

# Educational Park of “Sampah Sahabatku” in Growing the Environmental Care of Students SDN 1 Muntang

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**Abstract.** Waste management is an important thing that should be taught from an early age, especially elementary school age, as well as to increase student awareness of the environment. Sampah Sahabatku Educational Park which is located in Muntang, Kemangkong, Purbalingga, Central Java is a public organization that focuses on waste management. One of Sampah Sahabatku Educational Park's partners in waste management education for children is SD Negeri 1 Muntang. The purpose of this research is to find out, study, and describe the role of Sampah Sahabatku Educational Park in increasing the environmental care character of SD Negeri 1 Muntang students. This research uses a descriptive-qualitative approach to data collection methods of observation, interviews, and documentation. The data analysis technique of this research is descriptive-qualitative. Sampah Sahabatku Educational Park provides knowledge on how to dispose, sort, and process waste into saleable goods with the concept of learning while playing. The socialization activities carried out by Sampah Sahabatku Educational Park were able to improve the environmental care character of SD Negeri 1 Muntang students, but continuous and intense education is still needed so that all students are able to manage various types of waste properly. In addition, training is needed to process waste into saleable crafts so that it can become a Projek Penguatan Profil Pelajar Pancasila (P5) program from SD Negeri 1 Muntang.

**Keywords:** sampah sahabatku educational park, waste management, environmental care character, elementary school

## 1. Introduction

The waste management issue is a hot-topic of discussion in public, the complexity of the waste management issue is not only felt by developed countries but also developing countries such as Indonesia—the world’s largest producer of plastic waste after China (Andini et al., 2022) [1]. Waste is the remains of human daily activities or natural processes in solid form that require special management (UU No 18 Tahun 2008) [2]. Waste is a residual substance from the process of ending human activities that is considered useless and undesirable (Ratnasari et al., 2019) [3].

The nonoptimal waste management in Indonesia is caused by two factors, there are the behavior of people who care less about waste and the ineffective waste management implementation system by government so that there is a lot of waste dumped in rivers and seas, or burned and buried in earthen pits (Syarif, Rahmat, et al., 2022) [4]. Waste management is needed to minimize the negative impact of waste on the environment. The benefits of waste management are preventing environmental pollution, maintaining soil fertility, increasing income, keeping the environment clean, preventing floods, reducing pollution, preventing the spread of diseases that arise due to waste accumulation, and increasing creativity.

School as the second home for children is certainly inseparable from the waste problem. In the school environment, waste is generated from student and teacher activities such as food waste, plastic food packaging waste, and paper waste from student learning activities and administrative activities, as well as waste from plants that grow in the school environment. Waste management should be taught from an early age, especially elementary school age, to increase student awareness of the environment.

Waste management at schools can be carried out through collaborating with third parties, such as with educational park. The collaboration with educational park can make students to have different experiences through socialization and waste management training who carried out with the concept of learning while playing. One of the waste management educational parks is Sampah Sahabatku Educational Park which is located in Muntang, Kemangkong, Purbalingga, Central Java. The Sampah Sahabatku Educational Park provides socialization on how to dispose, sort, and process waste into saleable goods.

The research question is “What is the role of the Sampah Sahabatku Educational Park in increasing the environment care character of SD Negeri 1 Muntang students?”. The purpose of this research is to find out, study, and describe the role of Sampah Sahabatku Educational Park in increasing the environmental care character of SD Negeri 1 Muntang students.

The waste bank is a place used to gather waste that has been sorted by type so that it can be processed into objects that have economic value. The waste bank has a role to increase public awareness about the environment through waste gathering activities in exchange for money in order to change the public's paradigm regarding waste (Fitri Arifa et al., 2019) [5]. Environmental concern is an attitude of someone who is not only knowledgeable about the environment, but capable implement it in the will to act, attitudes, and behavior to solve problems that related to the environment (Susilawati et al., 2021) [6]. Indicators of environment concern are disposing waste in its place, cleaning up waste that clogs waterways, maintaining cleanliness and preserving the environment, do not uprooting plants, practicing energy-saving behavior and also making biopore holes in the school environment (Riskina, 2019) [7].

## **2. Research methods**

The approach used in this research is qualitative approach with qualitative descriptive method. Research that use this method is expected to be able to describe the events that occurred in the research descriptively. Qualitative research is research that produces descriptive data or words that can be written or spoken about people or observable behavior (Bogdan dan Tylor in Moleong, 2017:4) [8].

One type of qualitative research is phenomenology. Phenomenology originates from the Greek word "phenomenon" which means "to be seen". According to the Indonesian dictionary, interpreted as something that can be seen with five senses and assessed scientifically. (KBB online accessed April 1, 2023) [9]. Phenomenology is the study of identifying phenomena as an object human experience (Creswell, 2007) [10]. This research consists of three stages, namely the penetration stage, the field work stage, and the data processing stage.

The preparatory stage was carried out to see the initial description and see the research location in order to obtain the necessary data. The research was carried out at the Sampah Sahabatku Educational Park, Muntang, Kemangkon, Purbalingga, Central Java and at SD Negeri 1 Muntang. At this stage, the researchers looked at the environmental conditions of the research through preliminary observations and interviews as a basis for making (the research problem formulation) and determining the research title.

The field work stage was carried out by researchers by preparing supporting infrastructure for research data collection through observation, interviews, and documentation. The interview begins with making interview questions and contacting related parties. The data collection in this research was carried out from the preliminary observations to the end of this research. Researchers conducted observations, interviews, and documentation in order to obtain in-depth data about the research subject. Interviews were conducted with the founder of Sampah Sahabatku Educational Park, school principals, teachers, school caretakers, and students of SD Negeri 1 Muntang.

The data processing stage was carried out by analyzing data, checking the validity, and designing an initial draft of the research results. The data obtained from the interviews were processed into a report on the interviews results. The interviews results were sorted and grouped between answers that were relevant and irrelevant with the research theme which were then compiled in a research report. Researchers consult with supervisor in these three processes, researchers design complete, and systematic research reports. The results of the research report were then reviewed by the supervisor and made improvements.

### **3. Results and Discussion**

The Sampah Sahabatku Educational Park was born out of a concern to see a lot of inorganic waste scattered around the environment. The public is used to disposing of waste by making a waste collection pond behind the house and let the pond is full so that it makes the waste scattered. Another bad habit is when a waste pond is full and then another pond is dug so that the environment in Muntang that is visible is inorganic waste mixed with the soil. The rice fields in Muntang also often encounter waste in the form of disposable baby diapers and packs of instant noodles.

The waste management problem in Muntang raised a question for Roro Hendarti “Are we going to pass this waste on to our children and grandchildren? While plastic waste cannot be decomposed, even if it is decomposed it will take hundreds or even thousands of years, while human age is only a maximum of 60 to 70 years, while 80 years is very rare.” Roro Hendarti, S. Sos. is founder of the Sampah Sahabatku Educational Park, Muntang, Kemangkong, Purbalingga, Central Java. Roro Hendarti thinks that if the waste problem in Muntang is not managed properly it can pollute the environment and will have an impact on unstable weather conditions.

Some time ago it was hail and wind in the area around Muntang. Unstable weather is also marked by an erratic season where we used to know transition but now the season is hard to predict. The rainy season and dry season are increasingly erratic which provides evidence that climate change or global warming is so real. If climate change is not addressed immediately, it will be fatal.

RR. Hendarti conveyed that protecting the earth must be carried out immediately, one of them is by changing the mindset of the people to carry out waste management. The increase in the village population results in more and more waste being produced. Muntang still has a lot of vacant land, but that doesn't mean that people can throw waste anywhere. The problem of waste in the village is not only an environmental problem but also a social problem. Social problems that arise in the public due to the habit of littering is that people who do not have vacant land will throw waste in neighbors' yards, causing conflict.

The Sampah Sahabatku Educational Park was established in 2013 and a Village Decree was issued in 2014. The establishment of the Sampah Sahabatku Educational Park aims to make the public have a waste disposal site that is not only a shelter but also sorting and processing it so that waste can be more useful. The vision of the Sampah Sahabatku Educational Park is "Together with the public, keep the environment clean, sort waste, and process waste so as to increase the economy for the public, improve public health, environmental health".

The Sampah Sahabatku Educational Park began with the establishment of the village library, namely Limbah Pustaka which was established in 2007. Limbah Pustaka contains book waste or used books that are still suitable for use as a source of reading. At first, many people thought that the Sampah Sahabatku Educational Park had nothing to do with Limbah Pustaka, but now they are starting to realize that Sampah Sahabatku is a real action of what has been learned in Limbah Pustaka.

A few years after the founding of Limbah Pustaka, Roro Hendarti had an idea to solve the waste problem in Muntang, which later established the Sampah Sahabatku Educational Park. The Sampah Sahabatku Educational Park is a manifestation of Roro Hendarti's real work as a village official to create programs to realize public welfare. Public once viewed the establishment of the Sampah Sahabatku Educational Park as pessimistic, but gradually the public's awareness of the environment has increased along with the socialization of both the Limbah Pustaka and Sampah Sahabatku programs.

The establishment of the Educational Park began with Roro Hendarti's initiative to invite 10 people who were willing to join and then proceed with coordination with the village government so that they were given a decree. The composition of the management of the Sampah Sahabatku Educational Park is volunteers from the Muntang public, especially Health and PKK cadres. The small number of volunteers in the management of the educational park, but this has not dampened the public enthusiasm where public participation in waste management has been quite good, from those who initially gathered waste then there was increasing awareness to donate waste.

The work program of the Sampah Sahabatku Educational Park is to provide socialization related to waste management which must be carried out continuously. The next program is to routinely dispose, sort, and process waste into crafts, open educational tours for students and colleagues, become resource persons, and try to always coordinate with various parties in waste sorting and management. One of the program implemented results by the Sampah Sahabatku Educational Park is making Muntang a Proclim Village (Climatic Village Program) because one of the evaluation criteria for the program is that the village has carried out waste management activities.

Proklim is a program for villages in an effort to prevent global warming which is related to the program say no to burn waste. Proclim conducted socialization of the movement not to burn waste and this program has been quite successful, although there are still some residents who burn waste. Proclim also provides education which is carried out together with health cadres in terms of health including Posyandu, Eradication of Mosquito larvae, Posbindu, Elderly Posyandu, and Disaster Mitigation.

One of the disaster mitigation programs is to replace woody plants around houses with trees that are not hardy such as banana trees or fruit trees that are short so they do not endanger resident homes. Dissemination of disaster mitigation is carried out before the public builds a house by calling for the construction of a higher house foundation. The construction of high house foundations serves to deal with the flood disaster that has hit Muntang several times.

The achievements of the Sampah Sahabatku Education Park have been quite a lot, this is not only from waste management but also from various sectors such as waste literacy, harmonious family arts, and the National Nugraha Jasa Dharma Pitaloka Award for the category of literacy activists in the public category. In 2023, Sampah Sahabatku Educational Park was also proposed to get the Kalpataru award from Central Java Province and the Ministry of Environment.

The management of the Sampah Sahabatku Educational Park uses personal funding sources supported by invitations from speakers and visits from outside parties. RR. Hendarti tries to invite and set an example for the public to build a village without depending on the Village Fund Program which has not yet covered waste management activities. RR. Hendarti said that if the public is used to being independent, then the public will not experience difficulties in carrying out public activities.

The first hindrance that encountered in the management of the Sampah Sahabatku Educational Park is the lack of human resources because the number of volunteers is very limited. There are few people are willing to become waste bank volunteers because apart from not getting materials, volunteers usually make sacrifices in the form of labor, and even materials. The second hindrance is the lack of personnel in the Information and Technology (IT) sector. The Sampah Sahabatku Educational Park is quite well-known but does not yet have social media. Roro Hendarti hopes that the Sampah Sahabatku Educational Park can publish waste management activities on the YouTube channel and other social media so that its benefits reach more of the wider public.

RR. Hendarti conveyed that the Sampah Sahabatku Educational Park is currently experiencing lack of operational financing. The material constraints they face are actually blamed less because the management is unambitious. Roro Hendarti conveyed that on the other side, the manager is experiencing financial difficulties but there is hope to further advance the Sampah Sahabatku Educational Park by carrying out various activities and providing educational equipment.

The next hindrance experienced is that the public still underestimates the activities carried out by the Sampah Sahabatku Educational Park. The public considers the activities being carried out as if they are adding to activities and costs, even though the waste management activities at the Sampah Sahabatku Educational Park use personal funding that is meant to do not ask for donations from the public. Roro Hendarti said that she did this because she did not expect the Sampah Sahabatku Educational Park to become a burden and an object of ridicule for the public. The Sampah Sahabatku Educational Park as a public service program and strives to continue to be free from political interests.

RR. Hendarti hopes that the Sampah Sahabatku Educational Park will have more adequate infrastructure in sorting and processing waste, Educational Game Tools (EGT), and traditional game tools that can be used both indoors and outdoors with loudspeakers. Another hope is that there will be a commitment from the government, especially the village government, to make waste management as a priority program and quickly followed up until a waste emergency occurs which has already begun with evidence by the presence of waste on the roadside.

Another hope is that there is the same commitment between the central and local governments in waste management so as to motivate the increasing awareness of environmental care in general public. The shared commitment in waste management is expected to create a good relationship between the Sampah Sahabatku Educational Park and the entire public, including the school, so that waste management education can be carried out from an early age. The Sampah Sahabatku Educational Park has collaborated with almost various agencies in Purbalingga, Central Java Province Environmental Service, the Indonesian Ministry of Environment, schools from elementary to high school and also several universities.

The form of collaboration between the Sampah Sahabatku Educational Park and other parties, especially educational institutions, is the socialization of disposing of waste properly and correctly, sorting, and processing waste. The Sampah Sahabatku Educational Park also accepts donations of waste, especially inorganic waste which is processed into more valuable goods. The waste donation received was also in the form of leftover organic waste used as magot feed.

The Sampah Educational Park collaboration was also held at SD Negeri 1 Muntang, Kemangkon, Purbalingga, Central Java. The socialization activity at SD Negeri 1 Muntang was carried out with the concept of learning while playing. Students are given knowledge on how to dispose, sort, process and donate waste. Inorganic waste is turned into valuable goods such as handicrafts, while organic waste is reprocessed into fertilizer and magot feed. The implementation of waste education is usually carried out with limited time, namely during student breaks.

The results of interviews conducted with the subject of teachers and school caretakers explained that prior to the socialization carried out by the Sampah Sahabatku Educational Park, students tended to care less about the environment. Lack of student concern for the environment can be seen from the habit of students who litter. Students often throw waste in the school yard, gutters and desk drawers so that the school environment looks dirty. Students admit that the habit of littering is because they are lazy if they have to carry out class pickets.

Education on waste management at SD Negeri 1 Muntang has shown quite good results, this can be seen from changes in student behavior related to waste. Changes can be seen from the students are used to throwing waste in the places provided, cleaning up trash in the gutters, understanding the consequences of littering, paying more attention to the cleanliness of the school environment, watering the plants in the school yard, and cleaning the grass that disturbs the ornamental plants in the school.

The environmental concern character of the SD Negeri 1 Muntang students is also evident from the start of water and energy-saving behavior. The behavior of saving water is carried out by using enough water and closing the water tap when it is not used. Energy-saving behavior is carried out by students by turning off the lights when they are not in use and going to school by bicycle or walking.

SD Negeri 1 Muntang has also started the activity of sorting organic and inorganic waste which is carried out by the entire public school. Activities that have not been optimally carried out are processing waste into more valuable objects such as handicrafts. This is because there has not been socialization for all students at SDN 1 Muntang because based on the results of interviews with several student informants it turns out that only 1 student took part in the waste processing activity. All informants said that the school environment became cleaner after the socialization of the Sampah Sahabatku Educational Park.

Activities carried out at SD Negeri 1 Muntang were also carried out by Limbah Pustaka. Limbah Pustaka is presented as a mobile library which is used as a routine activity at SD Negeri 1 Muntang. SD Negeri 1 Muntang students are very enthusiastic about the presence of a mobile library because the amount of school literacy is indeed limited. Another activity is the SD Negeri 1 Muntang excursions to the Sampah Sahabatku and Limbah Pustaka.



It is hoped that Sampah Sahabatku Educational Park socialization will continue to the biopore hole creation at SD Negeri 1 Muntang as an effort to prevent floods. SD Negeri 1 Muntang students hope that educational activity on waste management will be carried out more frequently so that students can process various types of waste properly. SD Negeri 1 Muntang teachers and employees also hopes that there will be training on waste processing into saleable crafts so that it can become a school *Projek Penguatan Profil Pelajar Pancasila* (P5) program. Roro Hendarti as the founder of the Sampah Sahabatku Educational Park also hopes that the collaboration with SD Negeri 1 Muntang can run-well.

The results of this research are relevant to the results of research conducted by Irma Fitriani (2021) about the Sampah Sahabatku Educational Park at Muntang, Kemangkon, Purbalingga, Central Java. The research explains that Sampah Sahabatku Educational Park contributes to public empowerment to be active members of the waste bank, sorting waste, and participating in the training held (Irma, 2021) [11]. Another reference that supports the results of this research is that the Sampah Sahabatku Educational Park contributes to increase the environmental awareness of SD Negeri 1 Muntang student that has been conducted by Nurseto (2022). The Nurseto (2022) research explains that socialization carried out by waste bank can increasing environmental awareness of Junior High School and Vocational High School students, attracting students to participate waste gathering, and the waste gathering activities can provide benefits to add pocket money and cash in class (Nurseto, 2022) [12].

#### **4. Conclusion**

Sampah Sahabatku Educational Park activities in Muntang, Kemangkon, Purbalingga, Central Java succeeded in increasing the environmental awareness of the SD Negeri 1 Muntang students. This character improvement can be seen from every day that students carry out pickets both in class and in the school yard independently without being asked. The students' habit who previously threw waste in class, especially in desk drawers, school yards, and in the gutters has also reduced drastically.

The students' habit in cleaning up waste in the gutters has a positive impact on drains that are not clogged so as to minimize the school being affected by the floods that sometimes hit Muntang. Another indicator of environmental concern that can be seen in SD Negeri 1 Muntang students is preserving the environment when students carry out their pickets, they watering plants in the school yard and clean the grass that is disturbing the ornamental plants in the school.

SD Negeri 1 Muntang students have started implementing a water-saving and energy-saving lifestyle. This lifestyle is implemented by saving water use. The behavior of saving water is carried out by using sufficient water and closing the water tap necessary no longer used. Students also implement energy-saving behavior by turning off the lights if its is not used and go to school by bicycle or on foot.

Indicators of environmental concern for making biopore holes in the school environment have not been implemented. The Sampah Sahabatku Educational Park socialization should have been more focus so that students can manage and process waste, care for plants, and save water and energy. The process of increasing the character of environmental concern for SD Negeri 1 Muntang students is carried out in stages so that students do not feel burdened with the implemented programs.

It is hoped that the collaborative activities between Sampah Sahabatku Educational Park and SD Negeri 1 Muntang will continue, especially with the socialization making biopores in schools as an effort to prevent floods. Other education that is expected to be more intense, namely regarding the proper management of various types of waste and the need for training in processing waste into saleable crafts so that it can become a *Projek Penguatan Profil Pelajar Pancasila (P5)* program from SD Negeri 1 Muntang.

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