

# Waste Management Education with Composting Takakura Home Method

**Muhammad Isradi<sup>1\*</sup>, Heru Andraiko<sup>1</sup>, Hendy Yusman Firdaus<sup>1</sup>, Elhazri Hasdian<sup>1</sup>, Kukuh Mahi Sudrajat<sup>1</sup>, Syafiadi Rizki Abdila<sup>2</sup>, Syafwandi<sup>3</sup>**

<sup>1</sup>Department of Civil Engineering, University of Mercu Buana, Jakarta, Indonesia

<sup>2</sup>Faculty of Engineering, University of Krisnadwipayana, Indonesia

<sup>3</sup>Faculty of Economics and Business- University of Putera Indonesia "YPTK", Padang, Indonesia

Email: [isradi@mercubuana.ac.id](mailto:isradi@mercubuana.ac.id)

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## ABSTRACT

### Keywords:

Waste Management Education, Nature School, Tatakura Home Method, Compost

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### \*Corresponding Author

One of the environmental problems that affect environmental and human health is waste generated from various human activities. Managing and sorting waste based on its type will make it easier to choose the next processing step, which will help reduce it. Sekolah Alam Robbani is one of the educational units with MI level in Jatisampurna Bekasi which has quite a lot of students. This school with the concept of nature in its activities is under the Ministry of Religious Affairs. The purpose of this community service is to promote environmental awareness, waste management education and composting of food waste and management. The method used is by providing material and direct practice of Tatakura Home Method Compost processing procedures. Evaluation and results of activities by dividing students into small groups and this is effective, students are able to prepare the ingredients and what steps in making this compost and are able to practice directly how to make and process Tatakura Home Method compost.

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## INTRODUCTION

Universitas Mercu Buana has an active commitment in the implementation of the Tri Dharma Perguruan Tinggi, one of the pillars of which is the implementation of Community Service activities (Biro Penelitian Pengabdian Masyarakat dan Publikasi, 2021). In implementing this commitment, the Community Service (PkM) activities organized by Universitas Mercu Buana are always strived to be oriented towards solving the problems faced, especially for lecturers and students who have entered the final stage of their studies. (Isradi et al., 2022).

Sekolah Alam Robbani is one of the educational units with MI level in Jatisampurna Bekasi which has quite a lot of students. Before completing their studies at this school, students are given briefings and education on how to manage waste properly, especially food waste and sorting waste according to its type and this is the purpose of this community service activity.

Successfully developing proper waste disposal behavior must begin at an early age, it is very important to instill the habit of disposing of waste in its place from an early age (Sitompul et al., 2022). Waste management is an important concern by the government as outlined in the Law of the Republic of Indonesia Number 18 of 2008 concerning Waste Management, where waste is the residue of daily human activities and / or natural processes in the form of solid (Andayani et al., 2022).

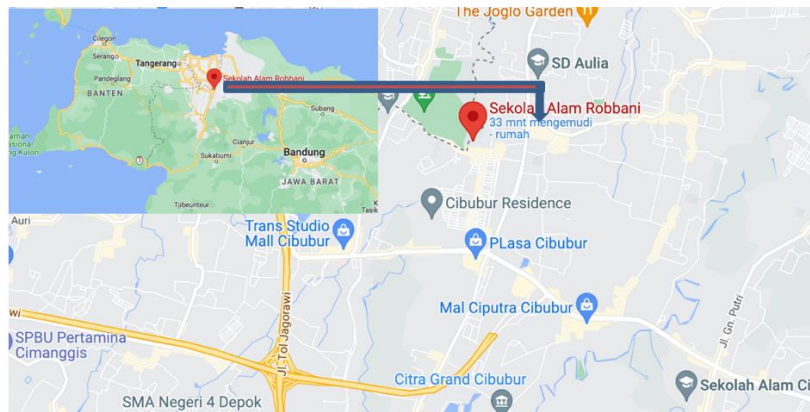
One of the reasons why littering continues to be a habit is people's lack of understanding about environmental management. There is a need to educate people of all ages about waste management. Due to the habitual practice, socializing and educating adults and youth about waste in the community is often more challenging. (Adicita et al., 2020). Some of the obstacles found are the lack of knowledge and information to students about sorting and good waste management, so there is a need for education related to this issue to instill knowledge and awareness of the importance of waste management properly and correctly.

The purpose of this community service activity is to improve students' ability to understand waste sorting and management and composting using the Tatakura Home method. Increasing knowledge about waste and its management can be done with various methods and media. Providing an understanding of the impact of waste and proper waste sorting practices will help students understand the importance of waste sorting and 3R activities. This community service is expected to contribute in the form of methods and information about waste sorting and management for Robbani Nature School students. From the understanding that is formed, it is hoped that it can be a reference for students in maintaining and preserving the environment (Hidayat et al., 2019; Isradi et al., 2019).

## **METHOD**

This community service activity was carried out by visiting the Robbani Nature School location. The team worked with students to help gather students at Sekolah Alam Robbani. The initial activity carried out was to clean up around the school. Then socialization and education were carried out to all students present regarding waste and the process of sorting and managing waste into organic and inorganic waste. Furthermore, after the presentation of the material will give some quiz questions with prizes to the students so that the material presented can be understood well. Students are divided into small groups to practice directly the procedure for making compost with the Tatakura Home Method (Hibino, 2023).

The learning media in this activity are in the form of several samples of organic and inorganic waste samples that have been prepared by the presenters team to make it easier for students to understand the material about the definition of waste, the impact of waste generation, types of waste and sorting methods. Implementation of this community service at Sekolah Alam Robbani, Jatisampurna, Bekasi



**Figure 1: Community Service Location**

The activity began by providing theoretical material on the procedures for processing and making compost using the Takakura Home Method Composting Technique (Jiménez-Antillón et al., 2018).



**Figure 2: Takakura Home Method Composting Technique**

The method is used by providing a briefing on the materials to be used for making Takakura Home Method Compost, where all the materials used are food waste or waste that is no longer used (Nuzir et al., 2019). This method can also be used by all groups of people to manage and manage small-scale food waste. The important principles in this management technique are water, air, food waste and microorganisms.

## FINDINGS AND DISCUSSION

The process of making compost with this method uses four (4) steps that are easy and easy to understand by students so that they can be applied at their respective homes.

1. Prepare a compost bin in the form of a used gallon of mineral water that is made hollow for air circulation as a place to place the compost.
2. Make the penampaian water.
3. Provide decomposer media.
4. Mixing the delivery penampaian water with the decomposer media as a composting process.



Figure 3. Tips for the 4-step Takakura Home Method

Hands-on pre-skilled students in the implementation of 4 composting tips.



Figure 4. Use of used mineral water gallons as a compost bin



**Figure 5. Making Media for Compost**

Students participated in this activity with great enthusiasm and there was very good interaction between the speakers and students, and it is hoped that this program will run smoothly and provide a good understanding to Sekolah Alam Robbani students.



**Figure 6. Good Interaction between Presenters and Students**



**Figure 7. Hands-on practice of Takakura Home Composting Method**

The evaluation technique used is to divide students into 5 groups accompanied by students to carry out direct composting with materials and materials that have been prepared by the implementers of community service activities. In these small groups, they made compost using the Takakura Home

method in accordance with the theory and practice that had been given previously.



**Figure 8. Small Group Division for Activity Evaluation**

From the results of the evaluation of this activity, the division of small groups in the direct practice of composting was very effective. Students can easily understand and master this waste management and processing technique, so they are encouraged to make and practice it directly at their respective homes.



**Figure 9. Group Division for Direct Composting**

The school also feels very happy and satisfied with this activity, because it provides a new understanding for its students and indirectly provides an independent attitude to students to be able to practice directly from the results of this activity. And the school feels that this activity is very positive and should be carried out sustainably in the future.



**Figure 10. Group Photo of Sekolah Alam Robbani Students and Teachers**

## CONCLUSION

Community service activities in domestic cooperation are running effectively with the title Waste Management and Sorting Education in the Sekolah Alam Robbani with direct practical activities for making compost using the Takakura Home method. Students have been able to make and directly practice the procedures for making and processing waste, especially food waste to be used as a useful and economically valuable material, namely making Takakura Home Method Compost.

The division of students into small groups makes students understand better what materials will be used and what steps in making this compost. Students are also easier to understand to sort out waste according to its type, be it organic, nonorganic, and toxic waste to be disposed of according to its place.

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