

Waste Bank-Based Inorganic Waste Management Training To Improve Community Environmental Awareness

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ABSTRACT

This community service program aims to develop community environmental literacy through inorganic waste management activities based on waste banks. Waste Bank is one of the effective solutions in overcoming the accumulation of inorganic waste in the community and manage it into something more useful. There are benefits that can be generated from the management of inorganic waste. In addition, this community service program is encouraged by the low level of community environmental literacy which is shown by the lack of community skills in managing inorganic waste. The method used in the community service program is carried out using the 7D model method with preliminary survey methods, training, mentoring, evaluation, and discussion. The results of community service activities carried out in Pasir Biru Village, Cibiru District, Bandung City went according to plan and obtained a fairly good level of satisfaction from partners.

Keywords: waste bank, environmental literacy, inorganic waste

INTRODUCTION

The development of science and technology has resulted in an increase in human life. In line with the increase in the standard of human life, it is not surprising that human needs in various aspects of life are also experiencing growth. In addition, the more things humans need, the more needs are needed. In this regard, the consumption needed by humans, of course, requires the availability of more and more resources (Harimurti, et al, 2020; Mashami & Aryani, 2021).

In line with this, by increasing people's consumption patterns, this condition is directly proportional to the increase in the amount of waste generated from public consumption activities. In addition, statistical data released by the National Central Bureau of Statistics explains that the increase in the number of human population is also the cause of the increase in the amount of waste. The problem with the increasing number of population and human standard of living is the problem of managing the waste produced (Masdar, et al, 2020). It is undeniable that until now, efforts to manage waste from the results of public consumption have not been optimally carried out by both the government and the community, so the amount of waste in final disposal sites is increasingly worrying (Rantisari, et al, 2022; Hamsa & Sulaiman, 2021)).

In addition, household waste is also a problem that must be solved immediately, considering that the amount of household waste from year to year also shows a fairly high number. The habit of using items that are difficult to recycle, such as plastic and styrofoam, makes the amount of organic waste build up. Meanwhile, in terms of management carried out by households, it is also a problem in itself. Most of the waste produced by household activities is simply thrown into the trash, without any effort to sort or process it (Sari, Hasanuddin & Hibrawan, 2019; Nurhasanah & Listyandini, 2022).

Weak public understanding of how to manage waste is the main reason that causes the accumulation of inorganic waste to become increasingly uncontrollable. The community does not receive intense education about good and correct inorganic waste management. Basically, tackling the accumulation of organic waste in landfills must start from the household, because household activities make a very large contribution from the accumulation of inorganic waste (Ratnaningsih, Setiawan & Siswati, 2021). Therefore, it is important for each party to provide education to the public

about inorganic waste management, so that it can minimize waste or can make the waste into goods that are more useful and even have a selling value (Sekarningrum, Sugandi & Yunita, 2020).

In addition, environmental literacy also needs to be understood by the community so that they will be more selective in using goods and products that are not environmentally friendly. Environmental literacy that is instilled in the community can be a major and important step in helping to preserve nature, especially in minimizing the uncontrolled increase in inorganic waste (Wildawati & Hasnita, 2019). One of the effective steps that can be taken to overcome this is to carry out a waste bank program. Basically a waste bank is a place used by the community to collect waste that has been previously sorted (Ratnah, et al, 2021; Deasy, 2020; Ismawati, 2018).

The results of the sorting of waste which are then stored in the waste bank will be distributed to the craftsmen of used goods, so that the waste can be made into something more useful (Srisantyorini, Salsabila & Wiyasih, 2021). In addition, waste bank managers can also invite the surrounding community to jointly manage the waste so that it can be reused (Solihin, Muljono & Sadono, 2019; Khaira, Hasanah & Hayati, 2020).

Based on this, in this case the researcher sees the urgency for the community to have an understanding of environmental literacy through the creation of a waste bank. On this basis, the researchers will carry out community service activities with the theme "Training for Inorganic Waste Management Based on Waste Banks to Increase Community Environmental Awareness in Cibiru District" as an effort to be able to provide skills and knowledge for the community to have environmental awareness and reduce the amount of inorganic waste and turn it into something more useful.

METHOD

Community empowerment activities through waste bank management in Pasir Biru Village, Cibiru District, Bandung City are carried out using the 7D model developed by Dhamotharan (2009), namely the community empowerment approach starting from giving appreciation to the various potentials possessed by Pasir Biru Village, then the activity is continued with provide encouragement to all community stakeholders in order to increase their potential. The 7D model is structured as follows.

1. Developing relation
2. Discovering capacities
3. Dreaming of community future
4. Diresctions of community actions
5. Designing community actions
6. Delivering planned activities
7. Documenting output, outcomes and learning

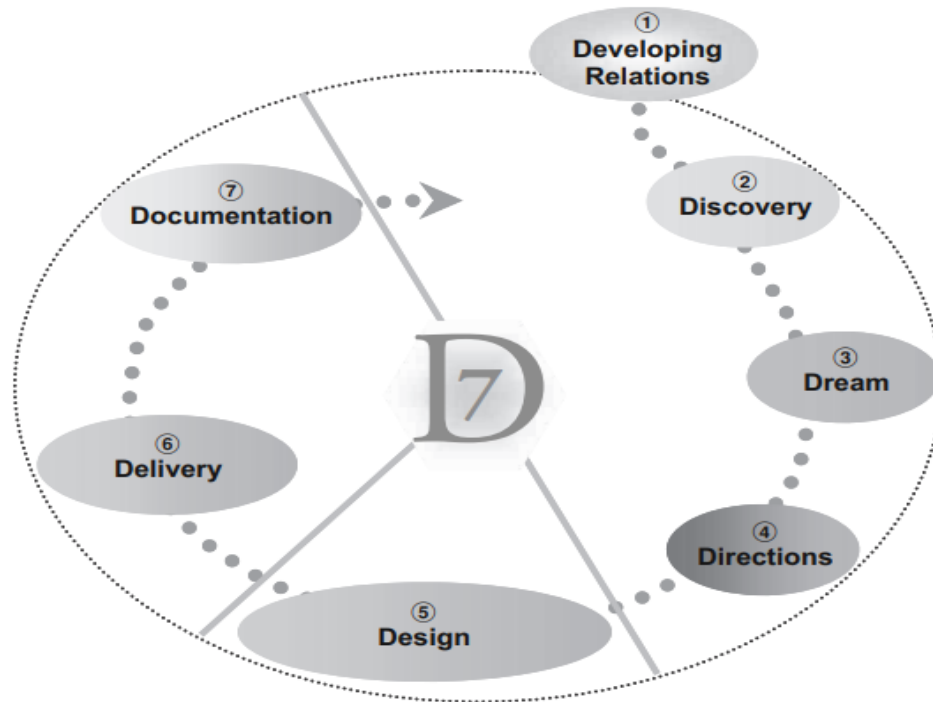


Figure 1. Model of 7D community empowerment (Dharmotharan, 2009)

In addition, this community service program is also supported by several methods starting from a preliminary survey, training, mentoring, monitoring, and evaluation. This is done so that the community service process carried out by the team can run according to a predetermined plan and can achieve optimal results.

RESULTS AND DISCUSSION

This community service program has been successfully implemented in Pasir Biru Village, Cibiru District, Bandung City. There are several findings and results that can be discussed in the community service program. According to the method and model used, the following results are obtained:

Table 1. Application of the community empowerment model

Model 7D	Community empowerment activities
Developing relation	At this stage the team conducted a preliminary study by surveying the location of community service, namely in Pasir Biru Village, Cibiru District, Bandung City, as well as establishing communication with RT and RW heads.
Discovering capacities	In the preliminary study and survey activities, another thing that the community service team also does is discussing with the community, RT and RW about the various potentials possessed by the surrounding community.
Dreaming of community	This stage is also still being carried out at the preliminary study stage, namely by exploring the obstacles and challenges faced by the surrounding community, besides that at this stage the team also equates perceptions with the community in planning community service activities to be carried out.
Directions of community actions	After the team conducted a site survey, the team began to design how the direction and what things would be done in community service activities. This is also done by adjusting the training activities to the needs of the community in Pasir Biru Village, Cibiru District, Bandung City.
Designing community actions	In this stage, the team makes a more detailed design in the form of technical steps for the implementation process of community service activities that will be carried out.
Delivering planned activities	At this stage, the team realized the community service program in accordance with the previously made design. In addition, at this stage the team also provided assistance to the participants in community service activities.
Documenting outputs, outcomes and learning	In this stage, the team documents the activities that are being carried out by the team either using a camera, smartphone or other device. In addition, at this stage the team also distributed questionnaires to ask for public responses about community service activities that had been carried out, so that the team could see the advantages and disadvantages of the programs carried out.

In connection with the description above, the results of the preliminary study found the fact that the community in Pasir Biru Village, Cibiru District, Bandung City experienced several obstacles in community empowerment in developing inorganic waste management based on waste banks,

some of which were the limited understanding of the surrounding community, lack of professional staff to become waste bank managers, as well as inadequate facilities and infrastructure.



Figure 2. Cooperation in the management of inorganic waste with the community

Some of the advantages found in Pasir Biru Village, Cibiru District, Bandung City are that it has optimal potential to develop inorganic waste management. Furthermore, from the results of the preliminary study, the community service team then made a design of empowerment activities that could be carried out in order to improve the quality of the community in Pasir Biru Village, Cibiru District, Bandung City by utilizing inorganic waste management. Some of the activities carried out are educating the public about inorganic waste management. The next stage is to provide assistance and monitoring of the implemented programs. This means that at this stage the service team provides assistance to the community in Pasir Biru Village, Cibiru District, Bandung City to overcome obstacles found in the process of community service activities.



Figure 3. Discussion of waste bank-based inorganic waste management

The next stage is evaluation, the evaluation results obtained from questionnaires given to the people of Pasir Biru Village, Cibiru District, Bandung City show that they are greatly helped by the community service activities carried out. In addition, the community considers that the presence of the program has aroused the interest of the community there to be able to further develop inorganic waste management. The last stage in the series of community service activities is discussion. This is important to do so that communication between the team and the community can be well established and monitor the course of the service program in order to achieve the expected results.

CONCLUSION

The community service activity program with the theme "Training for Inorganic Waste Management Based on Waste Banks to Increase Community Environmental Awareness" has been carried out well and is beneficial for the community as indicated by the results of the feedback questionnaire on partner satisfaction levels in the implementation of community service. In this case the partners gave a positive response (90%) with this service activity. This activity can increase the knowledge and skills of the community in Pasir Biru Village, Cibiru District, Bandung City in developing environmental literacy through waste bank-based inorganic waste management.

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