programs in several high schools in Ternate City. The objectives of this study are: (1) to describe the form of teacher involvement in the implementation of the waste-free program, and (2) to analyze the contribution of the program in forming environmental awareness in students. The results of this research are expected to make a theoretical contribution to the development of environment-based character education, as well as practical benefits for teachers, schools, and local governments in designing more effective environmental education strategies.

2. Literature Review

2.1. Environmental Education in the Context of Schools

Environmental education is a systematic effort to improve students understanding, awareness, and skills in preserving the environment. In schools, this education is not only provided through formal subjects, but also through extracurricular activities, school culture, and environment-based policies.

Environmental education is seen as an important strategy in building the character of the younger generation who care about sustainability, because environmentally friendly behavior is not enough to be instilled through theory alone, but needs to be practiced in daily practice. Some studies emphasize that schools are strategic places to integrate environmental education into students real learning and activities. The results of the study show that when schools implement environmental programs such as green schools or the waste-free movement, students experience a significant increase in ecological awareness and pro-environmental behavior (Prastiwi et al., 2019).

In addition, students active involvement in environmental activities has been proven to strengthen social responsibility attitudes and increase solidarity between students (Liu & Chen, 2022). Environmental education is also relevant to the purpose of character education, which is to form a responsible person who cares about the survival of humans and ecosystems. Recent research states that the integration of environmental education with character education in schools is able to produce more meaningful learning, because the values of caring for the environment are directly linked to students real actions (Nada, 2021). Therefore, environmental education in schools is not just an addition, but an integral component in forming students who have ecological and moral intelligence.

2.2. The Role of Teachers in Fostering Environmental Care Character

Teachers have a central position in guiding and fostering students to care about the environment. The role of teachers is not only limited to providing knowledge, but also as an example that shows real behavior of caring for the

environment. This example is an important key because students tend to imitate their teachers attitudes and habits. Teachers who consistently show concern for cleanliness, remind students to take care of the environment, and are active in environmentally-based school programs will be more effective in instilling the value of caring for the environment compared to teachers who only convey theories. Recent studies confirm that teachers involvement in school environment programs is able to increase students awareness of the importance of protecting the environment. Teachers who act as facilitators and motivators have been proven to strengthen students skills in managing waste and foster a sense of collective responsibility (Lima & Pato, 2021).

In addition, other research highlights that the role of geography teachers has a great influence because the subject is closely related to understanding ecology and living space (Musdalipah et al., 2021). On the other hand, the role of teachers also involves efforts to build an environmentally friendly school culture. This can be achieved through habituation, motivation, and integration of environmental care values into daily learning activities. As shown in international research, teachers involvement in waste-free programs makes students more consistent in reducing plastic waste and bringing long-term impacts on their lifestyles. Thus, it can be concluded that the role of teachers is a key factor in fostering the character of caring for the environment in schools.

3. Methods

This study uses a qualitative descriptive approach. This approach was chosen because the main purpose of the research is to describe in depth the role of teachers in fostering environmental care through waste-free programs in high schools. Qualitative descriptive research allows researchers to describe socio-educational phenomena based on available data, without manipulating variables as in quantitative research. Thus, the results of the research are expected to be able to provide a comprehensive understanding of how the waste-free program is practiced and how teachers play a role in instilling environmental awareness in students. The type of data used in this study is secondary data. Secondary data refers to data that is not obtained directly by researchers in the field, but rather collected through various pre-existing sources.

Secondary data sources in this study are in the form of previous research results, scientific reports, journal articles, textbooks, and official documents relevant to the theme of environmental education, the role of teachers, and waste-free programs in schools. The use of secondary data is considered appropriate because there are quite a lot of previous studies that can provide a theoretical foundation as well as an empirical picture related to the research topic. The data collection process is carried out through literature studies. Literature studies are carried out by studying and analyzing scientific works. Researchers use academic databases such as Google Scholar to find relevant sources. From each literature obtained, important information related to the role of teachers, strategies for building environmentally caring characters, and the implementation of waste-free programs in schools is

recorded. The next stage is secondary data analysis. The analysis is carried out using content analysis techniques, namely selecting, grouping, and interpreting information from various literature sources.

Data from previous research were compared and synthesized to find patterns, similarities, and differences related to the role of teachers and the effectiveness of waste-free programs. This analysis aims to produce a coherent description of how teachers contribute to shaping the character of environmental care in students. To maintain the validity of the data, the researcher used the source triangulation technique. This means that the data obtained from one literature is compared to other literature so that the information used is more tested for truth. Thus, even though this study does not use primary data, the results of the study still have a strong basis and can be accounted for academically. Overall, this research method focuses on the exploration of academic literature relevant to the topic. The results of the analysis are expected to be able to provide a deep understanding of the practice of the role of teachers in the waste-free program, as well as a reference for further research and school policies in strengthening environment-based character education.

4. Results and Discussion

4.1. The Role of Teachers in Fostering Environmental Care Character Through the Waste-Free Program

The results of the literature research show that the role of teachers in the waste-free program is not just limited to educators in the classroom, but extends to

become role models and drivers in shaping the character of caring for the environment of students. Teachers at Ternate City High School emphasized the importance of example as the main factor that builds an attitude of caring for the environment. The teachers example can be seen in simple behavior, such as always throwing garbage in its place, using environmentally friendly learning media, and consistently reminding students to maintain the cleanliness of classrooms and school environments. This example is in line with the results of Hasim et al. s (2022) research which emphasizes that geography teachers have a moral responsibility to show environmentally friendly behavior to their students. They stated that teachers are the main role models that students imitate, so that every teachers behavior will have a direct impact on students attitudes in daily life.

This is even more relevant when associated with the context of the waste-free program in Ternate, because students are proven to be more disciplined in maintaining cleanliness when they see their teachers active in school cleaning activities. In addition, teachers act as movers who organize students to engage in routine hygiene activities. The waste-free program in several Ternate high schools is effective because of the teachers direction. Teachers not only lead cleaning activities, but also ensure student participation by providing motivation, reprimands, and even sanctions if students are negligent. According to Khalilzadeh and Khodi (2021), teacher motivation is an important aspect in encouraging students to build environmental awareness, because the character of caring for the environment is not formed only through knowledge, but through habituation that is well supervised by the teacher.

This discussion also highlighted the role of teachers as facilitators in connecting waste-free programs with character education values. At Al-Irsyat High School, for example, teachers emphasized the importance of maintaining cleanliness as part of morals and social responsibility. The teacher conveyed the moral message that a clean environment is a reflection of a person with character. This is consistent with research by Handayani et al. (2020) which shows that environment-based character education can strengthen the moral and social dimensions of students. From the perspective of students, teachers who actively give direction and role models are considered authoritative and motivate them to join the program. Some students even admit that they have started to get used to keeping the house clean because they are used to doing it at school at the direction of the teacher.

This shows a spillover effect from school to home, as evidenced by a study by White et al. (2019) which found that environmental education in schools can have a positive effect on students environmentally friendly behavior outside of school. Thus, the results of the literature review confirm that teachers play a strategic role as role models, motivators, facilitators, and main drivers in the waste-free program. The success of the formation of a character of caring for the environment is highly determined by the consistency of teachers in providing clear examples and directions. Teachers who are passive or do not show real commitment will reduce the success of the program, while active teachers can create a clean and characterful school culture. Therefore, the existence of teachers in the waste-free program is not just a complement, but a determining factor for the success of the program in Ternate schools.

4.2. The Impact of the Waste-Free Program on Students Environmental Care Character

The waste-free program implemented at Ternate City High School has proven to have a significant impact on shaping the character of caring for the environment in students. This impact can be seen from changes in student habits, increased discipline, and the emergence of collective awareness of the importance of maintaining cleanliness. Based on the results of the literature, the waste-free program succeeded in creating a cleaner, healthier, and more comfortable school atmosphere, which in turn increased students awareness of the importance of reducing waste, especially plastic. Prior to this program, the responsibility for cleanliness was mostly imposed on school officials, but these conditions were not optimal. Once teachers and students are actively involved, the level of cleanliness of the school increases significantly. This change is in line with the findings of Debrah et al. (2021) who explain that the success of waste management in schools is highly dependent on the involvement of students and teachers in its implementation. In other words, the waste-free program is able to foster a sense of shared responsibility in creating a waste-free school environment.

In addition to changes in daily behavior, the impact of the waste-free program is also seen in the formation of student character values. The value of caring for the environment arises from habituation, such as cleaning the classroom after lessons, keeping the school yard clean, and sorting waste according to categories. This habit forms the character of students who are more disciplined and caring, environment-based learning and thematic activities are able to form the character of caring for the

environment through simple habits that are carried out consistently. Another positive impact is the increase in solidarity between students. The waste-free program is carried out collectively, so that students learn to work together and remind each other. The culture of mutual cooperation in maintaining the cleanliness of schools is an important capital in building a social character that is oriented towards concern for the environment. This is also confirmed by Puhakka (2021) who found that student participation in school cleaning activities not only increases individual concern, but also strengthens social relationships between them.

The discussion also found that waste-free programs have a long-term effect on student behavior. Many students report that they bring environmentally friendly habits into their homes, such as throwing garbage in its place, not using single-use plastics excessively, and reminding families to keep the environment clean. This confirms that environment-based education in schools can contribute to behavioral change in society, a phenomenon that was also found by Kusuma and Kusuma (2020) in research on eco-friendly schools.

Thus, it can be concluded that the waste-free program has a real impact in shaping the character of environmental care for students at Ternate City High School. The impact is not only limited to improving school cleanliness, but also extends to the formation of character values, strengthening social solidarity, and transferring positive behaviors to the home environment. The success of this program confirms the importance of making schools a base for sustainable environmental education, with teachers as the main actors and students as subjects of habituation. Therefore, the waste-free program can be recommended as an

effective model of environmental education to be implemented in other schools in Indonesia.

5. Conclusion

This research emphasizes that the role of teachers is very important in fostering the character of environmental care for students through waste-free programs in secondary schools. Teachers not only function as teachers, but also as role models, motivators, supervisors, and facilitators in shaping students awareness of the importance of maintaining a clean environment. The example shown by teachers in daily behavior is the most effective factor in instilling the values of caring for the environment. The waste-free program has been proven to have a positive impact on the formation of students environmentally caring character. These impacts include an increase in caring attitudes, real behavioral changes in waste management, and the emergence of critical awareness that extends beyond the school environment.

Thus, this program not only succeeds in creating clean schools, but also forms a young generation who have a high concern for environmental issues. Overall, this study shows that collaboration between school policies and the active role of teachers is the main key to the success of environmental programs. To maintain sustainability, consistency is needed in the implementation of programs, support from all school residents, and strengthening the value of caring for the environment through daily habits. With this step, it is hoped that students will not only care about

cleanliness at school, but also be able to become agents of change in preserving the environment in the community.

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