
EDUCATION HOW TO SEPARATE HOUSEHOLD WASTE FOR THE COMMUNITY DEVELOPMENT BASED ON COMMUNITY DEVELOPMENT.

Audyati Gany¹, Novie Theresia Br. Pasaribu¹
Erwani Merry Sartika^{1*}

¹Universitas Kristen Maranatha, Bandung, Indonesia
E-mail: erwani.ms@eng.maranath.edu

Abstrak: Sampah dapat dikatakan sebagai barang sisa atau terbuang yang bila tidak dikelola dengan benar, dapat menimbulkan masalah besar dikemudian hari. Secara alami sampah rumah tangga dan jenis sampah lainnya mempunyai waktu urai yang berbeda, bahkan ada sampah yang dapat dikategorikan dalam kelompok tidak dapat terurai oleh alam. Sampah yang dikelola secara bijak yaitu dengan menggunakan prinsip *Reduce, Reuse, Recycle* dan *Replace*, maka hal yang dianggap sudah terbuang dan tidak bermanfaat ternyata masih dapat menjadi sesuatu yang berarti. Laju timbunan sampah yang cepat, dapat menjadi penyebab timbulnya penyakit, lingkungan dan alam yang rusak serta menimbulkan pemandangan yang tidak nyaman dan bau. Edukasi merupakan suatu tindakan yang diberikan kepada masyarakat agar mereka mempunyai pengetahuan dan kepedulian untuk menjaga lingkungannya. Dalam melakukan edukasi kepada masyarakat, perlu juga diberi motivasi agar masyarakat mempunyai semangat dan gairah. Edukasi yang telah diberikan pada komunitas Kecamatan Sukajadi Bandung, menyebabkan pengetahuan peserta mengalami peningkatan yaitu sebesar 24 %. Keberlanjutan dari edukasi yang sudah diberikan adalah edukasi tentang cara mengkoordinasi sampah terpilah agar dapat menjadi berkah dan dapat menjadi sesuatu yang dapat digunakan dalam fungsi yang berbeda.

Kata Kunci: Edukasi, Pemilahan, Sampah

Abstract: *Garbage can be said as a leftover or wasted goods can cause big problems in the future if it not being managed properly, Naturally, household waste and other types of waste have different decomposition times, and there is even waste that can be categorized as non-biodegradable by nature. Waste that is managed wisely by using the principles of Reduce, Reuse, Replace and Recycling things that are considered wasted and not useful can still be something meaningful. The rapid rate of garbage accumulation can cause some disease, damaging the environment and nature, and cause unpleasant sights and odors. Education is an action that given to the community so they have the knowledge and care to protect the environment. In educating the community, it is also necessary to be motivated so that the community has enthusiasm and passion. The education that has been given to the community of Sukajadi Subdistrict, Bandung, has caused the participants' knowledge to increase by 24%. The continuation of the education that has been given is education on how to coordinate sorted waste so that it can be a blessing and can be something that can be used in different functions.*

Keywords: *Education, Sorting, Garbage*

Pendahuluan

Garbage always produced every day in the household of every family especially in Indonesia, either wet waste or dry waste. Dry waste can be divided into two types, which is biodegradable or non-biodegradable waste such as plastic. Plastic is a major concern at this time, because plastic is hard to decompose, or even cannot be decomposed, so this plastic waste will become a mountain piles of garbage. Arie Mega Prastiwi, in the coverage of 6, 20 January 2016 argued that something terrible was that by 2050, the amount of plastic in the sea could exceed the number of fish in the sea (Prastiwi, 2016), meaning that if every human being on this earth cannot be orderly and disciplined in managing waste, especially plastic waste that is difficult to decompose, then piles of plastic waste will inevitably form everywhere and can even occur at sea, not to mention the disorderly behavior of every citizen in disposing of waste, who prefers to throw or throw garbage into rivers, ditches or ditches. where the water flows, the plastic waste that cannot be decomposed is carried away by the flow of water, which then collects in the sea, which may also kill fish and other animals in the sea.

Stacked waste can also cause disease, because waste consist various types that have different decomposition times (www.p-wec.org, 2017), the details are in Table 1, while the picture can be seen in Figure 1.

Table 1. Decomposition time of various types of waste

Types of waste	Time	Decomposed by nature
Paper		2-5 months
Fruits/vegetables		2 months
Cigarette filters		10 years
Leather shoes		25-40 years old
Plastic		10-20 years
Aluminum cans		80-100 years
Plastic bottles		450 years
Glass bottle		1 million years
Styrofoam		cannot be decomposed by nature

Sumber: www.p-wec.org, 2017



Sumber: www.p-wec.org, 2017

 Figure 1. Time required for Decomposition

With the different time of decomposition for waste material, it will also have an impact on the balance of nature and the environment such as air pollution due to the emergence of gases and unpleasant odors due to rotting garbage, disturbing health because piles of rotting garbage and stagnant water will become mosquito breeding places. and flies that when flying will carry germs, interfere with normal life in the surrounding environment, including plant growth and interfere with aesthetics because piles of garbage are not a beautiful and comfortable sight to enjoy (Aisa et al., 2018).

Lack of awareness and insight of the community in managing their environment in order to keep it neat and clean, is one of the causes of the development of habits which later become living habitats by throwing garbage carelessly with no sense of care and guilt. Education is one of the actions that can be given to the community so that they have a concern for protecting the environment. In educating the community, it is also necessary to be motivated so that the community has the spirit and passion that managing waste in their environment can provide a blessing in itself for those who are diligent and enthusiastic. In addition, this waste management education needs to be taught to various age groups. Because youth, young and adult groups of people are more difficult to educate, especially in an effort to release and dispose of disorderly habits that have been embedded in their lifestyle, it would be better if education about disposing of waste properly and in an orderly manner had been educated to the community at an early age, because the community At an early age who have learned to be orderly, they always remember and have been embedded in their minds to carry out waste disposal activities appropriately and neatly.

Providing education through literacy about the environment, especially about waste management properly and correctly, will be effective if this education is also given to early childhood children, namely elementary school children. The education provided can be done with an introduction to the 3R's waste management, namely: Reduce, Reuse and Recycle, with the aim that these children are accustomed to being orderly in disposing of waste and can be done at home or with their families, so that families can apply cultural messages to manage waste properly and true (Adicita et al., 2020).

Government Regulation of the Republic of Indonesia Number 81 of 2012 stipulates regarding the Management of Household Waste. Waste management is an activity that is carried out systematically, thoroughly and must be sustainable, including the reduction and elimination of waste management, which is managed using the 3R (Reduce, Reuse, Recycle) approach. Reduce means an effort to reduce the use of goods that are difficult to decompose

naturally and are only used once, so that it can reduce the amount of the garbage. Reuse means an effort to reuse by utilizing what was previously declared as waste but not immediately disposed of as garbage because it can be said that it is still fit for use, but is converted or reused for the same function or for other purposes. Recycle means efforts to recycle waste in the category of already wasted and must be removed from the house, but it can still be processed or processed into other goods with different functions. To facilitate the recycling process, waste should be sorted according to its type, so that the collection process becomes easier. For example, sorting plastic waste from paper waste, or sorting vegetable or fruit waste. (Ministry of Public Works, 2010) (Fajrini et al., 2020), even in efforts to manage and reduce landfill waste can be added with Replace, which is an effort made by replacing, the step is to consider wisely in determining the goods to be used, for example by replacing goods that are only disposable with the use of goods that last long enough and can be used repeatedly and use goods made of materials that have environmentally friendly content, one example is the act of replacing using plastic grocery bags when shopping with bags or bags that have been prepared and can be used repeatedly. To be able to manage waste properly and correctly, the community needs to receive education and information about the importance of their role in managing waste in their environment and involve the local community so that they want to play an active role in their environment. it is not an enemy but the waste is processed so that it can be turned into a blessing (Samadikun, 2018).

Community Service is one of the Tri Dharma of Higher Education that must be carried out. The Community Service activities carried out are to provide additional knowledge to the community (Audyati Gany, Erwani Merry Sartika, Daniel Setiadikarunia, Novie Theresia Br. Pasaribu, 2020). The Maranatha Women's Family Association (IKPM) conducts Community Service activities to the community of Sukajadi Subdistrict, Bandung (Figure 2) as one of the Community Service activities, namely in the form of Education on waste sorting and management. In terms of education, IKPM collaborates with the Shining Waste Bank which motivates Education participants to start sorting waste.



Figure 2. Waste Segregation Educational Activities

The activity of educating the community by means of literacy can be interpreted as an effort to provide non-formal education, namely education that is given regularly but not too strict with fixed rules as applicable in schools. Non-formal education is more on educational activities outside of school, by carrying out various community empowerment programs through activities that include skills, community empowerment, youth, women through various programs such as training on the use of waste waste and others (Romadoni et al., 2018).

Method

The educational method used is the Community Organization Community Development Method, which is a method based on community development with approaches or skills intervention models and is a process to maintain a balance between social needs and social welfare resources from a group of people (Arthur Dunham, 1958) (Utami, 2015). The invitation for education participants to participate in this PKM, consists of several stages (see Figure 3):

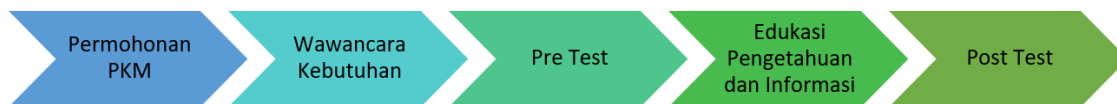


Figure 3. PKM stages

In the early stages, there was a request for Cooperation from Sukajadi District at Maranatha Christian University for waste management activities. Then the second stage, conducted an interview process about the community's need for information on waste management. The third stage, the implementation of PKM with participants getting a Pre Test to find out the extent of the participants' knowledge about the types of waste and how to manage it. The fourth stage, is that participants receive education, knowledge and information about waste in their environment. And the last stage is that participants get a Post Test to find out to what extent participants can receive or understand information and knowledge about waste and its management.

Results and Discussion

This household waste segregation education was attended by 45 participants, but in data processing, the data used were only 36 data, this was due to the incompleteness of the questionnaire data carried out by the participants. The following is a documentation of PKM activities when participants are doing the PreTest and Post Test (see Figure 4).



Figure 4. PKM participants doing the Pre Test and Post Test

The age distribution of PKM participants consisted of 15.6% of participants aged 19-40 years, 46.9% aged 41-50 years and 27.5% of participants aged over 50% (see Figure 5). Meanwhile, the gender distribution of PKM participants consisted of 80.6% female and 19.4% male participants (see Figure 6).

Usia Peserta PKM

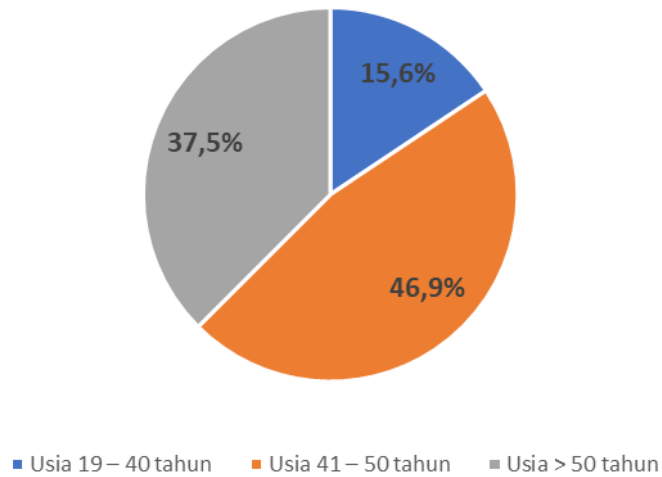


Figure 5. Age Distribution of PKM Participants

Gender Peserta PKM

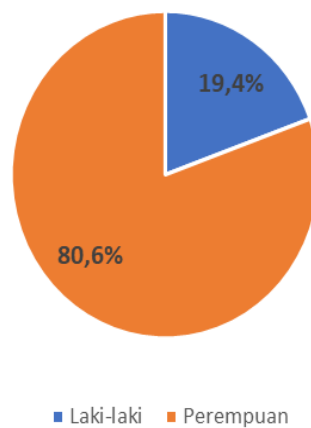


Figure 6. Gender Distribution of PKM Participants

The following is a topic given to each question given to test PKM participants (Table 2).

Table 2. List of Question Topics

Topic	Question
Question-1	Types of Inorganic Waste
Question-2	Exchange of waste to the Waste Bank
Question-3	Reuse
Question-4	Indestructible trash
Question-5	Reduce
Question-6	Recycle
Question-7	Meaning of Garbage
Question-8	Mechanism of depositing waste at the Waste Bank

The percentage of participants' accuracy in answering the questions for the Pre-Test and Post-Test is shown in Figure 7. Overall, almost all of the questions given have increased, except for Question-7 which has decreased.

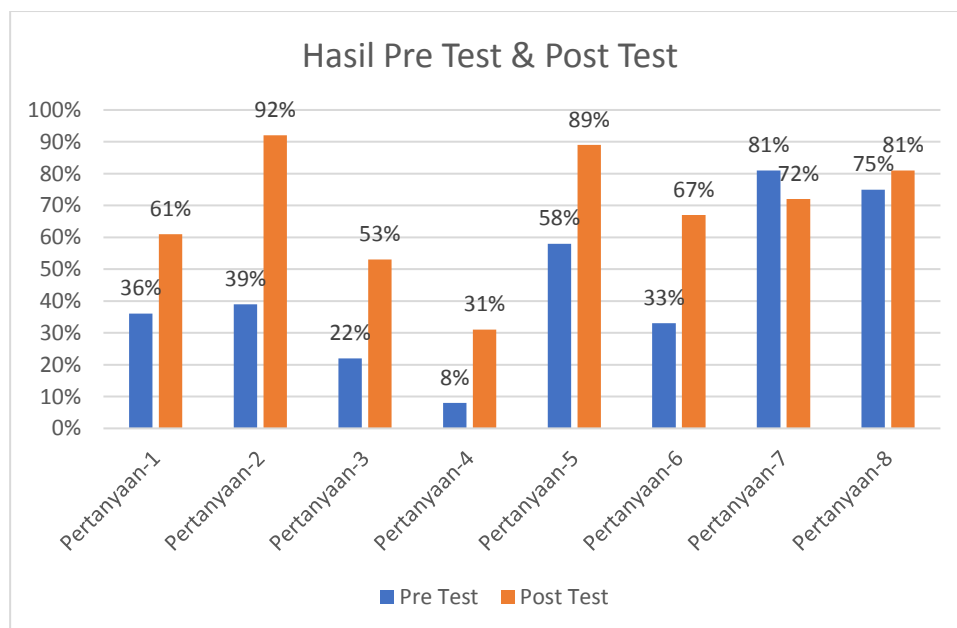


Figure 7. Graph of Participants' Answer Accuracy during Pre Test and Post Test

After education, the increase in knowledge from Question-1 by 25%, Question-2 by 53%, Question-3 by 31%, Question-4 by 23%, Question-5 by 31%, Question-6 by 34%, and Questions -8 by 6% (see Table 3). Overall, participants' knowledge after participating in this educational activity increased by 24%.

Table 3. Increased Knowledge of Pre Test & Post Test Questions

Question	Pre Test	Post Test	Post Test – Pre Test
Question-1	36%	61%	25%
Question-2	39%	92%	53%
Question-3	22%	53%	31%
Question-4	8%	31%	23%
Question-5	58%	89%	31%
Question-6	33%	67%	34%
Question-7	81%	72%	-9%
Question-8	75%	81%	6%
Average			24%

Conclusion

From the data obtained, it can be seen that there is an increase in the knowledge of the Sukajadi Bandung District community about waste management and how to sort household waste and the like so that the waste does not become a problem or a disturbing enemy, but the waste can be processed and reprocessed to become something that brings blessings.

Overall the increase that occurred because of this education was 24%. However, there is a decrease in the level of public knowledge when asked about the "Meaning of Garbage". If viewed positively, people know that waste can be a blessing so that people are motivated to sort waste properly and correctly, which of course can change people's behavior in disposing of waste, although if viewed from the negative side, garbage is still a problem. if the waste is not managed properly and correctly.

For the continuation of this education, then the Sukajadi District community needs to receive education and guidance on how to coordinate the results of the waste that has been sorted so that it can be processed or reused in a different form or function.

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