

Children's Environmental Waste Reduction Education Rawa Simprug IX, South Jakarta, Special Capital Region of Jakarta to Increase Public Awareness of Environmental Issues

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Submitted: March 3rd 2021; Revised: November 16th 2021; Accepted: November 26th 2021

Keywords:

Environmental
Plastic
Reduction
Student

Abstract Education is something that serves as a foundation for humans. As educational activists, we can raise a better generation by conducting teaching activities for the nation's children to hone their academic and non-academic abilities outside formal schools. The large number of students dropping out of school causes non-formal education to have an important role in fostering environmental awareness. This activity aims to foster a sense of concern for environmental knowledge, especially among children in Rawa Simprug IX, South Jakarta, Special Capital Region of (DKI) Jakarta. In addition, it also aims to enhance children's interest in reading from an early age and their understanding of various lessons that have been or have not been obtained in formal schools. This activity was conducted from August 2019 to November 2019. The peak of the event was held on Sunday, November 24, 2019. In this activity, several books could be loaned to children for on-the-spot reading (in the Madani Rubric). The book was carried by a mobile library car from the South Jakarta Administration City Library and Archives Service. There were approximately 30 children of Rawa Simprug IX who took part as the participants in this event. This activities teach children in the Rawa Simprug IX area who need additional education with the help of HMTL (Himpunan Mahasiswa Teknik Lingkungan) and some lecturers from Pertamina University as the teaching staff. The children were also taught about the environment, particularly reducing plastic waste by using drinking bottles. The achievement of this activity is a recycling product made by the target community themselves.

1. INTRODUCTION

Education is essential to be given as early as possible. Apart from being critical, education can also shape character, broaden horizons, understand ethics, and serve as preparation for a career. Non-formal education for children needs to be implemented gradually to increase the level of formal education. One of them is children's interest in reading. The lack of children's interest in reading is a factor that influences their lack of environmental awareness. This is triggered by humans' less concerned behaviour toward their

environment, which causes the condition of the natural environment to deteriorate (Ulhasanah & Goto, 2018). Besides, the quality of the living environment is currently decreasing due to excessive exploitation of nature without regard for the environment's carrying capacity and ecological functions. Children's environmental care behaviour must be instilled continuously through habituation (Adawiah, 2019). Environmental care aspects developed in schools include the habit of maintaining the cleanliness and preservation of the school environment, providing

ISSN 2460-9447 (print), ISSN 2541-5883 (online)

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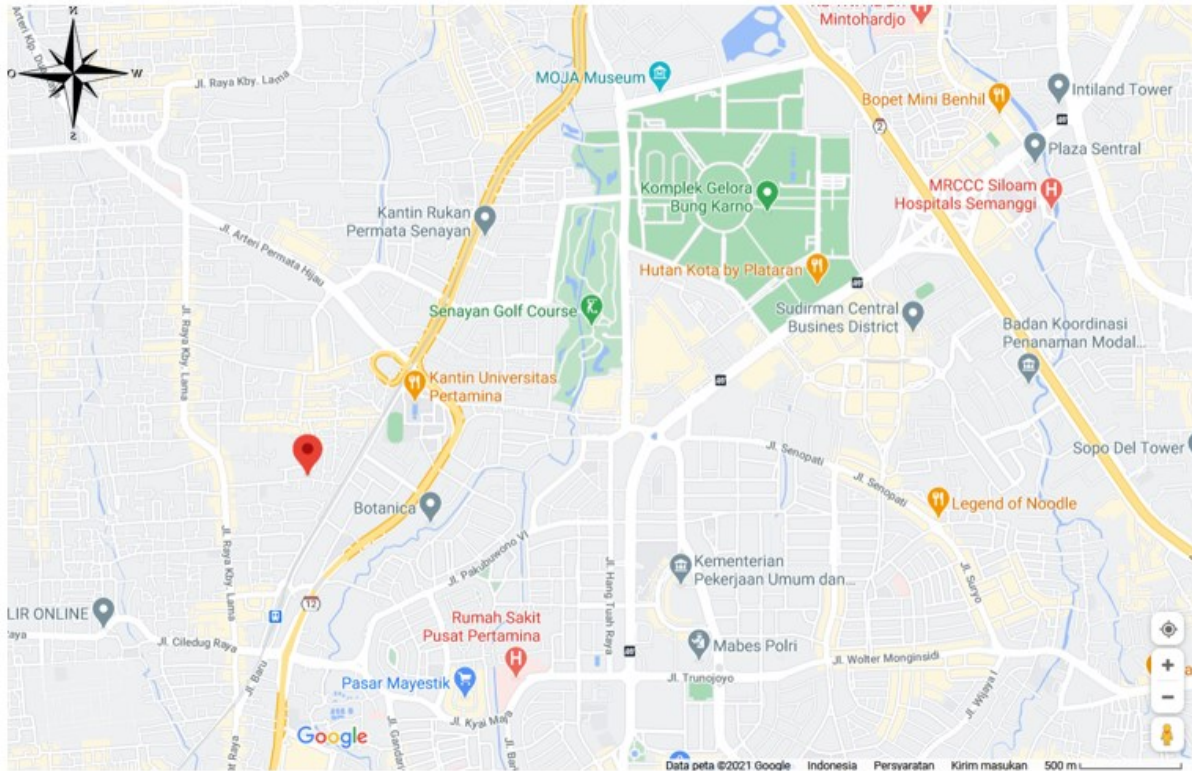


Figure 1. Location of activity implementation

garbage disposal sites, separating organic and inorganic types of waste, providing cleaning equipment, and conducting environmental care programs. One example of people's habits is producing plastic bottle waste (Žukauskienė et al., 2020).

Using tumblers or drinking bottles significantly support the government's campaign in encouraging people to reduce plastic use and switch to refillable beverage containers. This movement will make life healthier and reduce expenses. Children can bring this type of tumblers to school. A tumbler with a capacity of 300–450 milliliters is quite suitable for school children. Children can lessen their environmental impact and gain awareness by using a tumbler as a substitute for a drinking water container. Children who bring their own drinking container when buying food can also save money. Character development involves caring for an important environment that is instilled from an early age. One way to develop this character is through education (Widyaningrum, 2016). An environmentally conscious school will support the emergence of a caring attitude toward the environment. Environmental consciousness may be described as emotional attitudes toward the surroundings that emotionally and conceptually encourage students to admire, fear, and behave extra nicely toward the surroundings (Cui et al., 2015).

The use of plastic food and beverage containers continues to increase. According to data from the Indonesian Plastics Industry Association and the Central Statistics Agency, plastic waste in Indonesia

reaches 64 million tons per year (Mahmud, 2020; Nur et al., 2021). Using a tumbler or drinking bottle that can be used repeatedly can be one way to reduce plastic waste from drinking water packaging. Minimizing the use of plastic bags is certainly not easy and requires a consistent and continuous campaign. On February 21, 2016, the Paid Plastic Bag campaign coincided with National Garbage Day to aim Waste-Free Indonesia 2020 (Khoiruman & Haryanto, 2017). During the campaign's launching, reusable shopping bags were distributed, and a policy regarding plastic bag was imposed. This policy requires customers to pay an additional Rp. 200, if they still want to use plastic bags. For this reason, reusable bags are given to children in this service to reduce plastic waste and save their money.

As educational activists, we can help to raise a better generation by conducting teaching activities for the nation's children to hone their academic and non-academic abilities outside formal schools. Therefore, sharing knowledge, running books, and environmental education are some community service activities conducted by the Environmental Engineering Study Program of Pertamina University in teaching the nation's children. This community service activity aims to deliver knowledge to children about the environment, specifically reducing plastic bottle waste by carrying a tumbler or drinking bottle anywhere and preserving it. Moreover, it also aims to foster a sense of concern for the surrounding community among the members of the Environmental Engineering Study

Program of Pertamina University, particularly in education field.

2. METHOD

The implementation of this program is not only teaching in the academic field but also non-academics such as art. Moreover, there will be a running book available for children to borrow and read on the spot (at Rubric Madani). The book was carried by a mobile library car from the South Jakarta Administration City Library and Archives Service. Besides, children are also given knowledge about the environment and encouraged to reduce plastic waste by bringing drinking bottles. These drinking bottles were distributed to the children for free, with the hope that by using them, they will reduce their usage of plastic waste. The use of paid plastic bags is felt to be detrimental to children. The provision of reusable bags is handled to minimize environmental impact.

This activity was held at Jalan Rawa Simprug IX, RT 09/RW 09, South Grogol, Kebayoran Lama, South Jakarta City. It was routinely held every month from August 2019 to November 2019. The event's peak date is Sunday, November 24, 2019. Each month, 10-3-students participate in this activity.

3. RESULT AND DISCUSSION

This activity is in collaboration with Rubric Madani, one of the non-formal educational institutions for children. This activity teaches children in the Rawa Simprug IX area who need additional education, with volunteers from HMTL UP, lecturers UP, and Rubric Madani administrators. *Figure 2* depicts the documentation of teaching activities by HMTL UP. It is expected that the community will be more concerned about waste and the surrounding environment as well as reduce the amount of waste to the maximum through this socialization. As a society that will continue the advanced generation, we must know the benefits of waste. Organic waste can be used as recycled material, namely as fertilizer for plants, fruit, and others (*Ansari et al., 2020*). Meanwhile, inorganic waste can be recycled into crafts and others. Moreover, residue is non-recyclable waste that must be disposed directly into sanitary landfills (*Liu et al., 2017*). Waste that is not managed properly will cause many problems, such as leachate, greenhouse gases, and an increase in marine debris (*Septiariva & Suryawan, 2021; Suryawan et al., 2021; Yodi et al., 2020*).

Teaching activities are conducted by giving lectures every week. The lecture material is delivered interactively. The material includes an insight of an awareness toward the environment and it is provided by a representative of the HMTL UP. The objectives correspond with Kuntoro's statement that that if non-formal education is seen as community education, the forms, goals, and activities of non-formal education

should touch all dimensions of community life (*Kuntoro, 2006*). It is because the concept of lifelong education emphasizes that all life activities can be interpreted as learning activities. Environmental teaching is the procedure of identifying values and clarifying ideas to increase the competencies and attitudes essential to recognize and compare the connection among human beings, their lifestyle, and the biophysical environment (*Türkoğlu, 2019*). Environmental teaching, which is entirely based on sustainability concepts that concentrate on how humans and nature can coexist in efficient harmony, is a method that permits people to find out environmental issues, take part in fixing those issues, and initiate an act to enhance the environment (*Türkoğlu, 2019*).



Figure 2. Educational activities conducted by HMTL UP

Children are given knowledge about the environment as well as encouraged to reduce the use of plastic waste. Besides, they are also given the examples of negative impact of poor environmental management due to plastic bags and plastic bottles. It requires solid efforts to change people's behavior into pro-environmental by no longer using plastic bags and replacing them with reusable bags. Even if just through non-formal teaching, this program is expected to provide insight into plastic waste reduction which can increase the community's love toward the environment. According to Baro'ah and Qonita, a school that implements no plastic waste program contributes in providing character education for students to love environment (*Baro'ah et al., 2020*). In this program, Students are taught to love their environment by getting used to bring their drinking bottles from home, not buying food and drinks wrapped in plastic, and so on. This program can create a clean school environment to support students' and other school members' physical health. Besides, reducing plastic use has many positive impacts.

At the end of the activity, education on waste recycling was delivered. The Recycled Principle was implemented since items that are no longer useful can

be recycled (Arisona, 2018). Although not all goods can be recycled, there are many informal and home industries that will use the waste for other goods. It was done the committee and participants took a picture together (Figure 3).



Figure 3. Documentation of community service activities

4. CONCLUSION

Besides socialization, there is also waste recycling training, which at the very least can expand the environmental knowledge of children around Rawa Simprug IX, South Jakarta, DKI Jakarta. Environmental knowledge programs that encourage students to love the environment and develop healthy habits can be taught to children so they will apply it in their daily lives as early as possible. School environmental activities, especially those related to plastic waste reduction, are implemented when students are in the school. These activities are expected to develop habits that positively impact students when they are at home and in the community.

ACKNOWLEDGMENT

We would like to send our gratitude to Rubric Madani for the cooperation and opportunity to provide counseling service. This community service is one of Pertamina University's annual Students' Creativity Program (PKM) grants in 2019 (Decree No. 0043/UP-R/SK/II/2020).

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