

BEHAVIORAL TRANSFORMATION: SHAPING ENVIRONMENTALLY CONSCIOUS STUDENT CHARACTERS THROUGH PLASTIC WASTE PROCESSING IN ELEMENTARY SCHOOLS

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ABSTRAK

Pengabdian ini bertujuan menanamkan kesadaran akan pentingnya menjaga lingkungan pada siswa kelas 5 SD Islamiyah 1 Kota Ternate melalui kegiatan daur ulang sampah plastik. Kegiatan ini melibatkan pemberian materi tentang pengelolaan sampah, praktik pemilahan sampah, dan pembuatan aksesoris dari sampah plastik. Hasilnya menunjukkan peningkatan signifikan dalam pengetahuan siswa tentang sampah dan keterampilan mereka dalam mendaul ulang. Siswa antusias mengikuti kegiatan dan berhasil menciptakan produk bernilai dari sampah yang sebelumnya dianggap tidak berguna. Hal ini tidak hanya meningkatkan pengetahuan dan keterampilan siswa, tetapi juga menumbuhkan sikap peduli terhadap lingkungan. Kegiatan ini sejalan dengan kurikulum merdeka belajar yang menekankan pengembangan karakter dan kemandirian siswa. Dengan mengintegrasikan pengelolaan sampah ke dalam kurikulum, sekolah dapat menciptakan lingkungan belajar yang mendukung kebiasaan hidup ramah lingkungan. Sebagaimana dengan tujuan dari SDGs yaitu pendidikan yang berkualitas, konsumsi dan produksi yang bertanggungjawab serta aksi melawan perubahan iklim. Secara keseluruhan, pengabdian ini berhasil menanamkan semangat cinta lingkungan pada siswa sejak dulu. Kegiatan ini tidak hanya bermanfaat bagi siswa, tetapi juga berkontribusi pada upaya pelestarian lingkungan. Melalui kegiatan ini, diharapkan siswa dapat menjadi agen perubahan dan mengajak lingkungan sekitar untuk turut serta dalam menjaga kelestarian lingkungan.

Kata Kunci: Karakter, Pendidikan, Lingkungan, Daur Ulang, Sampah, Kelestarian.

ABSTRACT

This community service aims to instill awareness of the importance of protecting the environment in grade 5 students of SD Islamiyah 1, Ternate City, through plastic waste recycling activities. This activity involves providing material on waste management, waste sorting practices, and making accessories from plastic waste. The results showed a significant increase in students' knowledge about garbage and their skills in recycling. Students enthusiastically participated in the activities and succeeded in creating valuable products from waste that was previously considered useless. This not only increases students' knowledge and skills, but also fosters an attitude of caring for the environment. This activity is in line with the independent learning curriculum, which emphasizes character development and student independence. By integrating waste management into the curriculum, schools can create a learning environment that supports environmentally friendly living habits. As with the goals of the SDGs, namely quality education, responsible consumption and production, and action against climate change. Overall, this study succeeded in instilling a spirit of love for the environment in students from an

early age. This activity is not only beneficial for students but also contributes to environmental conservation efforts. Through this activity, it is hoped that students can become agents of change and invite the surrounding environment to participate in preserving the environment.

Keywords: *Character, Education, Environment, Recycling, Waste, Sustainability.*

PENDAHULUAN

Community service is an activity that provides an opportunity for lecturers to help the community or a certain group of people through empowerment without expecting anything in return. Community service is one of the missions of Higher Education, which is part of the Tri Dharma of Higher Education, namely Education, Research, and Community Service. One form of community service is providing knowledge that can be utilized by counseling participants. To provide this knowledge, a community service was held with the theme of Waste Education for Students at SD Islamiyah 1 Kota Ternate. This theme was chosen so that students gain increased knowledge about waste, types of waste, and an explanation of sorting waste at school and home.

The Geography Education study program at Khairun University takes on the role of a speaker who transfers knowledge to students. It is hoped that students can learn about waste and sort waste before throwing it away. This community service activity is expected to be able to solve the problems faced by schools because students cannot yet distinguish between types of waste, and sometimes still litter, and also do not maintain their own cleanliness. One of the Tri Dharma activities of Higher Education is Community Service. Community service is an activity carried out by lecturers at a university that aims to help the community or a certain group of people through empowerment without expecting anything in return. One form of community service is providing knowledge that can be utilized by training participants.

Plastic waste has become a serious global problem. In Indonesia, the amount of plastic waste continues to increase every year. Data from the Ministry of Environment and Forestry (KLHK) shows that in 2021, Indonesia produced 27.7 million tons of plastic waste. Of that amount, only 3.6 percent was recycled, 7.6 percent was processed into compost, and the rest was dumped in landfills (TPA), burned, or polluted the sea. The accumulation of plastic waste has fatal consequences for the environment. Plastic waste that pollutes the sea can endanger marine life and disrupt the ecosystem. On land, plastic waste can clog waterways, cause flooding, and pollute the soil. Therefore, efforts to reduce plastic waste need to be carried out sustainably. One effective way is to instill a love for the environment in children from

an early age. Instilling a love for the environment in elementary school students to recycle plastic waste has many benefits, both for the environment and for the students themselves. From an environmental perspective, it can reduce the amount of plastic waste, save natural resources, and reduce pollution. The benefits for students include increasing environmental awareness, developing new skills, increasing self-confidence, and forming good character.

Good and responsible waste management must be an integral part of character education at all levels of education. Schools have an important role in ensuring an organized, environmentally friendly, and educational waste management system for students. Each level of education needs to formulate the right strategy to instill waste management knowledge and skills in its students. This aims to ensure that the younger generation understands how to manage waste wisely and creatively, for the sake of environmental sustainability (Homaidy & Aulia, 2023). The concept of waste management in schools is in line with the independent learning curriculum, the latest curriculum that emphasizes character development and student independence. By integrating waste management into the curriculum, schools can create a conducive learning environment for students to adopt environmentally friendly and responsible living habits (Directorate of Elementary Schools, 2024).

Elementary school students are the right age group to instill a sense of love for the environment. At this age, children are still easy to learn and receive new information. In addition, they also have a high curiosity and enjoy trying new things. One activity that can be done to instill a sense of love for the environment in elementary school students is to teach them about recycling plastic waste. (Harlistyarintica, et al., 2017). Recycling plastic waste is the process of converting plastic waste into new, useful products. By teaching elementary school students about recycling plastic waste, they will learn about the importance of protecting the environment and how they can contribute to these efforts. In addition, they will also learn about new skills that can be useful for them in the future.

METHODS

This community service activity was carried out at Islamic Elementary School 1, Ternate City, with 26 class 5 (five) students as participants. The materials and tools used were straws, candles, matches, scissors, needles, and threads. This community service began by giving a pre-test to students. Furthermore, the speaker provided material about the environment and its relationship to waste. Students were asked to sort waste to facilitate waste management. Then, demonstrate how to make accessories

from used straws to students. After demonstrating, students in groups worked on making accessories from used straws and were accompanied by the speakers. At the end of the implementation, students were given a post-test to find out whether there was an increase in knowledge.

The method used in this training directly and actively involves students. This method is used to provide direct experience to students in managing plastic waste around them, starting from selecting waste that will be used as a tool, to the process of producing accessories that have economic value. The use of this method is expected to place students as the main focus of devotion and involve the participation of students as part of the planning, selection, implementation, and evaluation of the stages of character formation and a "zero waste" lifestyle as part of today's lifestyle that is oriented towards love for the environment and all ecosystems in it.

This activity involves the participation of activity partners from start to finish and as a coordination function with partner schools, namely the Principal of SD Islamiyah 1 Ternate City, and teachers who actively involve themselves and participate actively and enthusiastically during the activity. The research method in this activity directly involves stakeholders to be involved and makes students the main target in the concept of character formation and an environmentally friendly lifestyle by continuing to adjust and integrate with the Merdeka Curriculum, especially in developing environmentally friendly behavior that is in accordance with the needs of students at the Elementary School level.

DISCUSSION

1. Community Service To Continue To Spread Environmentally Friendly Behavior

One of the activities of the Tri Dharma of Higher Education is Community Service. This community service is real evidence of the existence of a university through an activity carried out by lecturers at a university with the aim of helping the community or a group of people by providing materials, theories, and practices, and empowering the community so that they can be useful for development and contribute significantly to the community. Waste management initiated by the Geography Education of Khairun Ternate University is a form of community service, especially for students at SD Islamiyah 1 Ternate City, namely providing knowledge related to waste management that can be utilized and has economic value by training participants.

This series of waste management training activities provides knowledge and skills to manage plastic waste into accessories, so in this activity, a community service was held with the theme of Straw

Waste Recycling Training at SD Islamiyah 1 Ternate City School. This theme was chosen because it is in accordance with the abilities of the students who are the goal of this activity, so that they can gain skills in making accessories from used straws and become useful and aesthetic items and can be used by students as accessories that can be used every day. With this activity, the level of creativity of students in recycling waste is getting better and can even be transformed into a work of art.

The Geography Education study program of Khairun University, through the role of its lecturers, takes on the role of speakers and trainers who always provide and transfer knowledge to students. Plastic straw waste in the Ternate City environment is a shared task to be able to process and decompose this waste because plastic straw waste is difficult to decompose naturally, which has the potential to be the main cause of environmental damage in Ternate City. The selection of Elementary Schools as the main focus of this activity is because students at the Elementary School level still have characteristics that like to play, move, and work in groups, and like to imitate and demonstrate something through direct involvement. It is hoped that through this activity, students can find out basic information about waste, recycling, and skills in making accessories from straw waste. This community service activity is expected to transfer the skills of speakers to students in recycling waste, and students can sort waste before being thrown into the trash into organic and inorganic waste, which can be reused.

Plastic waste has become a serious global problem. In Indonesia, the amount of plastic waste continues to increase every year. Data from the Ministry of Environment and Forestry (KLHK) shows that in 2021, Indonesia produced 27.7 million tons of plastic waste. Of that amount, only 3.6 percent was recycled, 7.6 percent was processed into compost, and the rest was dumped in landfills (TPA), burned, or polluted the sea. The accumulation of plastic waste has fatal consequences for the environment. Plastic waste that pollutes the sea can harm marine life and disrupt the ecosystem. On land, plastic waste can clog waterways, cause flooding, and pollute the soil. Therefore, efforts to reduce plastic waste need to be carried out sustainably. One effective way is to instill a love for the environment in children from an early age.

Instilling a sense of love for the environment in elementary school students to recycle plastic waste has many benefits, both for the environment and for the students themselves. From an environmental perspective, it can reduce the amount of plastic waste, save natural resources, and reduce pollution. The benefits for students include increasing environmental awareness, developing new skills, increasing self-confidence, and forming good character. Character is a basic value that builds a person's

personality, which is formed through the process and influence of the environment and is manifested in attitudes and behaviors in everyday life (Samani, 2012).

Good and responsible waste management must be an integral part of character education at all levels of education. Schools have an important role in ensuring an organized, environmentally friendly, and educational waste management system for students. Each level of education needs to formulate the right strategy to instill waste management knowledge and skills in its students. This aims to ensure that the younger generation understands how to manage waste wisely and creatively, for the sake of environmental sustainability (Homaidy & Aulia, 2023).

The concept of waste management in schools is in line with the independent learning curriculum, the latest curriculum that emphasizes character development and student independence. By integrating waste management into the curriculum, schools can create a conducive learning environment for students to implement environmentally friendly and responsible living habits (Directorate of Elementary Schools, 2024).



Figure 1. Student Completing Test Question

Elementary school students are the right age group to instill a sense of love for the environment. At this age, children are still easy to learn and receive new information. In addition, they also have a high curiosity and enjoy trying new things. One activity that can be done to instill a sense of love for the environment in elementary school students is to teach them about recycling plastic waste. (Harlistyarintica, et al., 2017). Recycling plastic waste is the process of converting plastic waste into new, useful products. By teaching elementary school students about recycling plastic waste, they will learn about the importance of protecting the environment and how they can contribute to these efforts. In addition, they will also learn about new skills that can be useful for them in the future.

This community service activity began with a pre-test for students to determine the level of knowledge of students regarding waste management and environmental behavior. The following are

some examples of data and documentation that describe the activities carried out during the implementation of the plastic straw waste management program at SD Islamiyah 1, Ternate City.

The main program of this activity is the provision and delivery of material on plastic straw waste management to students. The provision of this material is carried out as a form of awareness of inorganic waste that can disrupt and damage soil fertility. Even if burned, this waste will cause air pollution. Waste that is included in the inorganic category, such as beverage cans, plastic bags, plastic straws, and so on. In addition, students are also taught basic knowledge about other types of waste, such as organic waste and B3 waste containing hazardous or toxic materials whose nature and concentration can damage and pollute the environment both directly and indirectly. This community service program is a form of environmental education, which is a real attitude and action, and has a positive impact on the surrounding environment and efforts that can be made to continue to maintain, improve, and repair the surrounding nature and the earth's ecosystem.



Figure 2. Presentation About Waste

2. Environmental Education That Has Economic and Social Impacts

The increasing volume of waste, especially plastic waste, requires a more appropriate management method, one of which is through recycling activities. This recycling training activity is one way to increase students' knowledge and awareness of managing waste and to develop creativity. Some things that can support this activity include student motivation that makes this learning a process of experience to add new knowledge, improve skills, and a means to eliminate boredom in the classroom so that it is not monotonous (Sulistiyani, 2022).



Figure 3. Waste Sorting by Student



Figure 4. Benefits of Recycling Waste

Figure 5. Tools and Materials

Training on recycling and utilization of waste straws into accessories is a recycling activity by reprocessing waste or disposable products into new, useful products. The benefits obtained from this recycling activity include reducing land and space in the landfill, so that the accumulation and pile of waste in the landfill can be minimized. The materials and equipment provided during this activity are quite easy to find because they are items that are close to daily activities, including used straws, scissors, candles, matches, needles, threads, and used plastic containers.

This activity is also very useful for students to be able to train and get used to managing waste properly and optimally, and raise awareness to reduce the risks and impacts of plastic waste. The sustainability of the activities and student involvement in this activity is also one of the reuse of inorganic waste to become craft materials from waste such as plastic from bags, tablecloths from recycled plastic, and accessories.



Figure 6. Accessoris Making by Student

Plastic recycling is an effort to manage and use used plastic so that it can have economic value for the community, can be reused, and processed into objects or goods that are useful for the surrounding environment. This action also aims to reduce and overcome environmental pollution and damage. Plastic waste, which is one of the solid wastes produced by the community, is very dangerous for the environment because this plastic does not rot easily and is difficult to decompose by the soil (Nofiyanti, 2020). Therefore, its handling must go through the 3R program (Reuse, Recycle, and Reduce) as carried out by students in managing plastic waste into objects that can be reused.



Figure 7. Student With Accessories That Have Been Produced

Plastic waste management is also creative and innovative, and useful for dealing with the problem of plastic waste that usually ends up in landfills or in the ocean. This activity has a sustainable impact because it can help drive the local economy and increase awareness of the environment, and produce environmentally friendly products. There are several obstacles to being able to continue to realize the spirit and ideals of this environment, one of which is the importance of awareness and desire to be

involved from various parties such as government, industry and society regarding the importance of the benefits of effective and efficient plastic waste management, attractive design and more contemporary marketing in accordance with increasingly advanced technological developments.

The process of education and character building of students is a continuous and never-ending task that has been going on since humans began to know life in their surroundings and began to realize the importance of the ability to synergize and collaborate in preserving nature and the environment (Liyun, 136-137). One of the characteristics that must be developed is a love for the environment and efforts to preserve it. This activity shows that the formation of environmentally conscious characters in children is the first step in preparing a generation that is aware of and loves the environment. The community service activities conducted at Islamic Elementary School 1, Ternate City, are supported by teachers. This is evident in the teachers who provide materials and provide trash bins appropriate to the type of waste. Furthermore, the teachers explain and provide examples of how to manage waste into useful items.

CONCLUSION

Based on the results of the implementation of this community service activity, it can be concluded that this activity has been able to increase students' knowledge about the environment and acquire waste recycling skills. The increase in students' knowledge was obtained from the pre-test to post-test scores, which was 25%. In addition, students have recycling skills in making accessories using used straws. This training activity is also a business opportunity that can generate additional income and open up creative job opportunities. Thus, this activity is expected to improve the quality of life, the environment becomes cleaner, and jobs are increasingly available.

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