



Waste Utilization and Creative Economy: Efforts to Build Environmentally Concerned Characters for Students at SDN Nglumber II Kepohbaru Bojonegoro

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Abstract

Increasing the involvement of students in utilizing plastic waste in elementary schools (SD) is a very important thing to do. This paper aims to determine the involvement of students in collecting, sorting, processing, and utilizing waste to support the creative economy program. Instilling awareness of environmental values in all school members is something that must be applied from an early age. There is an effort to encourage students to use both organic and inorganic waste for recycling so that it is more useful. This process cannot be carried out without the role of educators or prospective educators who direct, motivate and practice directly how to process and utilize waste. This study uses a qualitative research approach with interviews, observations, and documentation and uses triangulation techniques to obtain the validity of the data whose purpose is to understand and at the same time explore a real event at the research site. From the results of research on increasing student involvement in utilizing waste, especially plastic waste to support the creative economy, it is highly accepted by all circles in the school environment, especially by students to be directly involved in collecting, sorting, processing, and utilizing waste in the school environment.

Keywords: Waste Utilization; Student Character Development; Creative Economy.

I. Introduction

Human life cannot be separated from the environment. The relationship between humans and the environment sometimes causes problems. Human and environmental problems can be categorized into social and moral dimensions, where human habits can have a positive or negative impact on the environment itself because humans and the environment are intertwined with mutual influence and reciprocity.¹ The existence of human efforts to manage and preserve the environment is part of the way to prevent pollution and environmental damage.

The large population today results in an even greater amount of buried waste so to realize the creation of clean and healthy life for the community, it is necessary to have healthy

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settlements by implementing the 3R guidelines (*reduce, reuse, recycle*).² With public awareness in this case also includes students sorting and managing waste properly, in addition to increasing the quality of personal and environmental health, it also increases and instills an understanding of the creative economy of waste utilization.

Today there is a lot of research on the use of waste to be used as an added power or as a creative economy. Afandi in his research explains that environmental education is very important and related to the world of education because it must be able to educate individuals who are quick to respond and are responsive to every pace of technological development which is certainly appropriate to maintain and preserve nature.³ The research is very good in terms of the use of waste for each individual which is carried out through environmental education. Each individual is taught to have biosphere problems, especially for each student as a member of society to be more aware of environmental problems so that by receiving knowledge and insights gained through environmental education, they can recognize their potential and equip themselves with religious spiritual intelligence, and morals. noble, as well as the skills needed for him both for the community, nation, and state.

Aisa & Pradana, 2018 in their research explained that based on Law No. 18 of 2008 concerning waste management, waste is a form of human daily activities or natural processes itself which can be said to be in the form of solid substances in the form of organic substances and inorganic substances which can then be decomposed or not. decomposed, this study aims to teach students, especially in terms of sorting and processing waste for each individual who is carried out through environmental education is observed from the point of view of environmental balance, health, safety, and environmental pollution. ⁴

The problem of waste is a very important thing to always be raised, this is so that people can realize and care more about the environment as well as preserving nature today and

² Dwiyanto, B. M. (2011). Model Peningkatan Partisipasi Masyarakat dan Penguatan Sinergi dalam Pengelolaan Sampah Perkotaan. *Jurnal Ekonomi Pembangunan*, hlm. 239– 256.

³ Afandi, R. (2013). Integrasi Pendidikan Lingkungan Hidup Melalui Pembelajaran IPS Di Sekolah Dasar Sebagai Alternatif Menciptakan Sekolah Hijau. *Pedagogia*, hlm. 98– 108.

⁴ Aisa, L., Rakhman, S. A., Ashmamillah, D., Fani, D. M., & Pradana, G. A. (2018). “Enviro School” Rumah Edukasi Pemanfaatan Sampah dalam Rangka Mewujudkan Generasi Peduli Lingkungan, hlm. 12.

tomorrow. The habit of caring for the environment and fostering the character of caring for the environment must be instilled from an early age, including in elementary school students. Among the means or containers to be able to increase and instill a concern for the environment is through formal institutions, namely schools. On June 3, (2005) the Ministry of Environment and the Ministry of National Education signed a joint agreement Number: Kep.07/MENLH/06/2005 and Number: 05/VI/KB2005 concerning the Guidance and Development of Environmental Education.

One of the programs of formal education institutions in instilling a caring attitude toward the environment is the Adiwiyata Program whose purpose is to build character and create school residents to take side with the surrounding conditions and be environmentally cultured, the Adiwiyata program is highly recommended to be held in the school environment because of its enormous benefits so that it can help build the character of each student in being responsible as a form of caring for the environment.⁵ There are four business components in achieving the objectives of the adiwiyata program, namely: (1) Environmentally Insight Policies, (2) Environmental-based Curriculum Implementation, (3) Participatory-Based Environmental Activities, (4) Management of Environmentally Friendly Supporting Facilities.⁶

The involvement of students who are also members of the community will be seen when they actively participate in developing their potential through the Adiwiyata school program by utilizing waste which is also economically valuable. In this case, the school directs students to sort waste from organic, and inorganic to hazardous waste. Sorting is also done for waste that has economic value. This process is carried out in addition to instilling and fostering students' character so that they care and love the environment as well as provide knowledge related to the creative economy.

The development of technology and information as well as globalization in addition to having a positive impact also has negative excesses, including problems related to the decline in character values within the scope of society.⁷ Among the government programs

⁵ Desfandi, M., Syiah, U., & Banda, K. (2015). Mewujudkan masyarakat berkarakter peduli lingkungan melalui program adiwiyata, Volume 2 No. (1), hlm. 31–37.

⁶ Paparang, O. E. (2017). Peran Serta Warga Sekolah dalam Melaksanakan Program Adiwiyata Di Sma Negeri 9 Lempake Samarinda, Volume 5 No. (2) hlm. 57.

⁷ Yetri, & Rijal, F. (2017). Penguatan Pendidikan Karakter Berbasis Masyarakat Pada Sekolah Menengah Pertama Negeri (SMPN) di Kabupaten Tulang Bawang Provinsi Lampung, hlm. 267–279.

that instill the value of caring for the environment is the Adiwiyata school. This program involves students in solving problems at school, especially those related to environmental protection and management.⁸

Assistance and direction related to the sorting and utilization of waste will foster awareness and care for the environment. In the activities carried out related to environmental care, more character values will emerge, including religious and disciplined characters. It is very important to instill character from an early age because it is a childhood that determines the basic personality of a person. For this reason, it is necessary to foster care for the environment which can be done through character education that cares for the environment, especially in schools.

Based on the results of observations made by researchers, around the school environment of SDN Nglumber II Kepohbaru Bojonegoro many kinds of waste were found, ranging from organic and inorganic waste that were not separated, the awareness of students to orderly dispose of waste in its place was still not built. The amount of irregular garbage in the school environment has a bad impact, namely reducing the beauty in the school environment and the environment becoming dirty. From these problems the use of waste as an effort to build the character of the students of SDN Nglumber II Kepohbaru Bojonegoro as well as a means of knowledge about the creative economy of waste sorting.

The above conditions are related to waste and the environment, researchers are interested in researching how to develop student character at SDN Nglumber II Kepohbaru Bojonegoro by utilizing waste in the school environment so that it becomes a use value as a form of creative economic learning. Researchers also understand that inorganic waste cannot be decomposed and its volume is increasing all the time. So that there is a need for guidance for students so that students have the expertise and willingness to process inorganic waste and apply their creativity to turn waste that was originally useless into waste that has value.

II. Method

The research approach used in this paper is qualitative, while the researchers used a case study. This type of case study research is a type of research that is tapered based on a

⁸ Syaufina, L., & Wijayanto, H. (2016). Analisis Perilaku Pelajar Terhadap Lingkungan Studi Kasus Pendidikan Menengah di Kabupaten Bogor. hlm. 122-130.

case, event, activity, process, or more based on the time where the researcher has determined and can accumulate complete information data by using various data collection systematics found by researchers. The researcher was fully present at the research location in full and optimally to collect information data using observation, interview, and documentation techniques obtained from participants in the field. The location of research was carried out at SDN Nglumber II Kepohbaru Bojonegoro. There are two categories of data sources in this study, namely primary and secondary. Primary sources are data obtained directly, namely teachers and students, while secondary data sources are data obtained through books and documents. Data collection procedures or techniques in this study were interviews, observation, documentation, audio, and visual materials, reduction was used, data was presented and conclusions were drawn, while to validate data from research results, researchers used triangulation techniques.

III. Main Heading of the Analysis or Results

A. Problems of Waste in the Community

Waste is waste that is not used after the end of a process. Garbage is grouped based on the degree of use. The remnants of human activities originating from various sources, such as markets, shops, restaurants, housing, schools, hospitals, offices, and many others, which are called garbage have so far become problems that have not been resolved.⁹

There are two types of waste, namely organic and inorganic waste, both of which require a touch of different processing and utilization. Organic waste is usually processed or processed by composting. The composting process itself will produce compost which can later be used as fertilizer. Meanwhile, the use of inorganic waste must be recycled so that later it can produce other goods that have use value and can be used, for example, utilizing and converting used packaging from plastic or mineral bottles into flower vases and other types of handicrafts that have economic value.

Although both types of waste are equally important to be changed and processed, what is more, urgent is the use of plastic waste (inorganic waste) whose volume continues to increase every day, if there is no effort from all components, environmental damage due to waste cannot be avoided.

⁹ Suryati. (2014). *Bebas Sampah dari Rumah Cara Bjiak Mengolah Sampah Menjadi Kompos & Pupuk Cair*. Jakarta: Agro Media Pustaka. hlm 5.

Inorganic waste is waste that cannot be decomposed. Inorganic waste is also known as dry waste. This inorganic waste does not rot easily.¹⁰ Various inorganic wastes that are often encountered in our environment are crackle bags, plastic bottles, cans, various used food packaging wrappers, metal scraps, used bottles, plastic-coated paper of various types of rocks, and others.

The natural process of inorganic waste takes a very long time to decompose, there are even some types of materials that will not be able to decompose at any time. The very long decomposition process causes problems, especially the accumulation of inorganic waste piles. Not only that, the volume of waste that continues to accumulate continues to cause problems. Here are some of the negative impacts that can be caused by piles of inorganic and organic waste:¹¹

- a) Garbage piles become a breeding ground for flies that can encourage the transmission of infections, skin diseases, and respiratory disorders
- b) Increased transmission of gastrointestinal infections, cholera, typhoid, dysentery, etc.
- c) Increased dengue fever
- d) High levels of vectors (disease carriers), such as flies, cockroaches, and mice.
- e) Declining public health.
- f) Declining environmental quality.
- g) The decline in environmental aesthetics.
- h) Causing unpleasant odors, dirty, and scattered environment, which of course is not pleasing to the eye.
- i) The country's development is hampered.
- j) Silting of the river due to the absence of waste disposal areas.

The volume of waste that continues to increase and is not handled can cause various problems that arise due to the lack of alternatives and community perspectives on waste

¹⁰ Nilawati (2010) Menyulap Sampah Jadi Kerajinan Cantik. Jakarta: Nobel Edumenia. hlm 4.

¹¹ Suryati. (2014). Bebas Sampah dari Rumah Cara Bjiak Mengolah Sampah Menjadi Kompos & Pupuk Cair. Jakarta: Agro Media Pustaka. Hal 27

management and utilization. Therefore, it is necessary to have a thorough awareness from all walks of life to care about the waste problem. Community participation in terms of waste management and utilization is very important so that the sustainability of a healthy environment is maintained and maintained.

B. Waste Utilization and Management

According to Law No. 18 of 2008 article 1 (5) Waste management is a systematic, comprehensive, and sustainable activity that includes waste reduction and handling. Waste management aims (Law No. 18 of 2008 article 5) to improve public health and environmental quality and to make waste a resource.

Inorganic waste must be utilized and managed properly to a minimum so as not to disturb and threaten public health and environmental sustainability. Wise inorganic waste management, not only for the sake of health but also for the beauty of the environment. Management of inorganic waste includes collection, and transportation, up to the destruction or management of inorganic waste in such a way that inorganic waste does not interfere with public health and the environment. Methods for managing inorganic waste include¹²

1) Waste collection and transportation

Plastic waste collection is the responsibility of each household or industry that produces plastic waste. Therefore, they have to build or provide a special place then from each plastic waste collection point it must be transported to a waste disposal site (TPS) and then to a final shelter (TPA). The mechanism of the system or transportation method for urban areas is the responsibility of the local government which is supported by the role of the millennial generation in the production of plastic waste. Especially in terms of funding. Meanwhile, rural areas in general can be managed by each family, without the need for TPS or TPA. Household plastic waste in rural areas is generally recycled into fertilizer.

2) Destruction and management

¹² Suryanti. (2014). *Bebas Sampah dari Rumah Cara Bjiak Mengolah Sampah Menjadi Kompos & Pupuk Cair*. Jakarta: Agro Media Pustaka. Hal 5

The destruction and/or management of solid waste can be carried out in various ways, including:

- a. Planted (landfill), namely the destruction of plastic waste by making fields on the ground then the plastic waste is inserted and filled with soil.
- b. Incineration, which is destroying plastic waste by burning it in an incinerator.

3) Destruction (*pulverization*)

Several big cities in Indonesia already have plastic waste collection cars. Plastic waste that comes from storage tanks is directly crushed into small pieces so that it is more compact. Crushed plastic waste can be used to accumulate low soil surfaces.

4) Recycling of

Waste that can still be processed, collected, and collected examples are paper, shards of gauze, used bottles, metal, and plastic. This kind of waste can be remade into cardboard, wrapping cardboard, and household appliances made of plastic and glass. But keep in mind that such waste should not be used or exploited again. For example, the papers from the trash are used just like that to wrap snacks or food. This is dangerous for health.

5) Reduce This

The step is carried out by reducing waste products using durable materials or goods, reducing the use of raw materials, carrying out consumable processes, avoiding single-use processes, using products that can be refilled (refilled), and reducing the use of plastic bags.

6) Reuse reusing

used goods without having to process them first, such as reusing packaging or utilizing packaged goods as a place to store something. This can extend the life of the packaging and the time the goods are used before they have to be thrown into the trash.

7) Recycle is

used by processing waste into other useful materials or converting used goods into other things that are more useful and worthy of use, such as changing used packaging from plastic or mineral bottles into flower vases and other types of crafts, recycled paper, compost, brick, and animal feed.

8) Recovery (*Transformation*).

C. Creative Economy Creative

The economy is a concept that is not foreign to us. The concept of the creative economy is one way to realize sustainable and creativity-based economic development. Utilization of unlimited resources includes ideas, talents (talents), and creativity which is one of the economic values. The economic value of products or services in the creative era is no longer determined by raw materials or production systems as in the industrial era, but rather by the use of creativity and the creation of innovations through increasingly developing technological developments. Industry can no longer compete in the global market by relying solely on price or product quality but must compete based on innovation, creativity, and imagination.¹³

According to Howkins in the book (Suryana, 2013: 21) Creative Economy, is creativity that can arise when someone does, says, and makes something new, both in the sense of creating something from something that did not exist before or in the sense of giving something new character. So it can be concluded that the creative economy is an idea and creativity that arises from someone making innovations, not only old discoveries but also discoveries.

Based on the understanding described above, a common thread can be drawn that the creative economy is creativity that arises from the desire (nature) of humans who want to try to develop themselves, different from what already exists, and hone their ability to produce creativity that can be valuable.

Good and proper waste management can not only leave the cleanliness and aesthetics of the environment but also can eliminate or inhibit the proliferation of vectors of various infectious diseases that can harm the health of the millennial generation. This is because

¹³ Purnomo. (2010). *Ekonomi Kreatif*. Hal 6

waste can be used as a source of food, a nest/place to live, and a good medium for the development of living things.

D. Character Development Caring for the Environment

Education and character building is an effort to provide understanding in thinking, appreciation in the form of attitudes, and practice in the form of behavior by the noble values that become their identity, the cultivation of these traits is manifested in interactions with God, with oneself, and with others. Public. The noble values in question include honesty, independence, courtesy, social solidarity, thinking intelligence also includes intellectual attitude and logical thinking.¹⁴

Efforts to instill character are not just teaching what is right and what is wrong, what is allowed and not allowed, but more than that, character education means to instill habits (*habituation*) about which things are good, so that students become cognitive (cognitive) about what is right and wrong, able to feel (affective) good values and accustomed to doing it (psychomotor).

The measure of the success of education and character building is when students can carry out the habits and behave well which they do wherever they are. The process of inculcating character is not like magic that quickly succeeds but requires a process with a long time, constancy, and continuous coaching and direction so that the attitudes and characters taught are firmly embedded in students.

Growing one's awareness and concern for the environment cannot be done instantly, requires a long process and must be continuously formed from an early age, through real activities that are close to everyday life. To instill awareness of the environment, the most strategic step is through education, either formal education or non-formal education. Schools as educational institutions need to instill and develop students' concern for the environment from an early age to form human resources who can wisely utilize their potential in acting to create a conducive, ecological, sustainable, real, and sustainable

¹⁴ Zubaedi. (2011). *Desain Pendidikan Karakter, Konsepsi dan Aplikasi dalam Lembaga Pendidikan*. Jakarta: Kencana. Hal 17

quality, of course, in sympathetic ways. , creative, and innovative by adhering to local cultural values and wisdom.¹⁵

Caring for the environment means participating in preserving the environment as well as possible, this can be done by maintaining, managing, restoring, and preserving the environment. Guidelines that must be considered in environmental care or preservation include: 1) avoiding and saving earth resources from pollution and damage; 2) avoiding actions that can cause pollution, damage health and the environment; 3) making the best use of renewable natural resources (which cannot be replaced); 4) maintain and improve the environment for future generations. Environmental care character education is a form of development of character values.¹⁶

One of the characteristics that must be instilled and developed in the school environment is the character of caring for the environment. Because sensitivity and concern for the environment are noble attitudes and actions that always try to prevent damage to the surrounding natural environment, besides that the character of caring for the environment develops efforts to repair the natural damage that has occurred.

This study aims to provide an understanding to students about the importance of maintaining and preserving the environment wisely and wisely by treating waste by sorting it so that it gets used value as a creative economy by processing waste, especially inorganic waste. This process, at the same time, also instills a caring character toward the environment in the students at SDN Nglumber II Kepohbaru Bojonegoro who incidentally do not yet have an awareness program to preserve the environment through the use of waste for the creative economy.

Among the processes carried out by researchers in providing understanding to students related to the use of waste and the creative economy as an effort to foster environmental care characters are:

First, coordinating and communicating with teachers and the school community to provide education and encourage students to be aware and care about the environment,

¹⁵ Wagiyatun. (2011). Pengaruh Pengetahuan Pencemaran Lingkungan Terhadap Kepedulian Lingkungan Peserta Didik Smp Alam Ar-Ridho Semarang Tahun 2011. Skripsi. Semarang: Fakultas Tarbiyah Institut Agama Islam Negeri Walisongo Semarang, hlm. 32

¹⁶ Zuchdi, (2011). Pendidikan karakter dalam perspektif teori dan praktik. Yogyakarta: UNY Press. hlm. 168

including by utilizing waste by sorting waste, especially inorganic waste such as used bottles, used cans, used plastics, and so on so that they have economic value. In addition, this process also indirectly fosters and instills students who are aware of and care about their environment.

Second, the concrete steps taken by the researcher by looking at the situation and conditions at SDN Nglumber II Kepohbaru Bojonegoro related to the use of waste and the creative economy as an effort to foster and inculcate the character of caring for the environment in students there are several programs that the school academic community must do, including:

- a. Providing environmental campaign counseling with action plans providing information about environmental issues through banners, billboards, wall magazines, and teacher participation in socialization related to environmental care by utilizing waste, especially inorganic waste to become goods of economic value.
- b. Waste Anticipation: action plan by adding trash bins according to their designation, namely separating organic and inorganic waste, this teaches students to be disciplined in disposing of waste according to its place and also to facilitate the process of sorting and recycling.
- c. Waste utilization (recycling): the next action plan is to organize a composter and recycle waste into useful crafts that have economic value as part of cultivating a creative economy while reducing pollution.
- d. Collecting, publishing and even commercializing the work of recycling waste by students and also the school's academic community.

Habituation and inculcation of K3 attitudes towards the school's academic community, the actual steps are to equip cleaning equipment, schedule a joint school environment cleaning picket whose aim is to instill and foster the character of students who are responsible and care about the environment.

IV. Conclusion

Based on the results of research and discussion on the use of waste and the creative economy as an effort to foster environmental care characters for the students of SDN

Nglumber II Kepohbaru Bojonegoro, the following conclusions can be drawn. *First*, there must be the management of waste management, especially inorganic waste so that it can be used as a craft that has economic value, so that in addition to teaching and instilling students with environmentally conscious and caring characters, they can also use waste as a creative economy.

Second, the relationship between waste management and character building is to implement students' religious values to do good and avoid evil by reducing the use of waste and utilizing waste to become useful goods.

Third, involve students in cleaning the school environment, so that with a clean environment teaching and learning activities feel comfortable. In addition, teachers must involve students during the process of utilizing waste that has an economic value such as separating organic waste and inorganic waste and applying penalties in the form of monetary fines to students who dispose of waste improperly, of course, this aims to make students aware of not throwing garbage haphazard.

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