

## **Community Environmental Education Through A Local Knowledge-Based Learning Program On Plastic Waste Management**

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### **Abstract**

The background of the problem in this study is the problem of plastic waste which continues to grow with the increasing population and changes in people's lifestyles. The efforts made in dealing with plastic waste are one of them with activities that can provide environmental awareness education for the community, especially in West Bandung Regency. The purpose of this study is to describe a waste management learning program based on local wisdom in the context of environmental awareness education for the community in Tanimulya Village, West Bandung Regency. This researcher uses qualitative methods, a type of field research with a descriptive method. The data collection techniques used are observation, interview, and documentation techniques. The resource persons or informants in this study were 4 people. In data analysis, 3 stages are used, namely data reduction, data presentation stage, and verification / drawing conclusions. Based on the research, the following findings were obtained: 1) the plastic waste management learning program in Tanimulya Village was carried out first by identifying the learning needs of the community which placed the top priority on learning plastic waste management based on local wisdom, 2) learning plastic waste management based on local wisdom including material on waste sorting, making waste banks, and processing plastic waste become useful items, 3) the results of learning plastic waste management include reducing plastic waste in the community environment of Tanimulya Village, increasing community creativity and productivity in utilizing plastic waste, and increasing environmental awareness of the people of Tanimulya Village, West Bandung Regency..

**Keywords:** Environmental Awareness Education, Community, Plastic Waste Management Learning, Local wisdom

### **Abstrak**

Latar belakang permasalahan dalam penelitian ini adalah permasalahan sampah plastik yang terus bertambah dengan bertambahnya jumlah penduduk dan perubahan pola hidup masyarakat. Upaya-upaya yang dilakukan dalam menangani sampah plastik salah satunya dengan kegiatan yang dapat memberikan pendidikan kesadaran lingkungan hidup bagi masyarakat terutama di Kabupaten Bandung Barat. Tujuan penelitian ini adalah untuk mendeskripsikan program pembelajaran pengelolaan sampah berbasis kearifan lokal dalam rangka pendidikan kesadaran lingkungan hidup bagi masyarakat di Desa Tanimulya Kabupaten Bandung Barat. Penelitian ini menggunakan metode kualitatif, jenis penelitian lapangan dengan metode deskriptif. Teknik pengumpulan data yang digunakan menggunakan teknik Observasi, Wawancara, dan Dokumentasi. Narasumber atau informan dalam penelitian ini berjumlah 4 orang. Dalam analisis data digunakan 3 Tahapan yaitu Reduksi data, Tahap penyajian data, dan verifikasi/penarikan kesimpulan. Berdasarkan penelitian didapat temuan sebagai berikut: 1) program pembelajaran pengelolaan sampah plastik di Desa Tanimulya dilakukan pertama-tama dengan mengidentifikasi kebutuhan belajar masyarakat yang menempatkan prioritas utama pada pembelajaran pengelolaan sampah plastik berbasis kearifan lokal, 2) pembelajaran pengelolaan sampah plastik berbasis kearifan lokal mencakup materi mengenai pemilahan sampah, pembuatan bank sampah, dan pengolahan sampah plastik menjadi barang-barang yang bermanfaat, 3) hasil pembelajaran pengelolaan sampah plastik meliputi berkurangnya sampah plastik di lingkungan masyarakat Desa Tanimulya, peningkatan kreativitas dan produktivitas masyarakat dalam memanfaatkan sampah plastik, dan meningkatnya kesadaran lingkungan hidup masyarakat Desa Tanimulya Kabupaten Bandung Barat.

**Kata kunci:** Pendidikan Kesadaran Lingkungan Hidup, Masyarakat, Pembelajaran Pengelolaan Sampah Plastik, Kearifan lokal

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## **INTRODUCTION**

One of the purposes of community education is to establish a learning society (Hasan & Nurhayati, 2012; Nurhayati, 2021). Environmental awareness education for the community through community learning programs based on local wisdom is a form of community education that plays a significant role in molding the character of the community, including the character of being aware of and caring for the environment. Character conscious of the significance of caring for the environment is an attitude and behavior that always seeks to prevent damage to the surrounding natural environment and develops efforts to repair damage to nature that has already occurred. In addition, environmental education is a program that promotes rational and responsible attitudes and behaviors toward nature and the implementation of sustainable development among the community (Alfan Nugroho, 2022; Widiawati, Barkah, & DS, 2022).

Indonesia has accumulated waste in landfills that is not decomposed and is not managed properly, making the waste problem one of the country's most pressing issues. In fact, if waste is effectively managed, both the environment and economy will benefit. However, in reality, not everyone knows how to effectively manage waste. It is anticipated that environmental education will instill in the community the significance of environmental consciousness. This is crucial because community engagement in problem-solving has a significant impact on the success of community education programs (Jabar & Nurhayati, 2021; Musa, Nurhayati, & Zubaedah, 2022; Nurhayati, Fasa, Panjaitan, Indriyani, & Fadlyansyah, 2020; Suharto et al., 2021).

People's attitudes toward environmental stewardship are anticipated to shift as a result of environmental attitudes and awareness. Current environmental issues are urgent and must be addressed without delay. All facets of society bear responsibility for them. This study aims to analyze a learning program for plastic waste management based on local knowledge as a form of environmental awareness education for the community, particularly in Tanimulya Village, West Bandung Regency, in order to combat the growing plastic waste problem.

### ***The Concept of Environmental Education***

Environmental education is the process of creating a global population that is aware and concerned about the total environment and all related problems, and a society that has the knowledge, skills, attitudes, and behaviors, motivation, and commitment to work together, both individually and collectively, in order to solve current environmental problems and prevent the emergence of new ones (Miranto, 2017). In accordance with this viewpoint, environmental education is a program designed to cultivate in the community a rational and responsible understanding, awareness, attitude, and behavior regarding the mutual influence of the population and the environment on various facets of human life (Alfan Nugroho, 2022).

### ***Plastic Waste***

Indonesia ranks second in the world, behind China, which produces 187.2 million tons of

plastic waste annually. According to data from the Ministry of Environment and Forestry, the amount of plastic waste produced by 100 stores or members of retail entrepreneurs' associations has reached 10.95 million pieces; this amount is equivalent to a plastic bag area of 65.7 hectares (Tanjung, Munthe, Munthe, & Pratama, 2019). Plastic bags are made from nonrenewable chemicals and may be used or discarded. Typically, packaging accounts for the majority of daily plastic waste. Indonesians continue to use plastic frequently in their daily lives. In addition to being inexpensive, plastic is resistant to the elements, lightweight, and rustproof, so it is still used in everyday life (Jubaedah, Rahayu, Nailatunnajah, Safaat, & Mulyawan, 2021).

### ***Local Wisdom***

Local wisdom is a perspective on life and science as well as various life strategies in the form of activities carried out by local communities in response to a variety of problems and in order to meet their needs. Local policy, local wisdom, or local knowledge are common synonyms for "local genius" in foreign languages. The local community implements numerous strategies to preserve its culture (Ulfah Fajarini, 2014). People's responses to changes in the physical and cultural environment constitute local wisdom. Local knowledge is also referred to as the ingrained culture or characteristics of a region or even a hereditary legacy (Istiawati, 2016; Tanjung et al., 2019).

## **METHOD**

This investigation lasted three months, from December 2022 to February 2023. This research employed a qualitative, descriptive approach to fieldwork. This research was conducted in the village of Tanimulya, West Bandung Regency. In-depth interviews, documentation studies, and observations were used to gather information for the research. Mr. A, a community leader, Mrs. E, a PKK cadre, Mrs. L, a community resident, and Mrs. I, a community leader in Tanimulya Village, were interviewed. This study's data processing procedure consists of three steps: data reduction, data review, and data verification or conclusion drawing. Several techniques, such as extending the research period, increasing the number of observations, and triangulation, were employed to ensure the validity of these research results.

## **RESULTS AND DISCUSSIONS**

### ***Plastic Waste Management Learning Program Based on Local Wisdom***

Tanimulya Village is one of the villages in West Bandung Regency, West Java Province, with a total area of 2.43 kilometers squared (0.94 sq mi). Tanimulya Village's demographic condition can be inferred from its total population of 38,364 people. This local wisdom-based plastic waste management learning program consists of waste sorting socialization activities designed to engage the community in the movement to sort household waste, as determined by observations and interviews. So that the waste can be easily recycled. Therefore, the community will recognize the significance of waste sorting. The public is provided with basic information regarding the most common types of

waste, namely organic and inorganic waste.

The next activity in a learning program for plastic waste management based on indigenous knowledge in Tanimulya Village, West Bandung Regency is the establishment of an Independent Community Development Waste Bank. Tanimulya Village residents derive numerous benefits from bank waste. The waste bank also raises awareness about the significance of cleanliness in the area and the dangers of unattended plastic waste.

The third activity, which is part of the learning program for plastic waste management based on local wisdom according to the resource person for Mrs. E, a PKK cadre, is skill training on the use of plastic waste for PKK mothers or residents of small household industries by processing plastic waste into bags, handicrafts, and other biased useful items. resale. PKK cadres obtain additional income from the sale of recycled plastic waste for themselves and for existing organizations or associations. According to Mrs. E, who is one of the most frequent plastic waste depositors at the Bina Masyarakat Mandiri waste bank, before the existence of the Bina Masyarakat Mandiri waste bank, she always discarded her plastic waste; however, after the existence of the Bina Masyarakat Mandiri waste bank, her plastic waste can be used to create a craft that has a resale value.

Based on research findings, the local wisdom-based plastic waste management learning program in Tanimuly Village also raises environmental awareness among community members. Efforts to cultivate environmental consciousness have yielded several indicators of success, including acclimatization to environmental care, as demonstrated by the elimination of plastic waste disposal without sorting and recycling.

#### ***Local Knowledge-Based Waste Management Learning Program Outcomes***

Indicative of the success of this local wisdom-based waste management learning activity is the community's increased awareness of the significance of transforming plastic waste into useful and efficient products. In addition, people are becoming more knowledgeable about waste types, particularly household waste. Every community, including the Head of RW in Tanimulya Village, reacted positively to the establishment of a waste bank because, with this waste bank, residents of Tanimulya Village can begin sorting waste properly and earn additional income. Additionally, the existence of plastic waste recycling skills training activities raises awareness of the significance of reducing plastic waste production. The community can recycle plastic waste in their spare time and on a continuous basis through this organization. People can fill the gaps in their schedules by creating bags, tissue holders, and other items from plastic waste.

#### ***Discussions***

This finding necessitates the participation of all levels of society in managing plastic waste in an effort to reduce plastic accumulation in the Tanimulya Village, West Bandung Regency, community (Septiani, Arianie, Risman, Handayani, & Kawuryan, 2019). Environmental awareness education is required to increase public awareness about not littering; it requires a process beginning

with socializing the impact of waste itself and implementing the role of the community on the environment, let alone discarding long-established local culture or wisdom. This learning program for plastic waste management based on indigenous knowledge in Tanimulya Village, West Bandung Regency, has a significant impact on the management of plastic waste because the community is the primary actor in this waste land issue.

Learning programs that include socialization activities for sorting plastic waste are crucial and should be widely disseminated. Because there are multiple types of plastic that can be recycled and deposited in the Tanimulya Village waste bank. In addition to improving the cleanliness of the environment in Tanimulya Village, the community can earn additional money by depositing sorted plastic waste in the waste bank. This is consistent with the findings of previous research, which indicated that waste banks in Indonesia are a relatively effective alternative to plastic waste management (Suryani, 2014). The enthusiasm and active participation of the community are crucial to the success of this local wisdom-based waste management learning program because it requires innovation and effective marketing following training on the skills of recycling plastic waste into useful and marketable items such as bags, tissue holders, and other crafts. Successful community learning programs must always be based on the community's learning needs and the program's added value in enhancing community welfare (Intadiyah, Nurhayati, & Rukanda, 2021; Mulyati & Nurhayati, 2020; Musa et al., 2022; Nurhayati & Musa, 2020; Suharto et al., 2021)

## **CONCLUSION**

Community environmental awareness education based on local wisdom through a learning program on plastic waste management yields positive results for the sustainability of human life in maintaining and caring for environmental ecosystems, particularly in the public environment. Society's environmental concern plays an active role in realizing human values such as taking care of one another and maintaining the environment so that it can continue to support the balance of nature on Earth. The development of environmental awareness in the society from childhood has a significant impact on their ability to preserve the environment. Society's understanding and habituation is an important step because education provides insight and knowledge about environmental education. Habituation is more than just doing things; it can also shape attitudes and feelings toward environmental issues. The learning program has improved society's environmental awareness through significant way.

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