



Fostering Environmental Awareness Character in Elementary Education Through the Economic Green Living Approach

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Abstrak

Masalah global terkait kerusakan lingkungan menuntut adanya pendidikan yang mampu membentuk karakter peduli lingkungan pada siswa sejak usia dini. Green living menjadi pendekatan pembelajaran yang efektif untuk melatih siswa peduli terhadap lingkungan sekaligus mengembangkan kemandirian. Penelitian ini bertujuan untuk menganalisis pembentukan karakter peduli lingkungan siswa sekolah dasar melalui pendekatan economic green living yang menerapkan prinsip 5R (*refuse, reuse, recycle, reduce, dan replant*). Penelitian ini menggunakan metode kualitatif deskriptif dengan teknik pengumpulan data melalui observasi, wawancara, dan dokumentasi. Data yang diperoleh dianalisis menggunakan model interaktif Miles dan Huberman, yang melibatkan reduksi data, penyajian data, dan penarikan kesimpulan secara berkesinambungan. Hasil penelitian menunjukkan bahwa penerapan prinsip 5R pada siswa meliputi kegiatan daur ulang sampah, penghijauan, penggunaan kembali barang bekas, pengurangan sampah, dan penolakan penggunaan kantong plastik. Karakter yang terbentuk dari proses ini meliputi kemandirian, tanggung jawab, disiplin, kreativitas, dan kemampuan kolaborasi siswa. Simpulan dari penelitian ini adalah pendekatan economic green living dengan prinsip 5R efektif dalam membentuk karakter peduli lingkungan siswa sekaligus melatih keterampilan hidup yang relevan dengan tantangan keberlanjutan lingkungan.

Kata Kunci: Green Living, Karakter, Peduli Lingkungan, Sekolah Dasar

Abstract

The global issue of environmental degradation necessitates education that fosters environmental awareness among students from an early age. Green living is an effective learning approach to cultivate students' environmental concern while simultaneously developing their independence. This study aims to analyze the development of environmental awareness among elementary school students through the economic green living approach, which applies the 5R principles: refuse, reuse, recycle, reduce, and replant. This research employs a descriptive qualitative method, with data collected through observation, interviews, and documentation. The collected data were analyzed using the interactive model by Miles and Huberman, which involves data reduction, data presentation, and continuous conclusion drawing. The results reveal that the implementation of the 5R principles among students includes activities such as waste recycling, greening, reusing discarded items, waste reduction, and rejecting plastic bags. The process cultivates characteristics such as independence, responsibility, discipline, creativity, and collaborative skills. This study concludes that the economic green living approach, utilizing the 5R principles, is effective in shaping students' environmental awareness while equipping them with life skills relevant to addressing environmental sustainability challenges.

Keywords: Character, Environmental Awareness, Green Living, Elementary School

1. INTRODUCTION

Character education must be introduced to children from an early age. Character education is one of the efforts to provide learning to children so that they are ready to face global competition in the future. One of these characteristics is caring for the environment. Indifference to the environment is an important issue that must be followed up from now on (Fauzan Muttaqin & Joko Raharjo, 2018; Riddell, 2015). The habit of littering, illegal logging, forest fires, and many other environmental damages that have occurred lately must be followed up immediately so that future generations can still enjoy a green environment. An action that every community must take is an attitude of caring for the environment so that environmental damage does not occur and can harm all levels of society (Kamarudin &

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Djafri, 2023; Y. Ramli et al., 2022). The school environment can shape the personality and character of students. Schools are not only places where students can imitate those who are role models and role models but also where students learn and where its members form good character (Fauzan Muttaqin & Joko Raharjo, 2018; Samong et al., 2016). Children may learn the moral characters contextually and meaningfully through the national language of Indonesia at schools. However, caution should be taken as the themes and the sub-themes are critically beyond the first and second-graders' cognitive and moral development stages (Hakam, K., 2018; Rasna & Tantra, 2017).

Student character education is comprehensive because it is related to the development of multi-faceted potential for national excellence. Character education starts with honesty, empathy, and respect (Betawi, 2020; Santika, 2020). The success of character education suggests that learning is not necessarily seen from the perspective of the cognitive realm alone, but how to balance the cognitive, affective, and psychomotor realms whose estuary is to realize a complete human being (Amelya et al., 2021; Astra et al., 2015). One of the values of character education is caring for the environment. Concern for the environment is one of the characteristics that need to be prioritized in education. The use of the environment is not only for oneself but for the common good. In character education, environmental care involves all interests in education, both the family, the school, the school environment, and also the wider community (Ismail, 2021; Maunah, 2016). Concern for the environment fosters students' sense of responsibility for the generation's interest in future successors. Instilling an attitude of caring for the environment towards students can start with maintaining the cleanliness of classrooms and schools by throwing garbage in its place, conducting class pickets, taking care of plants, and so (Abdi, 2018; Baharudin, 2017; Ismail, 2021).

In science learning which is closely related to learning the environment, it is very easy to apply ethics or morals when character education is carried out in elementary school. Learning to independently find environmental problems will motivate children during classroom learning (Purwanti, 2017; Puspasari et al., 2019; Rahimah et al., 2020). Efforts that can be made to create a clean, beautiful and comfortable environment in schools provide awareness for teachers, students, and the community so that they will be aware of the environment and the formation of student's character through a green living-learning approach (Behnamnia et al., 2020; Fathinnaufal & Hidayati, 2020).

One effort is to introduce environmental care in schools, especially for elementary school children as a provision for them to continue to care for the environment as early as possible, namely through the green living-learning approach. Green living is a concept that teaches students to live green. Currently, green living has predicted elementary school where it is proven that many elementary schools are competing to go to *Adiwiyata* school. *Adiwiyata* is a school that cares about a healthy, clean and beautiful environment. Forming an environmentally friendly and cultured school that can participate in and carry out environmental conservation and sustainable development efforts for the benefit of present and future generations. The effectiveness of the *Adiwiyata* school is predicated on shaping the attitude of caring for the environment of students. Moreover, green living comes as a solution to improve the attitude of caring for the environment (Obaki, 2017; Pelita et al., 2020).

Oro-oro Ombo Elementary School in Madiun City, one of the *Adiwiyata* schools, has a large classroom and schoolyard, but its management is still not optimal. Green plants and the habit of disposing of garbage in its place are still lacking. This is because the supervision of the teacher and the habit of being aware of the clean environment is not maximal. Used goods and rubbish that are found in the school environment can be made more useful. The used items such as plastic drink bottles and others. Environmental education in schools needs to be improved and sustainable to be achieved in terms of assessing cognitive, affective and

psychomotor aspects. Knowledge and understanding of the concept of sustainable development are important, but building attitudes toward the meaning of sustainable development (right and whole) is no less important (Krayneva et al., 2021; Zaenuri et al., 2017).

Previous research has shown the importance of implementing green living in big cities that require fighting air pollution, and water and soil pollution so that they must live environmentally friendly, use resources efficiently, reduce energy consumption, reduce pollution, and reduce waste (Almalki et al., 2023) Research conducted by other study state that environmentally friendly behaviours grown by children based on Eco-Literacy are implications, ecological knowledge about environmental problems and responsibility for daily behaviour (Lestari & Siskandar, 2020). The research conducted state that the character of students' love for the environment is in the form of discipline, responsibility, punctuality, independence, and creativity through an environmentally friendly economic approach that accustomed students to always maintain cleanliness, neatness, and care for the environment (Retno et al., 2019).

The role of teachers is very important to encourage students to care about the environment so that students' character will be formed as early as possible. The novelty of this study integrate the use of used goods can contribute to a better daily life that is more practical and economical so that teachers and students can apply the 5R principle (refuse, reuse, recycle, reduce and replant). With these goals and roles, Green Living's contribution to the formation of students' environmental care characteristics is very likely to be realized, especially at SDN *Adiwiyata* Madiun City. The purpose of this research is to analyze the develop the character of elementary school students to care about the environment and students can apply the 5R principles through a green living approach.

2. METHODS

The research was conducted at SDN Oro-oro Ombo, Madiun City. This type of research is descriptive qualitative with a phenomenological approach because the research leads to a detailed and in-depth description of the portrait of what conditions occur based on facts in the field (Creswell & Creswell, 2018; Sugiyono, 2022). The instruments in this study were interviews, observations and documentation of the results of the researcher's development. The grid of instruments use in this study is show in Table 1, and Table 2.

Table 1. Interview Grid

No	Sub Variables	Aspects	Resources
1.	Implementation of green living in schools	Overview of the implementation	Headmaster and teacher
		Designed program	Headmaster and teacher
		Character values of environmental care	Headmaster and teacher
		Steps in implementation	Headmaster and teacher
		Supporting facilities	Headmaster and teacher
2.	Evaluation of the Implementation of Character Education cares for the environment	Monitoring	Headmaster and teacher
		Supporting Factors & Barriers	Headmaster and teacher

Table 2. Observation

No.	Theme	Aspects
1.	Implementation of economic green living in schools and the <i>Adiwiyata</i> program	Supporting facilities Overview of the implementation Designed program Steps in implementation Economic Green living is developed and the character is formed
2.	Evaluation of the implementation of character education caring for the environment	Implementation process Monitoring

Here is this study, the data obtained by the researcher comes from teachers, students, and documents in the form of images. The students involved were 26 and 2 teachers. The data collection technique in this study is based on the type of data and data sources, namely 1) questionnaire, which is to see the response of students after the implementation of green living in schools, whether the character of caring for the environment has been realized or not by giving several questions related to caring for the environment 2) training, the training here is to train students to utilize inorganic waste or used materials into more valuable goods, and recycling organic waste into fertilizer, practicing to get used to living a healthy and environmentally friendly life and 3) observations are made to observe students' behavior in forming environmental care characters such as throwing waste in its place, reducing plastic waste, planting and caring for plants, using items that can still be used. Data analyzed in a qualitative descriptive manner with interactive analysis consists of data reduction, data presentation, and inferring interactive forms by collecting data (Miles & Huberman, 2014).

3. RESULTS AND DISCUSSION

Results

Learning outcomes using the Economic green living approach to explain the principle of 5R (Replant, Recycle, Refuse, Reduce, Reuse). There are 5 indicators which can increase student awareness of the environment through the results of observations with students. The result of observation is show in [Table 3](#).

Table 3. Result of Observation

No	Aspects of Green Living	Category	Value of Environmental Care Character
1	Involvement of students in planting and caring for plants	Replant	Responsibilities
2	Skills in processing used goods	Recycle	Creativity, Cooperation
3	Cooperation between students to reject the use of plastic bags	Refuse	Cooperation, Responsibility, Discipline
4	Student involvement to reduce waste	Reduce	Active, Responsibility
5	The ability of students to reuse used items	Reuse	Responsibility, Creativity, Discipline

Base on [Table 3](#), through observations, implementing environmental care had been emphasized starting in first grade. The first year of elementary school in environmental education learning teaches to care about the environment by planting and caring for plants.

Planting plants is an activity that can be done by everyone. They are planting and caring for plants trained students to take responsibility, awareness, and independence.

Skills to Process Used Goods (Recycle)

In every environmental learning, students were involved in processing used items by the teachers' leading. Processing used items trained students' creativity to make used items into handicrafts, flower pots, pencil cases, and wall hangings by collaborating between students and teachers. Used goods from plastic waste were mostly processed into valuable goods and can be used by others. The characters formed are creativity and practice cooperation.

Cooperation between Students to Reduce Waste (Reduce)

Reducing waste is a shared responsibility, in elementary school students need to make efforts to reduce waste by bringing drinking bottles from home, reducing the use of plastic bags, carrying handkerchiefs, and reducing the use of straws. Activities to reduce waste were a form of training student discipline, cooperation and a greater sense of responsibility in protecting the school environment. Utilization of web-based media can be an effective tool to visualize the waste treatment process interactively. Through socialization about the impact of using excessive plastic waste, discipline arises through habituation to always bring your provisions and drinking bottles. The school cafeteria also no longer provides plastic, ice and straws. In addition to the attitude of habituation in students, this reduced activity also raises the view students that one way to reduce plastic waste is to bring their own bottles and food provisions so that when they want to eat or buy drinks in the canteen, they will bring their eating and drinking utensils

Student Involvement to Refuse the Use of Plastic Bags (Refuse)

Plastic bags are one of the biggest contributors to waste. Students were taught to reject the use of plastic waste and given an explanation of the dangers of plastic waste. With this explanation, it formed the character of the students, which was about caring for the environment, green living and training students' responsibilities and discipline.

The Ability of Students to Reuse Used Items (Reuse)

The reuse of used items made by students and teachers was utilizing used drink bottles used for flower pots. These acts could shape students' care, practice creativity, responsibility, and discipline. In this activity, students reuse items such as plastic bottles that they collect as plant pots and decorations in class. Students also come to know that waste disposed of in garbage cans is then taken to the waste bank for reuse

Discussion

The results of the study indicate that character education needs to be taught to early childhood, especially elementary school children. Elementary school is the beginning for children to learn to care for the environment starting from disposing of garbage in its place, cleaning the school environment, planting plants, caring for plants, utilizing used goods, and recycling waste as provisions when continuing their education at the next level (Fauzan Muttaqin & Joko Raharjo, 2018; Lestari & Siskandar, 2020). According to previous study the habituation of the environment conveyed by teachers in class, students are able to develop a character of caring for the environment, for example students throw garbage in its place and are willing to care for plants, water and clean the surrounding environment (S. Ramli et al., 2022). Then with routine activities at school such as picket and community service also improve student communication and motivation in improving students' environmental care character. Education in Indonesia is very important in building character in accordance with

the nation's culture, not only in schools through a series of learning activities, but also through lifestyle habits, such as being religious, honest, disciplined, tolerant, hard working, loving peace, being responsible, and caring for the environment (Dirgantari & Cahyani, 2023; Hidayati et al., 2020).

School effectiveness is predicated on *Adiwiyata* in shaping the character of caring for the environment student's life, but no research describes *Adiwiyata* school's strategy in shaping and character care for the environment. The results of research on 3R waste management (Reduce, Reuse, and Recycle) can be done by reducing the use of paper for example Reduce which was previously a student's assignment using paper replaced by only providing Softcopy or other digital devices (Muslich, 2015; Pelita et al., 2020). Examples of Reuse can be done by using plastic items again, for example, students bring reusable drinking bottles. Examples of recycling, namely waste management with the concept of recycling are divided into three, organic waste management (wet), inorganic, and B3. Such as the management of organic waste (wet) into compost (Arisona, 2018; Hamid et al., 2020).

According to previous study character education is a continuous and never-ending process that results in continuous quality improvement that aims to realize future human figures and is rooted in national cultural values (Fathinnaufal & Hidayati, 2020). Character education is the process of providing guidance to students to become a complete human being with character in the dimensions of heart, mind, body, feelings and intentions (Rasna & Tantra, 2017; Suwiwa et al., 2022). Character education can be interpreted as value education, character education, moral education, and character education which aims to develop students' ability to make good and bad decisions, maintain good things, and realize goodness in daily life wholeheartedly and also train student independence.

Student independence developed from the results of the application of environmental care character is obtained, namely taste values, caring values, and cultural values. Meanwhile, the values of independence that are formed include; brave, responsible, creative, independent, caring for the environment, honest (Retno et al., 2019; Strømme & Mork, 2021). Environmental education that has been implemented for elementary school students is one of the efforts to build character in students. The skill of processing used goods can not only train students to be creative and provide opportunities for students to take ideas to form something useful, valuable and applicable in daily life but also train students to be able to cooperate with friends and be difficult to degrade (explained) by microorganisms. The impact of poor management of waste includes pollution of soil, water and air, the environment becomes slum and causes unpleasant odors and eventually becomes a source of disease (Mutiar, 2021; Rahmayanti et al., 2020). Waste management is intended so that waste does not endanger human health and does not pollute the environment. Furthermore, it becomes a source of poison for humans who consume fish that have been poisoned by microplastic. Plastic waste, which takes 400 years to decompose if burned with the intention of making it easier to destroy, will actually cause toxic fumes that are harmful to fertility (Maslamah et al., 2020; Safriani et al., 2022).

Green-living-based learning can contribute good things to schools, teachers, and students while economic-green living is a concept that not only saves the earth from destruction but also is a way to live more concerned about the environment, conserving natural resources and improving the quality of health for humans. Furthermore, they can enjoy nature continuously and sustainable life. A green living approach by applying the principle of 5R (Refuse, Reuse, Recycle, Reduce, Replant) by utilizing used goods in our environment, being friendly to the environment with environmentally friendly products that are identifying environmentally friendly products as well as planting and caring for plants (Retno & Yuhanna, 2018; Smith et al., 2018). Economic green living is also a learning approach that can apply the 5R principle because students can use the used goods to be used for daily needs. Such as utilizing used bottles as flower pots, pencil cases, and wall hangings,

and refracting students to reduce plastic waste, recycle waste, and separate organic and inorganic waste. Refraction needs support from the school, especially the motivation of teachers, school residents, and their parents. The achieving of main objective of the approach to learning green living is the realization of a comfortable, beautiful and cool school environment. Besides, the importance of a clean environment can be used as a learning resource for the students. Learning directly in this environment can provide knowledge and experience for students so that students can determine attitudes which is good for the environment (Ardianti et al., 2017; Fauzan Muttaqin & Joko Raharjo, 2018).

The implementation of 5R through the green living all school residents, both students and teachers, are involved in the implementation of the 5R, namely (Recycle, Refuse, Reuse, Replant, Reduce) which makes the program superior in ensuring the character of caring for the environment. The main purpose of green living itself is to create a clean and comfortable school atmosphere where the existence of green living programs related to environmental care will be developed so that it is good for strengthening the character of environmental care in school residents. Through this green living concept, schools can become a place to produce generations of environmentalists who positively impact the character of students with character development that appears in student behaviour as well as growing a sense of responsibility and social care.

The obstacles found were limited school facilities, there were limited school facilities, violations of school rules, parental neglect, and the influence of the surrounding community. Solutions to overcome these obstacles include the school cooperating with parents through the provision of additional equipment to maintain the cleanliness of the environment, hand washing sinks, and clean and comfortable bathrooms, the school should more often prepare students to maintain personal hygiene and the environment before learning begins, the school sanctions students who violate school rules, Schools should reward students for exemplary activities, schools should give direction to parents, and schools should set examples, habituate, and supervise. In students' daily activities through their parents related to environmental care. Creating a comfortable, clean and beautiful environment is a shared responsibility.

4. CONCLUSION

The study results could be concluded that students, in the approach to learning economic green living in elementary school, can apply green living aspects such as recycling waste, greening, reducing waste, refusing the use of plastic bags and reusing items that have been used. On the other hand, the characteristics of students that formed in elementary school are cooperation, responsibility, creativity to take ideas, and discipline in attitude. The development of environmentally caring character that can be felt by the school through the application of green living is certainly very positive and beneficial, as the application of green living will shape the character of students always to have concern for the environment, the active role of students can greatly affect the implementation of programs that run in green living so that this can be the key to the success of strengthening character education care about the green living program to go to *Adiwiyata* school.

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