Community service in Kecamatan Patampanua: Improving community’s economy and prosperity through the establishment of pisang sale’s UMKM

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Abstract. Collaboration, among the Hasanuddin University Regional Partnership Program (PKW), POLITANI, and the Pinrang District Government, has carried out community service activities with the aim of overcoming the problems in the Patampanua District, in particular, Desa Sipatuo. Knowledge and skills to utilize the district’s surrounding natural resources are essential for a community to improve their economy and welfare as one of the solutions to decrease poverty. This activity aims to increase the knowledge and skills of communities in the Desa Sipatuo about processing bananas into banana sale products. This activity was carried out in Desa Sipatuo on July 24-26, 2018 by involving the community as a target audiences. The method used is counseling, demonstration with pre-activity events, implementation and evaluation of knowledge. The results are the community’s knowledge about banana’s nutritional content and its processed products, namely the sale pisang increases. The society favored with the taste, color, flavor, and texture of banana sale product.

1. Introduction

One of the efforts made by the government of Kabupaten Pinrang to improve society's welfare is by encouraging the improvement of the family economy that stimulates the growth of micro-entrepreneurs with home industries scale. The abundant bananas production in Kabupaten Pinrang is a high potential for home industries that it will support the government's efforts to improve the economy of the society.

Banana is one of the horticultural commodities that can be consumed directly or processed. The water content in bananas that are high and metabolic process activities that are continuing to increase has caused bananas easily damages, and their quality rapidly changes after being harvested \cite{1,2}. This condition is one of the problems of consuming fruit in fresh consumption.

The abundant banana production that is not comparable with the level of society’s consumption has resulted in the number of decaying bananas since their relatively short shelf life. The best way to solve the problem is to make bananas into processed products \cite{3}. Banana is a fruit that has a high source of
potassium, rich in provitamin A and carotenoids [4]. Banana fruit can be processed into several products such as the sale pisang.

The existing problems in Kecamatan Patampanua, Kabupaten Pinrang are formulated as follows:

a. There is a tremendous amount of banana agricultural waste because of overproduction, and it becomes worthless.

b. Lack of community skills in processing featured commodities, such as bananas.

c. The existing community knows less about the marketing information so that they do not feel interested in doing a “Home Industry” or UMKM business.

Therefore, the purpose of this activity was to increase the knowledge and skills of society in Desa Sipatuo regarding the processing of bananas into the sale pisang products. It is expected that the society’s ability to manage raw banana to a value-added product will increase.

2. Material and Method

This community service activity was carried out in Kabupaten Pinrang, Kecamatan Patampanua, Desa Sipatuo, Makassar, South Sulawesi, on July 24-26, 2018. The targeted audience of this activity is the society living in the Desa Sipatuo, Kecamatan Patampanua. Primary materials used in this activity are banana, cooking oil, rice flour, and oil filter. The appliances used are frying pan, bowls, spoons, knives, scales, and dishes.

Interactive counseling and demonstration of making banana processed products were conducted to help in increasing the knowledge and skill of the targeted participants. The stages carried out in those activities are as follows:

Pre-Activity

There are three steps in this stage, which are:

1) Survey location and discuss the technical implementation of the program with the local government in Kabupaten Pinrang, Kecamatan Patampanua, Desa Sipatuo.
2) Demonstrate to make the sale pisang product.
3) Identify society as targeted participants, instructors to share knowledge and do training, and students as assistants.

2.1. Implementation of Activity

The activity was done in two categories:

1) Counseling about the benefits of banana fruit and the types of banana-based processed products.
2) Demonstration of making the sale pisang products with different flavors.

2.2. Evaluation of Targeted Community’s Knowledge and Motivation

Evaluation is conducted by distributing a yes-no-questionnaire-sheet containing nine questions to the targeted community. It was designed to grasp their knowledge level of banana fruit and its processed products. The participants were also interviewed regarding the difficulty in making the sale pisang, and organoleptic tests carried out descriptively by the target audience. To ascertain the difference in the knowledge level of the participants after being given counseling, the evaluation sheet is given before (pre-test) and after (post-test) activity takes place.
3. Results and Discussion

3.1. Counseling
Counseling was aimed at enhancing knowledge about banana so that the targeted society receives better information about the potential benefit of banana. The material information contains three themes, that is, the variety of banana, the nutritional content of banana, processed banana product, and characteristics of bananas that are suitable for making the sale pisang products. Additional information was also given about the benefits of eating the banana.

All participants, society living in the Desa Sipatuo, Kecamatan Pinrang, carefully and actively pay attention to a lesson provided during counseling phase. All of them throughout involved in the counseling program and no one that is leaving the place before the event ended. Participants also asked some questions related to the material given during this phase, and the instructor thoroughly and clearly explained all of the questions.

3.2. Demonstration
Demonstration to make banana-processed products was run by a lecturer from Hasanuddin University assisted by three Hasanuddin University students. Before conducting the demonstration, a lecturer acted as the instructor explains various matters related to banana, in particular about the process of making the sale pisang products to the audience. During this session, there is an interactive discussion between the instructor and participants. The discussion mostly talks about on how to modify the sale pisang product and sell the product if participants would like to establish their own business or just sale the sale pisang products.

![Figure 2. Explanation by Instructor during the Demonstration Program](image)

3.3. Knowledge Level of Targeted Community about Banana and its Processed Product
For the effectiveness of the counseling program, it is essential to understand the level of participants' basic knowledge about the material that will be taught. Pre-test instruments consist of 10 questions each related to banana and its processed products to measure the basic understanding of participants, were distributed. The sheet must be filled honestly by the participants.

Furthermore, a post-test evaluation was conducted at the end of the activity. The participants should answer the same questions as stated in the pre-test evaluation that is previously distributed before the activity begins. From the post-test evaluation sheet, we obtain data about the effectiveness of participants' levels in retrieving the information during counseling and demonstration program. In addition to the 10-item questions given in the post-test, two questions asking the participants’ opinions about the results of the sale pisang products and the organoleptic description of the sale pisang products were also be presented. The following is results of the pre-test and post-test evaluation of making of the sale pisang products.
3.3.1 Content of Banana. Before counseling program conducted, evaluation sheets asking community's knowledge level about the nutritional content of banana were distributed. There are 36.4% of participants stating that they did not know the nutritional content of banana. However, after instructor gave counseling about the nutritional content of banana, the number of participants who answered yes meaning that they knew the nutritional content of banana increased by 100%. Based on the data there are differences in participants' level of knowledge after and before the activity was conducted. The significance level is 0.002.

The transfer of knowledge by the instructor about banana nutrition that contains a high source of potassium, and rich with pro-vitamin A and carotenoids have increased the participants' knowledge about the fruit and its processed products.

3.3.2 Processed Products of Banana. Banana is an agricultural product categorized as climacteric fruits, a fruit continuing to ripen after harvesting. Banana also has a soft feel when ripening so that it is naturally rotten easily. In general, banana is often supposed as an edible banana (eaten as the dessert) so that overproduction of banana sometimes may cause banana waste. In fact, with nutritional content inside the banana, it is possible to process raw banana into the processed banana, one of them is the sale pisang products.

The sale pisang (smoked or dried banana fritters) is processed banana that is made by the drying process. It has the distinctive flavor that is determined by the quality of the banana used. Society in the Desa Sipatuo, Kecamatan Pinrang knew less about the sale pisang products, and some of them have also never made the product. This information was collected from the pre-test evaluation sheet asking society's knowledge about the sale pisang products that are distributed just before the activity was conducted. It is shown that around 45.50% of participants did not know what the sale pisang products are. After training was done, the society's knowledge increased by 90.90%. This increase was due to the transfer of information provided by the instructor.
Characteristics of Banana to Make of the Sale Pisang Products. The initial evaluation sheet also shows that about 45.50% of society did not know the characteristics of banana that are suitable to make of the sale pisang products. The reason is they have less information about the knowledge of banana characteristics. There are various types of bananas in the market, which varies in characteristics such as color, flavor, and aroma. Based on the consumption criteria, banana is divided into two types, dessert banana (directly eaten when it ripens) and cooking banana (have a fine flavor after being processed into other types of food). All banana varieties can be used as the sale pisang products, only a few varieties that can produce the delicious flavor of the sale pisang though. The home industry made of the sale pisang products usually uses the following variety of bananas, such as ambon, emas, raja, siam, kepok, and milk as the raw material of the product. The level of bananas’ ripeness substantially impacts on the sale pisang being made since the starch and glucose of banana directly affects the sweet of the sale pisang.

In addition, after performing counseling activity, the knowledge level of targeted society about banana's varieties and characteristics has increased significantly from 54.50% to 100%. Their knowledge about the ingredients used and the method to make the sale pisang has also risen from 54.50% to 90.90% and from 27.30% to 100%, respectively (figure 5). It means that the number of participant's knowledge has increased since the counseling program.
Before conducting the training program, participants were asked about the criteria of the sale pisang flavor, attractive packaging and storing process of the sale pisang products. No one (0%) of participants understand about the level of the sale pisang production. However, after participating in the training program, the percentage of people knowing about the information increases (figure 6). The increase is due to the information transferred by the instructor.

Consumers firstly look for the taste, color, flavor, and texture of the sale pisang products. Meanwhile, the technical characteristics of the sale pisang are about the design, the shape of the product, the design of the package, the image, and type of banana [6]. Furthermore, technological features can be seen from processing technology relating to how to measure the flavor pattern and select the additional ingredients.

There are four assessment aspects during the training, taste, color, flavor, and texture. According to Doyon, et al. [8] packaging techniques that apply to the sale pisang products is vacuum packaging and plastic Polypropylene (PP) because it has a Water Vapor transmission rate (WVTR). The sale pisang products can be stored at a temperature of 23-25°C and RH 90-95%. Storage at low temperatures and humidity can extend the storage period by up to 37 days.

3.3.4 Consumers Acceptance Rate of the Sale Pisang Production. During the training program, all participants have an occasion to do product testing by their visual assessment and preference level. They are asked for the preference of color, taste, flavor, and texture of the products they like. Almost all participants like the sale pisang products.
After the programs were completely conducted, the participants are asked for the next community service events in particular about developing the sale pisang products. There are 100% of participants would like to produce the sale pisang products in their homes for family consumption or sale purposes (figure 7).

![Distribution of Targeted Community’s Follow-up after Training Program](image)

**Figure 8.** Distribution of Targeted Community’s Follow-up after Training Program

There are about 27.30% of participants have made of the sale pisang products, in which, 100% of them said that making the sale pisang products is not difficult because it uses simple techniques and can be done at home. The sale pisang products are also worthy for sale because they have a distinctive and attractive taste, aroma, texture, and color. The audience shows expectation and enthusiasm to develop their own business to sale the sale pisang products.

4. Conclusion

While the counseling program about bananas and their processed products can enhance the targeted society's information about bananas and their processed products, the demonstration can improve their skills in handling bananas into the sale pisang products. This activity will provide extensive benefits if there is the transfer of knowledge and supporting facilities to the community in the Desa Sipatuo, Kecamatan Pinrang.

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