

# Implementation of Waste Sorting Habits in the Buntet Islamic Boarding School Area

Ivan Chofyan\*, Ina Helena Agustina, Dadan Mukhsin, Diden Rosenda, Muhtadin Yanto, Muhammad Alvianto Kartaatmaja

Universitas Islam Bandung, West Java, Indonesia

\*Correspondance author : [chofyanivan@gmail.com](mailto:chofyanivan@gmail.com)

## Article

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## Abstract

This study aims to explore the implementation of waste-sorting behaviors at Buntet Islamic Boarding School and its surrounding areas. The purpose of this research is to describe the application of waste sorting behaviors in the Buntet Islamic Boarding School region. The approach method used is by collecting data through surveys and field observations, then analyzing the estimated waste generation at the study location, and then analyzing waste sorting. Data collection took place over five days, from February 18 to February 22, 2024, using field surveys and observations. The application of voting habits is an innovative finding to be incorporated into the educational curriculum of an Islamic boarding school to provide a waste solution.

*Keywords:* Buntet-Boarding School; Waste-sorting-habit-implementation; waste

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## Introduction

Buntet Islamic Boarding School was founded in 1750 and is considered one of the oldest Islamic boarding schools in Indonesia. The Buntet Islamic Boarding School has historical significance in the development of Islam and education in Indonesia. The Buntet Islamic Boarding School area should be designated as a cultural heritage site because it has significant historical value in the journey of the nation and state.

The development of educational space in the surrounding area demonstrates the Buntet Islamic Boarding School's swift development. As a result, the surrounding built environment has changed. This development has been accompanied by sporadic growth in business activity. These developments and changes have an impact on waste production in this area (Fatimatuzzahroh *et al.*, 2015).

The increasing population in this area has led to a rise in waste generation, making waste management a critical environmental challenge in the Islamic boarding school region. Waste plays a significant role in environmental issues and must

be addressed effectively. Raising human awareness is the first step in tackling this problem. However, the practice of waste sorting at the source, where waste is initially generated, has not yet become a widespread habit.

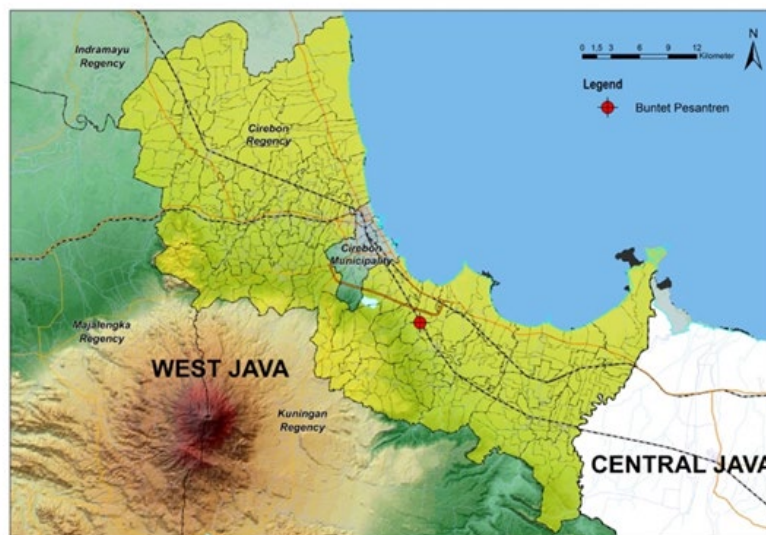
Buntet Islamic Boarding School, a village institution rooted in religious principles, can play a key role in community development by promoting public awareness about waste management. This study aims to explore the implementation of waste-sorting behaviors at Buntet Islamic Boarding School and its surrounding areas. Developing waste sorting habits begins with education. According to Lincoln, character education integrates cultural values and habits that can transform society. Applying cultural values and fostering disciplined habits, such as consistent waste sorting, can cultivate a community that is more conscious of waste management issues.

Studies on waste and environmental issues have been carried out by FatimatuZZahroh *et al.*, (2015) and Khairani & Fauzi (2023), focusing on environmental concerns. However, an analysis of the research topics reveals that no study has specifically addressed waste sorting practices. This research aims to fill that gap by examining waste sorting activities within the educational context of Buntet Islamic Boarding School.

## Method

### Study Context

The research method uses a qualitative research method. The research is being undertaken at the Buntet Islamic Boarding School. This location is in Mertapada Kulon Village, Astanajapura District, Cirebon Regency, West Java Province. Buntet Islamic Boarding School is 14 kilometers from Cirebon City. Islamic boarding schools are scattered throughout 65 places. Its distribution is sporadic. Figure 1 depicts the location of an Islamic boarding school.



*Figure 1. Orientation of the boarding school position within the Cirebon Regency Area*

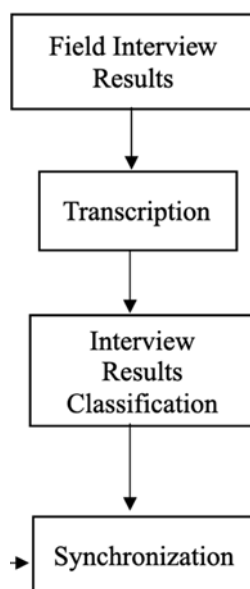
### Data Procedure

Data collection took place over five days, from February 18 to February 22, 2024, using field surveys and observations. The field survey aimed to gather insights into local community waste management practices, conducted through informal conversations recorded with appropriate equipment. Informants were selected using the snowballing technique, which resulted in five participants: two students, two local residents, and one Islamic boarding school manager. Informants were chosen through accidental sampling rather than a predefined population. The interviews focused on participants' perspectives on

waste, common waste management practices, and sorting processes. Observations were conducted on-site to monitor waste management activities, with findings documented through photographs highlighting the observed issues.

### Data Analysis

Data analysis was performed using survey findings in the form of interviews and observations in the form of waste management visualization at the household level. In terms of framework, Figure 2 illustrates the analysis procedure.



*Figure 2. Analytical Framework*

#### Field Interview Results :

Interviews were conducted with all five informants individually. Each interview began with an introduction, followed by questions about the informant's duration of residence in the area and their role within the community. Daily activities were discussed, along with their routines for preparing meals and the types of waste generated from their food. The questions explored their waste-sorting habits, whether waste sorting is practiced at home, boarding houses, or workplaces, and their understanding of waste management. Additional questions addressed their habits regarding the use of designated trash bins, sorting waste, and their knowledge of final waste processing methods.

#### Transcription:

The interview recordings were transcribed verbatim, preserving the narrative shared by each informant. The transcriptions were organized by date and linked to the identity of the corresponding informant. Each transcript was completed in detail. For example:

(TR01) Interviewer: What is your name? Informant: Mansur. Interviewer: How long have you been studying here? Informant: I've been here for five years; I'm originally from Indramayu. Interviewer: How are your school activities? Informant: Very busy, because in addition to routine classes, I have to memorize assignments from the teachers. Interviewer: What about meals? Informant: Meals are partially provided at the rented house, but it's mostly just rice. I buy other food. Interviewer: Is your boarding house far from the school? Informant: No, it's close (pointing to a white-fenced building). Interviewer: Do you sort your daily waste, like paper, plastic, or food waste?

Informant: No, it's all combined since there's only one trash bin available. Interviewer: Do you know that waste should be sorted? Informant: Yes, but it's a bit inconvenient to do so.

### Classification:

The transcriptions (TR01 to TR05) were analyzed and color-coded to categorize the informants' knowledge, understanding, and practices related to waste sorting.

### Synchronization

Statements from the classifications were synchronized using the same color codes. This process allowed the data to be interpreted effectively, focusing on the informants' levels of awareness, understanding, and behavior regarding waste sorting.

## **Results And Discussion**

### **Knowledge, Understanding, and Passion for Waste Sorting**

According to the results of data collection and processing, waste in the Buntet Islamic Boarding School area has not received adequate attention. This is supported by interviews with Santri students as informants, who stated that "garbage is thrown in the rubbish bin and then transported to the waste processing site." After examining the waste processing plant, the findings are illustrated in Figure 3.



*Figure 3. Waste and Temporary Waste Disposal Sites (TPS) in the Buntet Islamic Boarding School Area*

Waste bins are provided near the Islamic boarding school (see Figure 4), along with transportation methods for waste disposal. However, no facilities for waste sorting are currently available. The visual evidence confirms that the provided bins are not designed for waste segregation. Interviews and observations of the existing waste facilities reveal that knowledge and understanding of waste sorting remain underdeveloped. Despite this, both students and the surrounding community express a strong desire for a clean and healthy environment.



**Figure 4.** Waste facilities spread across the Buntet Islamic Boarding School Education Area

The following statements from the interviews illustrate their perspectives on waste disposal:

- TR 01 : "I throw garbage into the provided trash bin, but I never sort it because it's difficult. It's hard because there's only one trash bin available. I do want a cleaner environment."
- TR 02 : "I dispose of garbage in the trash bin, but sorting it is inconvenient because I'm often in a hurry. A clean environment is a necessity."
- TR 03 : "I just use plastic bags to throw trash into the bin. I definitely want a cleaner environment."
- TR 04 : "I often sweep the scattered trash in the yard, but I don't sort it because it's already mixed. Of course, I really want cleanliness."
- TR 05 : "We're frequently reminded to dispose of garbage in the trash bins provided, and sorting bins are available, but it's challenging to make sorting a habit. A clean environment is essential." A clean environment is a crucial component of sustainable human life (Herawati *et al.*, 2024), particularly in educational institutions and rural areas like Buntet Islamic Boarding School. Although rural areas, such as villages dominate the country's landscape, they deserve services equivalent to those available in urban regions to ensure equitable development (Nastain *et al.*, 2024).

### **Stimulation of Behavioral Norms to Foster Waste Sorting Habits**

The concept of personal norms refers to normative variables (Schwartz, 1977), with an emphasis on moral obligation. Several studies have found empirical support for personal norms as environmental awareness intents and behavior in the context of sorting waste (Loan *et al.*, 2017; Matthies *et al.*, 2012; Pakpour *et al.*, 2014; Visschers *et al.*, 2016; Zhang *et al.*, 2019). Besides, it has successfully integrated personal and subjective norms to model various elements of conduct in harmony with the environment (Setiawan *et al.*, 2020; Wall *et al.*, 2007). The theoretical perspective of norm activation refers to personal value orientation (Stern *et al.*, 1993) and sentiments of moral obligation (Schwartz, 1977) as predictors of environmental behavior, including waste sorting (Zhang *et al.*, 2019).

Waste sorting has not yet become a part of their daily habits, as reflected in the following statements:

- TR 01 : "I have sorted waste before, but I often forget to do it."
- TR 02 : "Sorting waste is difficult because there's often no proper place for it, and in daily life, I usually just throw it in the nearest available bin since I'm often in a hurry." These statements highlight that waste sorting requires significant effort, particularly in maintaining consistency.

Waste management behavior corresponds with the natural environment (Albayrak, T., Caber, M., Moutinho, L., & Herstein, 2011). The production of waste can endanger human health and the environment, particularly in underdeveloped nations (Dedinec *et al.*, 2015). There is a need for schemes to incentivize people to reduce negative environmental impacts, as well as research into the causes of environmentally friendly behavior (Pakpour *et al.*, 2014). According to Thøgersen (1996) theory, behavioral harmony with the environment stems from personal moral views and societal pressure, rather than economic factors (Wan *et al.*, 2017).

Waste sorting activities are associated with community knowledge and education (Wang *et al.*, 2021). Motivational variables influence waste sorting. The application of socio-psychology to encourage behavioral changes (Haq *et al.*, 2013), such as changes in how people manage household waste, is likely to have a considerable impact on natural resource conservation (Aji *et al.*, 2021). Waste disposal locations remain an unresolved issue (McCarthy & Liu, 2017). As a result, public awareness and education about waste choices are critical and should be enhanced and implemented on a continuous basis. This principle should also be applied at Buntet Islamic Boarding School.

Lickona (2004) states that character education aligns with cultural values and habits that can change civilization. Indonesia urgently needs upstream waste sorting to support 3R waste volume. Encouraging the intention to sort waste is essential. As a result, it is vital to first investigate the motivation for carrying out waste sorting operations upstream, particularly the elements that favor or obstruct this goal (Halvorsen, 2012). Similarly, waste generated from the Buntet Islamic Boarding School and its surroundings must be sorted.

In order to establish a habitual pattern of waste sorting, education at the Buntet Islamic Boarding School must incorporate sorting activities as an intrinsic element of the learning process. Development of an integrated learning model and environmental materials, including waste sorting, into the development of Islamic environmental-based learning methods, development of curricular activities to increase students' knowledge and awareness about the environment, and implementation of Islamic environmental teachings in eco-Islamic boarding school activities (Aulia *et al.*, 2018). The expansion of eco-Islamic boarding school education to include waste sorting behaviors is a key move in the Buntet Islamic Boarding School Education Area. It is designed not only for students but also for the community.

### **Implementation of Waste Sorting Habits**

Based on the interview transcripts and Section 3.2, it is evident that waste sorting must become a habitual practice. As Lickona (2004) stated, character education integrates cultural values and habits that can transform civilization. Implementing character education focused on waste sorting serves as a starting point for advancing waste management practices and transforming societal behavior.

Indonesia urgently requires upstream waste sorting to support the 3R (Reduce, Reuse, Recycle) principles and to reduce waste volume. Fostering the intention to sort waste is crucial. Therefore, it is important to first examine the motivations for engaging in upstream waste sorting, including the factors that enable or hinder such efforts (Halvorsen, 2012). Similarly, waste generated by the Buntet Islamic Boarding School and its surrounding areas must be sorted effectively.

To establish waste sorting as a habit, educational practices at the Buntet Islamic Boarding School should integrate sorting activities into the learning process. This involves developing an integrated learning model that incorporates environmental education, including waste sorting, into Islamic teaching methods. Curricular activities should aim to increase students' environmental knowledge and awareness while implementing Islamic environmental principles in eco-friendly boarding school activities (Aulia *et al.*, 2018). Expanding eco-Islamic boarding school education to include waste sorting behaviors is a significant step for the Buntet Islamic Boarding School education area. This initiative targets not only students but also the surrounding community, fostering a broader culture of environmental responsibility.

## Conclusions

Based on the research findings described in the results and discussion section, a description of waste sorting practices implemented in the Buntet Islamic Boarding School area is presented. It can be done in three steps: 1. Sharing information and understanding about waste sorting; 2. Providing motivation to develop the habit of sorting waste; 3. Creating habitual patterns through the integration of educational resources, such as eco-boarding schools and waste-sorting programs for students and the community. The aim of this study was to describe the implementation of waste-sorting behaviors in the Buntet Islamic Boarding School area. The findings indicate that while disposing of waste in designated bins is practiced, sorting waste has not yet become a habitual behavior. Based on the results and discussion, the implementation of waste sorting practices in the Buntet Islamic Boarding School area can be summarized in three steps: 1. Sharing information and raising awareness about the importance of waste sorting; 2. Providing motivation to cultivate the habit of sorting waste; 3. Establishing consistent habits by integrating educational resources, such as eco-boarding school programs and waste-sorting initiatives for both students and the surrounding community.

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