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# Skills Improvement for Local Integrated Healthcare Post (*Posyandu*) Cadres and Housewives through Training on Making Healthy Snacks Based on Fisheries Waste in Benda Baru, South Tangerang

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***ABSTRACT***

*The program aimed at improving the skills of housewives and Posyandu cadres in Benda Baru, South Tangerang in the form of training in making healthy snacks based on fishery waste, namely shrimp shells. This training is part of the community service program for 25 housewives and Posyandu cadres. The expected outcome of the training is an increase in skills as an effort to develop a group of people who are economically independent and prosperous. Outputs in community service are healthy snacks from fishery waste, modules for healthy snacks based on fishery waste, scientific publications, and video publications on activities of making healthy snacks based on fishery waste on the YouTube platform. The method used in this activity is lectures, demonstrations, and practice with the training participants to make healthy snacks using ingredients from shrimp shells. The results of the training to improve skills in making healthy snacks based on fishery waste were followed well by the participants by making salty kue simping and kue telur gabus using flour from shrimp shell waste.*

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## INTRODUCTION

Based on data from the Central Statistics Agency, the output of capture fisheries in Banten Province amounted to 101,663 tons in 2018. This abundant fishing situation, however, has not been well optimized. The use of fishery products as food products, especially the use of fishery waste, is still lacking. According to Poernomo in Fajar Syukron (2013), fishery waste contains nutrients that do not differ from the main ingredient; and there has also been a lot of research into its application. In general, the shrimp consumed by the population is only part of the product, while the head, skin, and tail of the shrimp are sometimes discarded, which ends up as waste. The waste generated is as much as 60-70 percent of the waste from the weight of the shrimp, in particular the skin and the head (Pratiwi, et al., 2017). Shrimp waste also causes environmental issues because it is perishable and has a strong odor. This is mainly because shrimp waste contains a lot of organic compounds, particularly protein and shrimp heads, which are a gathering place for enzymes that decompose organic and putrefactive bacteria. Most shrimp waste comes from the shell, head, and tail. Shrimp waste is part of the shrimp processing remains that can no longer be used. However, shrimp shell waste often contains high levels of protein and calcium that have not been efficiently utilized.

Community service programs by the Program Studi Tata Boga Universitas Negeri Jakarta are carried out in Benda Baru, Pamulang District, South Tangerang which has 24 wards (*Rukun Warga*) and 155 neighborhoods (*Rukun Tetangga*). Based on data collected by the City Government of South Tangerang in the Final Report of the Mid-Term Infrastructure Investment Program, the people of South Tangerang City have a relatively large number of 71.80 percent of people of productive age. The high number of productive ages is a good opportunity to provide training that can improve community expertise as a capital for entrepreneurship, one of which is in the culinary field, namely the production of various traditional snacks utilizing fishery waste.

Providing information and skills to make salty *kue simping* and *kue telur gabus* using shrimp waste flour for the people of Benda Baru, Pamulang District, South Tangerang will provide an alternative to shrimp waste processing. This activity also offers state-of-the-art training to the community that encourages a program of food diversification that is produced in the form of healthy snacks.

## LITERATURE REVIEW

According to Poernomo in Fajar Syukron (2013), fishery waste contains nutrients that are not different from the main ingredient and its use has also been extensively studied. In general, the shrimp consumed by the community is only part of the meat, while the head, shell, and tail are often discarded which ends up as waste. The waste is as much as 60-70 percent of the weight of the shrimp, in particular the shell and head (Pratiwi, et al., 2017).


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## IMPLEMENTATION METHOD

This community service program is aimed at the target community with a maximum of 25 participants. This community service program is assumed to be allowed to develop skills through the role of community training participants through the use of shrimp waste. In the long term, the existing shrimp waste utilization will build business units in the area that can improve the skills of the local community.

The mechanism for implementing this program is: 1) distributing and presenting the materials, directing practice, and providing assistance. The presentation on shrimp waste innovation to introduce alternative food sources, several examples of shrimp waste-based food innovations, and technologies for the production, and to display of the finished products was held in a local hall. The method used to determine the effectiveness and usefulness of this program is an assessment tool through pre-test and post-test questionnaires of community knowledge and skills to make variations in shrimp waste dishes in Benda Baru, Pamulang District, South Tangerang. The questionnaires are intended to acquire responses and feedback from the participants. The data were analyzed descriptively with descriptions given in pictures and graphics.

## RESULTS AND DISCUSSION

The outcomes of the training shall be seen based on the implementation of well-run exercises and shall provide the participants with information and skills. The biggest challenge faced in this training was the adjustment of time to meet with the community due to the circumstances of the Covid-19 pandemic.

The solution is that training was carried out online via training and education videos through YouTube, the pre-and post-tests were distributed through the Google Form platform, and the product creation assistance was carried out via the Whatsapp Group Chat.

The participants' tremendous enthusiasm has made this training work well and smoothly as a whole, which can be shown in the reports of the activities, the outcomes of the pre-and post-tests, and the satisfaction of the participants in the training. The program documentation is as followed:

A. Opening of the training program, which can be seen in Figure 1.
B. Video Image Footage of Making Salty *Kue Simping*, which can be seen in Figure 2.
C. Video Image Footage of Making Salty *Kue Telur Gabus*, which can be seen in Figure 3.
D. Pre– and Post-test Results, which can be seen in Table 1.


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**Figure 1.**
Opening of the training program


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**Figure 2.**
Video Image Footage of Making Salty *Kue Simping*


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**Figure 3.**
Video Image Footage of Making Salty *Kue Telur Gabus*


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**Table 1.**
Pre– and Post-test Results

| No. | Participant Names | Pre-Test | Post-Test | Difference |
|---|---|---|---|---|
| 1 | Murniyati | 6 | 9 | 3 |
| 2 | Dwi Susiana | 10 | 10 | 0 |
| 3 | Indrawati | 5 | 9 | 4 |
| 4 | Sulfa Andriani | 9 | 10 | 1 |
| 5 | Rosita Darya | 5 | 9 | 4 |
| 6 | Saptarini | 9 | 10 | 1 |
| 7 | Sumijatun | 8 | 10 | 2 |
| 8 | Mella Sari Handayani | 8 | 9 | 1 |
| 9 | Sri Wijayanti | 6 | 9 | 3 |
| 10 | Anita Joesoef | 8 | 9 | 1 |
| 11 | Rusmini | 5 | 8 | 3 |
| 12 | Siti Muljawati | 7 | 9 | 2 |
| 13 | Mona Indriyani | 6 | 9 | 3 |
| 14 | Sukamsih | 7 | 8 | 1 |
| 15 | Nunik Purwaningsih | 6 | 10 | 4 |
| 16 | Pranita | 7 | 9 | 2 |
| **Total** | | **112** | **148** | **35** |
| **Mean** | | **7** | **9,3** | **2,18** |
| **Median** | | **7** | **9** | **-** |
| **Mode** | | **6** | **10** | **-** |


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The results of the training evaluation of the material given about food products from shrimp shell waste show the pre-test score was 112 out of 16 participants, an average value of 7, a median value of 7, and a mode value of 6. This shows that the category of the participants' prior knowledge before being given the material was very good. While the post-test score was obtained by a total of 148 out of 16 participants, the average score was 9.3, the median score was 9, and the mode score was 10. Improved results from the pre-test 112 to post-test 148 and the average score was 2.18. It can also be inferred that there is an improvement in knowledge and skills arising from the provision of materials for training participants. A survey was also performed to see the satisfaction of the training participants in this program. The outcomes of the satisfaction of the training participants can be seen in the following graphs:

1. Material Presentation

   The results of questions about the material presented by the instructors distributed to the participants indicate that 62.5 percent of the participants understood the material very well and 37.5 percent understood the material well. For more details, see Figure 4. below.

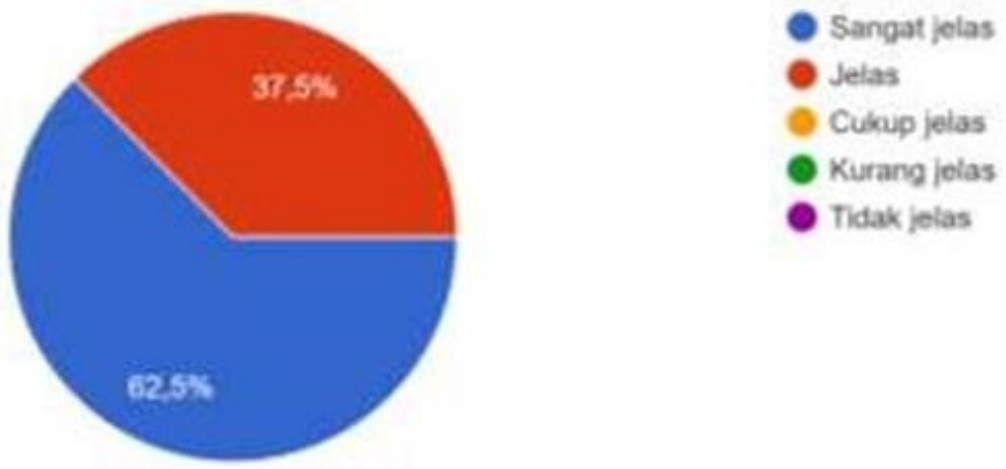


**Figure 4.**
Material Presentation


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2. Suitability of the content/material for the needs of the participants

   The results of questions about the suitability of the content for the needs of the participants indicate that 100 percent of the participants agree that the content of the training is suitable for them. For more details, see Figure 5. below.


**Figure 5.**
Suitability of the content for the needs of the participants

3. Presentation on Materials, Tools, and Process for Production

   The results of questions about the presentation on materials, tools, and processes for production indicate that 62.5 percent of the participants understood the presentation very well and 37.5 percent understood well. For more details, see Figure 6. below.

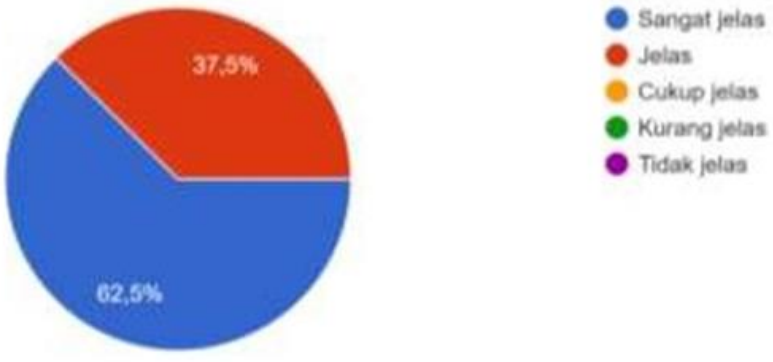


**Figure 6.**
Presentation on Materials, Tools, and Process for Production


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4. Audio and Video Quality

The results of questions about audio and video quality indicate that 50 percent of the participants agree that the audio and video quality is very good and clear. For more details, see Figure 7. below.

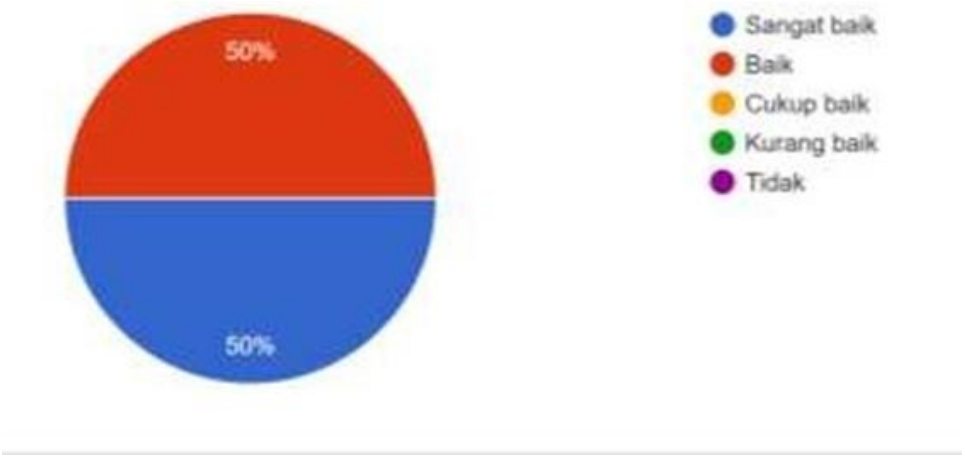


**Figure 7.**
Audio and Video Quality

5. Duration of Training Video

The results of questions about the duration of the training video indicate that all of the participants agree that the duration of the training video is precise. For more details, see Figure 8. below.


**Figure 8.**
Duration of Training Video


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6. Participants Are Interested in Making the Exemplary Products

   The results of questions about whether participants are interested in making the exemplary products indicate that all participants are interested. For more details, see Figure 9. below.


**Figure 9.**
Participants Are Interested in Making the Exemplary Products

7. The Exemplified Product Fit for Consumption

   The results of questions about whether the exemplified product is fit for consumption indicate that all participants agreed to the statement. For more details, see Figure 10. below.


**Figure 10.**
The Exemplified Product Fit for Consumption


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8. The Exemplified Product Fit for Market

   The results of questions about whether the exemplified product is fit for the market indicate that all participants agreed to the statement. For more details, see Figure 11. below.

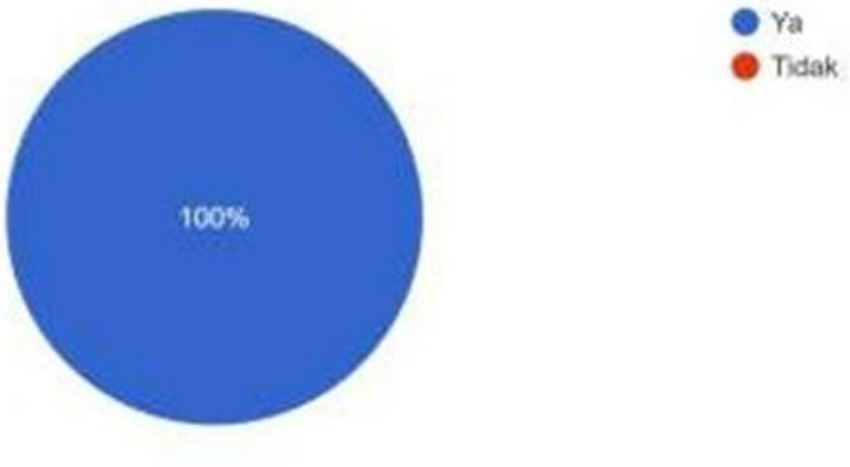


**Figure 11.**
The Exemplified Product Fit for Market

9. Instructor Performance

   The results of questions about the instructor's performance indicate that 62.5 percent of the total participants agreed that the instructor's performance is very good and 37.5 percent agreed that the instructor's performance is good. For more details, see Figure 12. below.

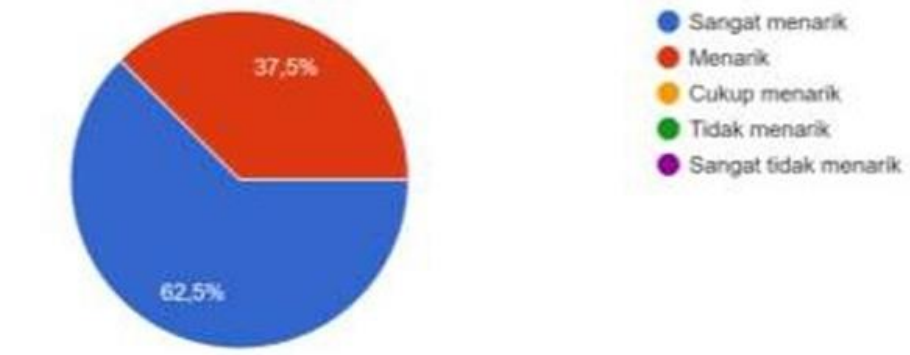


**Figure 12.**
Instructor Performance


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10. The Clarity of Training Module and Application/Practice

    The results of the questions on clarity of training module and practice suggest that 50% of the total participants accepted that training module and practice are very easy to understand and do. For more details, see Figure 13. below.


**Figure 13.**
The Clarity of Training Module and Application/Practice

The results indicate that the participants gave very satisfactory responses to the training activities. Community service program in Benda Baru, Pamulang by giving training on making healthy traditional snacks, which started by providing information on shrimp waste flour, recipes and formulas of salty *kue simping* and *kue telur gabus* to demonstrating how to to make them through the successful provision of skills to the participants.


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## CONCLUSION AND SUGGESTION

The utilization of shrimp waste flour as the main material for making various traditional snacks can increase the nutrition and nutritional value of the product. Training on making healthy snacks, such as salty *kue simping* and *kue telur gabus* by substituting shrimp waste flour for housewives in Benda Baru Pamulang District, South Tangerang, provided new insights and information on the use of shrimp waste and the ability to make such snacks. This indication can be seen from the results of the post-test. In addition, the products of salty *kue simping* and *kue telur gabus* by substituting shrimp waste flour have the potential to become a new market commodity for housewives and *Posyandu* cadres and can develop new skills.

The results of the training evaluation suggest that this training is well underway and gives participants satisfaction both in terms of the media used, namely video, and in terms of the content or material of the training provided. In the future, it is expected that the people of Benda Baru community, particularly the housewives and the *Posyandu* cadres, will be able to use the results of this training as a means of increasing family income.

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