

EFFORTS TO OVERCOME WASTE ACCUMULATION TO KEEP THE ENVIRONMENT CLEAN

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Keywords

Waste, PAR,
Community Service

Abstract

The public problem is waste management. The production of hamlets is the biggest amount of waste. Waste production in this hamlet continues to increase, but management is not yet running well and in a balanced manner. The accumulated and scattered waste is obtained from various sectors. This community service activity uses the PAR (Participatory Action Research) method. The PAR method is a research or research process that is oriented towards empowerment and change. Community service using the PAR method functions as a learning tool in overcoming problems and fulfilling the practical needs of the community. The realized work program involves the community as participants. So that the implementation of the program does not burden the community, but instead creates conditions that are built in a unity of mutual cooperation as a tradition that has been owned by the community all this time. The realization of the KKN activity program in Jedong Wetan Hamlet, namely counseling and mutual cooperation, Procurement of rubbish bins and warning signs, Utilization of plastic waste. During we underwent the KKKN program in Wotanmas Jedong village, we learned many things. Through this service activity, we can apply the knowledge we gain in college. However, it is not uncommon for being directly in the field to be very different compared to theoretical learning. This is a very valuable experience that we cannot find in lectures.

INTRODUCTION

Apart from teaching and research, universities have the task of realizing community service. Real Work Lectures (KKN) is one of the actualizations of the Tri Dharma of Higher Education, namely community service. This activity is carried out by providing learning and work experiences to students in the context of community empowerment using the PAR (Participatory Action Research) method. It is hoped that this KKN activity will enable students to have experience through direct involvement in society to find, formulate and solve problems. Moreover, as an academic, students have a duty to try to help solve existing problems.

This time the KKN activity took place in Wotanmas Jedong Village, Ngoro District, Mojokerto Regency. This village is at the foot of a mountain with various natural potentials. The location of Wotanmas Jedong Village is also close to an industrial area. It cannot be denied that this village has its own natural resources and human resources, but it is also inseparable from problems that need to be solved and solutions found.

The public problem that is currently becoming a serious concern is related to waste. This includes the people of Wotanmas Jedong Village in general and the residents of Jedong Wetan Hamlet in particular. Therefore, the main target in this service activity is Jedong Wetan Hamlet. Waste production in this hamlet continues to increase, but management is not yet running well and in a balanced manner. The piled up and scattered rubbish comes from various sectors. Waste generated from households occupies the largest position. In addition, there is a lot of MSME waste in this hamlet. Apart from that, plantation residues also contribute to waste.

It is felt that the community's handling of this waste is not good enough. The small number of people who still have enough land are accustomed to burning their rubbish. Meanwhile, residents who do not have the land and time to deal with this rubbish will choose the instant method, namely throwing it into the nearest ditch and river. Such waste management will not solve the problem, it will actually result in various bad impacts. On the other hand, the village government has facilitated a waste management program with the existence of a Final Disposal Site (TPA) belonging to Wotanmas Jedong Village. However, it is felt that the implementation of this program has not been effective.

The main problem is public awareness. They do not yet have awareness of environmental concerns. The embedded mindset is that waste is not a problem, so they do not need to keep the environment clean of waste. So it is not surprising that residents continue to throw rubbish carelessly. Most residents also prefer to throw rubbish directly into ditches and rivers. Ironically,

this bad habit then becomes normal for residents, from the elderly to children. Without even thinking about the piled up and scattered rubbish in the gutter.

Garbage problem This will certainly have a negative impact on the surrounding community. Accumulating rubbish can have an impact on the cleanliness and health of residents. Apart from that, waste that is thrown away carelessly can also cause natural disasters. It doesn't stop there, other problems that will arise from the accumulation of rubbish in rivers will certainly be felt by the environment along the river. Not only Wotanmas Jedong Village, but the surrounding environment will also receive the impact.

Starting from the problem above, there needs to be an effort or program to find a solution to it. The waste produced by the community must be managed well. Concern for waste must be pursued together to create a comfortable and healthy environment.

METHOD

This community service activity uses the PAR (Participatory Action Research) method. PAR method is a research or research process oriented towards empowerment and change. Devotion using the PAR method functions as a learning tool in overcoming problems and meeting the practical needs of society, as well as the production of knowledge¹, and the process of socio-religious change (Afandi, 2022). The goal is to bring about desired changes and improve them. Therefore, to achieve this goal, this research must be carried out with systematic, collaborative and sustainable efforts in order to create social transformation.

Basically, the PAR method is research that involves many relevant parties in researching an action - in this case meaning the problem that is being experienced by society. The PAR method is participatory, which means that a person plays a key role in it and has relevant information about the social system (community) under research and they also actively participate in the design and implementation of actions based on research results. In other words, PAR is “research by, with, and for people” not “research on people”. Participation in PAR is an active process whose initiative is carried out by the community itself and is guided by their own way of thinking by using certain tools, processes and mechanisms that can enforce the monitoring process effectively. Therefore, PAR cannot be separated from the participation of all elements of society. In fact, this is a necessity and absolute (LPPM, 2023).

Society is no longer an object, but society together with students are the subjects of the process. However, both have different roles. The community acts as someone who has determined the problem, continues, plans and carries out the activities that have been prepared.

Meanwhile, students act as motivators, dynamists, facilitators, catalysts and companions of the community in formulating and solving the problems they face. 4 Therefore, students (researchers) and the community together identify problems, plan programs and take action. to resolve these problems. This method consists of 3 stages, including:

1. Preparation

Before carrying out KKN activities, participants must go through several stages. The first step is to register as a prospective IKHAC KKN participant. The requirements that must be completed to become a KKN participant include that the participant must be an undergraduate (S1) student and not lose his rights as an IKHAC Mojokerto student at the time the KKN is held, have completed courses up to semester 6, be physically and mentally healthy. As well as filling in the biodata registration form, passport color photo (red background) measuring 3x4 cm, proof of KKN payment, and other requirements determined by the KKN Implementation Committee.

Next, KKN participants are divided into several groups and then assigned to villages or sub-districts determined by the Committee. Before carrying out KKN-PAR activities, first carry out field observations in the village or sub-district in the district or city concerned. This aims to identify the location of activities and prepare activity needs before implementation.

KKN participants must take part in the briefing stage. In the context of debriefing, DPL and KKN participants were given debriefing and an overview of one of the Community Service methods used by LPPM-IKHAC in the KKN Program, namely the PAR method. Organizing KKN training is an effort to prepare students to be able to carry out KKN effectively and efficiently. Through provision, it is hoped that there will be changes in attitude, mentality, knowledge and skills according to needs during implementing KKN.

The KKN briefing was held for 2 days, namely on 25-26 June 2023. The first day was filled with briefings related to theoretical material. On the second day of briefing, students were assigned to carry out direct practice by analyzing the surrounding environment as an object.

The briefing material includes the following:

- a. Regional conditions, community potential or problems in the community
- b. Code of Conduct
- c. PAR method

- d. Preparation for departure (equipment needed)
- e. Departure and withdrawal techniques
- f. Techniques for preparing individual and group reports

2. Election of coordinator, secretary and treasurer for each Research Mechanism group

Basically, PAR is research that involves many relevant parties in researching an ongoing action (a problem that society is experiencing) in order to change and improve it. Participation in PAR is an active process whose initiative is carried out by the community itself and is guided by their own way of thinking by using certain tools, processes and mechanisms that can enforce the monitoring process effectively. The PAR method involves conducting research to define a problem and applying information into action as a solution to the problem that has been defined. The implementation is by using the PRA (Participatory Rural Appraisal) technique. This PRA prioritizes active participation from the village community itself. The steps that must be taken consist of 11 stages, namely:

- a. Mapping
- b. Transectoral (Transect)
- c. Ranking Chart (Rank Matrix)
- d. History Search (Time line)
- e. Change and Trend Chart (Trend and Change)
- f. Seasonal Calendar (Seasonal Calendar)
- g. Daily Calendar (Daily Routine)
- h. Institutional Relationship Chart (Venn Diagram)
- i. Flow Chart
- j. Semi Structured Interview
- k. Problem and Hope Tree Analysis

3. Action

The implementation of KKN activities was carried out for approximately four weeks starting on Wednesday, 12 July 2023 until Wednesday, 09 August 2023. During this 28 day period, the implementation of KKN activities was carried out in several structured stages. These stages are carried out every week.

The first week is an inculturation process, namely mingling with society to build trust. Students do not just gather with the community at the KKN location, but are also

directly involved in community groups with the aim of finding out their living situation. This process can be carried out by KKN students through religious activities held by residents of Wotanmas Jedong Village.

Apart from that, students must also explore and collect various complete, correct and detailed information regarding the situation and conditions of the village. This stage is important because the data and information obtained from field or regional observations will become material for preparing work programs. This stage is carried out using mapping techniques, transectors, village historical flow, trends and changes, seasonal and daily calendars, traditions, economics, and village development profiles as data to complete the entire series of processes.

The second week is the stage to understand the main problems of the community, namely the residents of Wotanmas Jedong Village. This stage is also called the decodification stage, namely the stage of formulating the social problems that occur. Through the data obtained, students will observe and identify the realities that occur to local residents and then determine the focus of community problems. Determining the main problem is adjusted to the problems faced by the community and the ability to solve them. So the method taken is to discuss with the community through Focus Group Discussions (FGD). This stage goes through the process of Venn diagrams, flow diagrams, analysis of use, power and governance, as well as analysis of problem and hope trees.

The third week is the stage for planning problem-solving actions. This stage depends on the previous process in formulating the problem. Because problem solving must be based on the problem formulation obtained when identifying community problems. After carrying out an in-depth analysis regarding the priority problems taken, KKN students formulate a plan to solve the problem.

The fourth week is the stage for carrying out program actions to solve community problems. The work program to be implemented must be in accordance with the results of the analysis of social problems and the strategic planning that has been designed. Program realization must also pay attention to the potential resources available in the community, so that program implementation does not burden the community. By utilizing this potential, it will actually create conditions that develop in the form of mutual cooperation as a positive tradition of society.

RESULTS AND DISCUSSION

Program implementation means carrying out program actions to solve community problems. After the planning stage of the group activity program, the next step is to realize it. This stage includes the most important part, namely carrying out change actions through these programs. Actions of change that are carried out must have an impact on people's lives gradually, so that evolutionary social change emerges.

Therefore, the program implemented must be in accordance with the results of the analysis and strategic planning that has been formulated. And by paying attention to the potential resources they have. The work program that will be realized involves the community as participants. So that the implementation of the program does not burden the community, but instead creates conditions that are built in a unity of mutual cooperation as a tradition that has been owned by the community all this time. The realization of the KKN activity program in Jedong Wetan Hamlet is as follows.

1. Counseling and mutual cooperation

The information obtained shows that people throw rubbish carelessly because they prefer practical methods. Residents are used to throwing rubbish into rivers and ditches because river water will carry the rubbish away. So it will be easier to throw rubbish in the river compared to joining a village program by paying a monthly fee. This habit is still being carried out because residents have not felt the impact that would occur if the river was blocked by rubbish. Therefore, it is necessary to increase public awareness and concern for environmental cleanliness. With this awareness, people will be able to change their mindset not to litter. The initial program attempted to increase awareness was by conducting outreach to local residents.

Furthermore, the realization of an outreach program to the community is realized by providing education regarding waste. Extension is a series of activities carried out systematically, planned and directed with the active participation of individuals and groups to solve problems by taking into account local social, economic and cultural factors. This outreach program was taken as a form of education regarding waste management for the people of Jedong Wetan Hamlet. The aim is to make people aware of how to dispose of rubbish in its proper place. Because the majority of people still have the mindset that throwing rubbish in the gutter will not have a negative impact.

This outreach program began by inviting local residents not to throw rubbish carelessly, especially in rivers and ditches. This counseling is carried out through

educational outreach to each individual or group. Starting from children to the elderly. Counseling for children is considered important because education about waste management must be provided from an early age. Counseling aimed at children is pursued through outreach to formal and non-formal educational institutions, including schools and the Quran Education Park (TPQ).

Then, education was also carried out to all residents. The target is residents at the RT level as the smallest scope of society. This outreach program was carried out in conjunction with mutual cooperation activities. In this program, KKN students act as facilitators. By inviting all elements of society to actively participate in outreach activities as well as working together to clean up rubbish in the surrounding environment.

In this first program, namely outreach to residents, oriented towards slowly increasing public awareness. As a facilitator, he emphasized material about household waste management, which incidentally is the waste that is mostly produced by residents. This counseling includes exposure to types of waste, its dangers, how to manage waste properly, recycling, and the use of environmentally friendly products. The education program also provides information on sorting organic and inorganic waste.

Furthermore, inorganic waste that is difficult to decompose can be managed through the utilization and recycling stages. The facilitator offers various ways to manage inorganic waste so that it does not accumulate in rivers and ditches. One of the principles promoted is the 3R principle, namely reduce, reuse and recycle.

The outreach and mutual cooperation program is carried out in rotation to every RT in Jedong Wetan Hamlet. This activity was carried out over 3 days, namely on 31 July 2023, 01 August 2023, and 02 August 2023. The facilitator created small forums to present the material. Citizen participation is approximately 10 people every day. Then, it continued with mutual cooperation with the residents to clean up the rubbish. Some places that are the focus of attention for cleaning are in rivers, in the gutters in front of people's houses, and several other public places. These locations have become regular rubbish dumps for residents.

Mutual cooperation activities are a real form of concern for environmental cleanliness. Mutual cooperation has great potential to make people aware of various things. The realized mutual cooperation proves that collective cooperation has a positive impact in maintaining environmental cleanliness and strengthening community ties. Through active participation in this activity, the community is more aware of the

importance of cooperation, togetherness and social responsibility in protecting the environment and improving residential conditions. In addition, mutual cooperation can raise public awareness about environmental problems such as cleaning polluted rivers and repairing damaged infrastructure. This can make them more sensitive to the negative impacts of pollution or lack of maintenance of public facilities.

Therefore, mutual cooperation activities can also be an educational tool to teach positive values and responsible behavior to the environment. So, mutual cooperation is not just a physical activity, but also an effective tool for educating, building awareness, and encouraging positive change in society.

The obstacle in realizing this program is the lack of enthusiasm from the community. Apart from that, there are still those who do not understand the educational material presented. So the socialization and education stages are not running optimally. Apart from that, obstacles also came from the Village Head who was less cooperative in handling this program. Also, not all RTs show a high level of concern for the waste problem.

2. Provision of rubbish bins and warning signs

The trash bin procurement program was held because of the limited infrastructure for disposing of waste. Apart from that, it also aims to encourage the village government to update infrastructure which is no longer functioning. In fact, the village has facilitated residents with a waste disposal program. But in reality, the majority of residents are less interested in registering for the program. Because the system is not running optimally.

Before starting this activity program, the facilitator consolidated the Village-Owned Enterprises (BUMDes) as the institution that manages the waste disposal program. This consolidation was held to discuss the management of waste disposal that ends up in final disposal sites (TPA). Also, try to carry out an evaluation regarding village waste program policies. This stage was carried out as an effort to lobby the BUMDes to carry out regular supervision and monitoring of both cleaning staff and facilities and infrastructure. So that the system running for the village waste program can run more optimally.

If we look at the quantity, the number of waste cleaning officers, which is only 2 people, is deemed insufficient to be able to work effectively and efficiently throughout

Wotanmas Jedong Village. From the information obtained, the performance of the waste cleaning officers is also less than professional. Apart from that, the program schedule is not prepared efficiently, so this results in non-routine waste transportation. Even more so in terms of contribution withdrawals. Where every resident who takes part in this program pays a contribution of 15,000 every month. However, this withdrawal is not properly regulated by the authorities.

Not only that, the transportation provided is not optimal and adequate enough to function as a waste carrier. This is a complaint from the janitor himself. The complaint most felt by residents and an obstacle to this program is the lack of monitoring from the village. After residents registered for this program and then received trash cans, the village no longer checked. So the trash cans that have been available since the start of this program have been running, that is, there has been no renewal for approximately 3 years. These factors are the cause of the lack of public interest in registering for the village waste program.

After that, the facilitator also conducted outreach to the Head of the Hamlet and each RT in Jedong Wetan Hamlet first. This is done to make it easier to disseminate information to the wider community. Because these parties have an important role as community mobilizers. The facilitator tries to collaborate with the Head of the Hamlet and the Head of the RT to build community service activities or something similar to try to keep the environment clean. Apart from that, we emphasize strengthening the village waste program so that residents are interested in registering. The final goal is that trash cans are distributed evenly in every resident's house.

So, providing adequate trash cans is one of the group's main targets. The facilitator places the trash cans in strategic locations, namely main roads, ditches, educational institutions, and several other places. Not only that, this rubbish bin is also accompanied by the installation of a warning sign bearing the words to protect the environment from rubbish. The aim is to serve as a warning to local residents to no longer throw rubbish carelessly.

With this program, it is hoped that to some extent it can raise public awareness to care more about the environment. The installation of trash cans and warning signs was carried out on Monday, August 7 2023. As a result, this program ran smoothly.

3. Utilization of plastic waste

Society produces a lot of plastic waste because it is used for various needs of human life. Plastic waste cannot decompose naturally and takes a very long time to clean from the face of the earth. However, there are many ways to manage them so they don't pile up and get scattered. Among them is the 3R concept, namely reduce, reuse and recycle (Trisnawati, 2020).

Waste management using the reuse principle was chosen to be one of the KKN programs. The aim is to reduce the accumulation of plastic waste which mostly comes from households and MSMEs in Jedong Wetan Hamlet. This program is also a follow-up to outreach activities that have been carried out previously.

This program is carried out by utilizing plastic waste into items that can be reused. In this case, the facilitator uses plastic bottles to make flower pots. The first step is to invite local residents to sort plastic waste which is easily available. Then prepare the materials needed, including soil or planting medium, plants and flowers, rope, and colored paint. Then these plastic bottles are converted into flower pots that have useful properties.

Given time and opportunities, this program was realized by involving children as the main participants. By involving children in this program, they can instill awareness to keep the environment clean and at the same time foster children's creativity.

In general, the planned KKN activity program in Wotanmas Jedong Village has been completed smoothly and well. However, the realization of these programs encountered several obstacles, including the lack of enthusiasm of residents and village officials in participating in the activity programs being held.

CONCLUSION

Commitment to continue the program to achieve change so that there is no discontinuity. From here, new knowledge and new commitment will emerge between students and society, so that what has been done so far is meaningful for everyone. Based on research, community learning processes, and action programs that have been implemented, all participants reflect on the process and results obtained (from start to finish).

During the 28 days the facilitator underwent the KKKN program in Wotanmas Jedong village, he learned many things. Through this service activity, you can apply the knowledge gained in lectures. However, it is not uncommon for being directly in the field to be very

different compared to theoretical learning. This is a very valuable experience that cannot be obtained in lectures. Facilitator learns to live in the Wotanmas Jedong Village community, especially in Jedong Wetan Hamlet which is occupied as a KKN post. The most important experience that can also be felt is that when facing society you must prioritize community norms, social ethics and culture without abandoning academic ethics. There is learning to be tolerant in dealing with individual and group differences in society. Moreover, with the group activity program, the community can apply their knowledge, especially regarding how to maintain cleanliness and preserve the environment from waste in Wotanmas Jedong Village, more precisely in Jedong Wetan Hamlet.

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