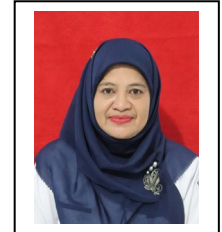


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## **EDUCATION ON HEALTHY, SAFE, AND NUTRITIOUS LOCAL FOOD THROUGH THE NUTRITION *GO TO SCHOOL* (NGTS) SCHOOL GARDEN PILOT MODEL IN CIREBON CITY**

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**Abstract.** School is a very effective place for learning and character formation of students. Knowledge, attitudes and behaviors in choosing, processing and consuming food are greatly influenced by education in schools. Schools that have a school garden are an important component and greatly contribute to realizing healthy students. The school has sought the availability of a nutrient garden in the school during the NGTS Community Service activity carried out with SEAMEO in 2019. NGTS activities have contributed with the existence of model school gardens in 4 (four) locations, namely SMPN 7, SMPN 5, SD Sidamulya and SD Pahlawan in Cirebon City, in addition to the cooperation between various related service sectors in the implementation of NGTS. Partnership community service activities (PKM) are in the form of education and assistance in making safe, healthy, nutritious food made from local ingredients so that video tutorials on how to make nuggets and recipe books for processed nuggets based on local food ingredients are obtained which can be used as a guide in making healthy, safe and nutritious food and made from local food that can be used as an example for other schools in the Cirebon city

area. This activity was carried out using a combination of socialization and mentoring methods by involving students. The initial stage of this activity was the making of books on various processed nuggets, and the second stage was socialization by video tutorial method and distribution of books on various processed nuggets. Measuring nugget processing knowledge before and after distributing books and playing videos of nugget making. The outputs achieved from the PkM program are the book *Miscellaneous Nugget Recipes* processed from local food from school gardens and a video of the process of making *Miscellaneous Nuggets* (IPR). The conclusion of this PKM activity is that there is an increase in knowledge about nugget processing so as to help teachers and students in providing healthy, safe and nutritious food from school.

Keywords: PKM, knowledge, local food, nuggets.

## INTRODUCTION

### A. School Child Nutrition

Adequate nutrition gradually plays an important role during school age to guarantee that children get maximum growth, development and health. School-age children 7-12 years old have a variety of activities so their nutritional needs must be considered because at this age children are easily influenced by habits outside the family. At this age, children begin to choose or determine for themselves what foods they consume or what they like. Sometimes there is excessive difficulty with one particular food called Food Faddism (Anggaraini, 2003). The growth and development of elementary school-age children will be maximized if the nutritional needs of children can be met. In addition, the habit of a healthy diet in the family must be really instilled so that children can grow and develop optimally (Damayanti, Didit Muhilal, 2006). Nutrition in children changes as children grow such as physical, mental, and emotional. Children who do not have enough nutritional needs, especially energy and protein. When these 14 nutritional deficiencies last months to years, it causes children to grow short (stunting) and their learning performance is lower than children who get good nutritional intake (A. Roth, R, 2011).

### B. Local Food for School Children

Local food commodities such as cereals, nuts and tubers are often considered inferior, despite their good nutritional content. Such a community's view must be changed because in reality local food types have the potential to be used in order to overcome the problem of healthy food fulfillment (Nasir, 2018).

Local food development has strategic value. To preserve local food as a staple food in the community, the role of local governments is indispensable to popularize local food. Food security needs to be built based on local resources, because this is very meaningful in food diversification (Raudatina, 2011).

Elementary school children are children aged 7-12 years. This is the transition period from childhood to the end of childhood. In elementary school children at the age of 12 years, it is a phase to the next period, namely puberty,

so the role of nutrients is very necessary to optimize growth (Yulia, 2017). Therefore, it is necessary to introduce and instill local food consumption patterns from school age. According to Bergamaschi, *et al.* (2016), the consumption of varied foods in children can increase their sense of familiarity, liking and consumption of these foods. The introduction of various types of healthy foods is the key to children's food consumption patterns in the future. Food that is not only delicious on the tongue but also healthy and nutritious for the fulfillment of body nutrition.

### C. Nutrition Gardens in Schools

A nutrition garden is a plantation with the concept that plants planted have nutritional value for humans. This program uses land as access to family nutrition. The hope is that with this program, more people can consume nutritious food (at least vegetables & fruits). Here are some facts:

1. Indonesia is rich in natural resources
2. Indonesia's low food security & low purchasing power of the Indonesian people
3. WHO consumes fruits and vegetables for Indonesia 34.55 kg/year, the standard of sufficiency for health according to FAO is 91.25 kg/year

The average consumption of fruits and vegetables for children aged 5-14 years in Southeast Asia is very low; at 182 grams/day. These results are far different from the recommendation issued by the *World Health Organization* (WHO), that the consumption of fruits and vegetables is 400 grams (5 servings) per day for all age groups (1). Eating fruits and vegetables every day is one of the indicators of Clean and Healthy Living Behavior (PHBS). As many as 19.6% in Indonesia are classified as undernourished (2). As many as 93.6% of Indonesia's population over 10 years old are included in the category of undereating fruits and vegetables, even though people know that a good diet is balanced nutrition (2). The role of fruits and vegetables functions to help increase immunity, maintain health, prevent various diseases and various other benefits. Vegetables and fruits are one of the food groups in the *Food and Agriculture Organization* (FAO) classification, known as *the Desirable Dietary Pattern* (1) or Hope Food Pattern (3). Vegetables and fruits serve as a source of vitamins and minerals. Lack of consumption of vegetables and fruits has a negative effect on nutritional conditions, especially in school children.

Consumption of vegetables and fruits along with other food groups affects health conditions. The analysis of consumption patterns is based on data on the amount of energy consumed by vegetables and fruits (in kcal), by looking at differences between provinces and urban and rural areas. Food security and low purchasing power of the community are one of the causes of low consumption of vegetables and fruits. Nutrition gardens are community-based programs as an effort to meet the needs of fruits and vegetables by utilizing yard land or school land as school gardens or other media.

### D. Partner Analysis and Problems

School is a very effective place for learning and character formation of students. Knowledge, attitudes and behaviors of consumption, choosing food are greatly influenced by education in school. School gardens are an important component and greatly contribute to realizing healthy students. The problem

that exists with this school partner is that the school garden has been managed so far, but there are several arrangements that need to be improved regarding the types of plants needed. Especially types of vegetables, tubers from local plants have not been optimized, so it is necessary to re-establish school gardens. On the other hand, the movement to love local food is being encouraged by the government, so that how to use school gardens as a basic ingredient in making safe, healthy and nutritious food made from local ingredients in 4 partner schools SMPN 7, SMPN 5, SD Sidamulya and SD Pahlawan has not been carried out optimally.

## **METHOD**

### **SOLUTIONS AND OUTPUT TARGETS**

#### **A. Solution**

The school nutrition garden is part of health education in schools. Educational institutions must be able to present a school nutrition garden as one of the services that must be provided by schools, to realize smart and healthy children.

The management of school gardens provides benefits for all school residents, including:

#### **Advantages of School Nutrition Garden:**

1. Provides positive benefits for clean and healthy living behaviors
2. Habit of eating vegetables,
3. Benefits of economic aspects, food security

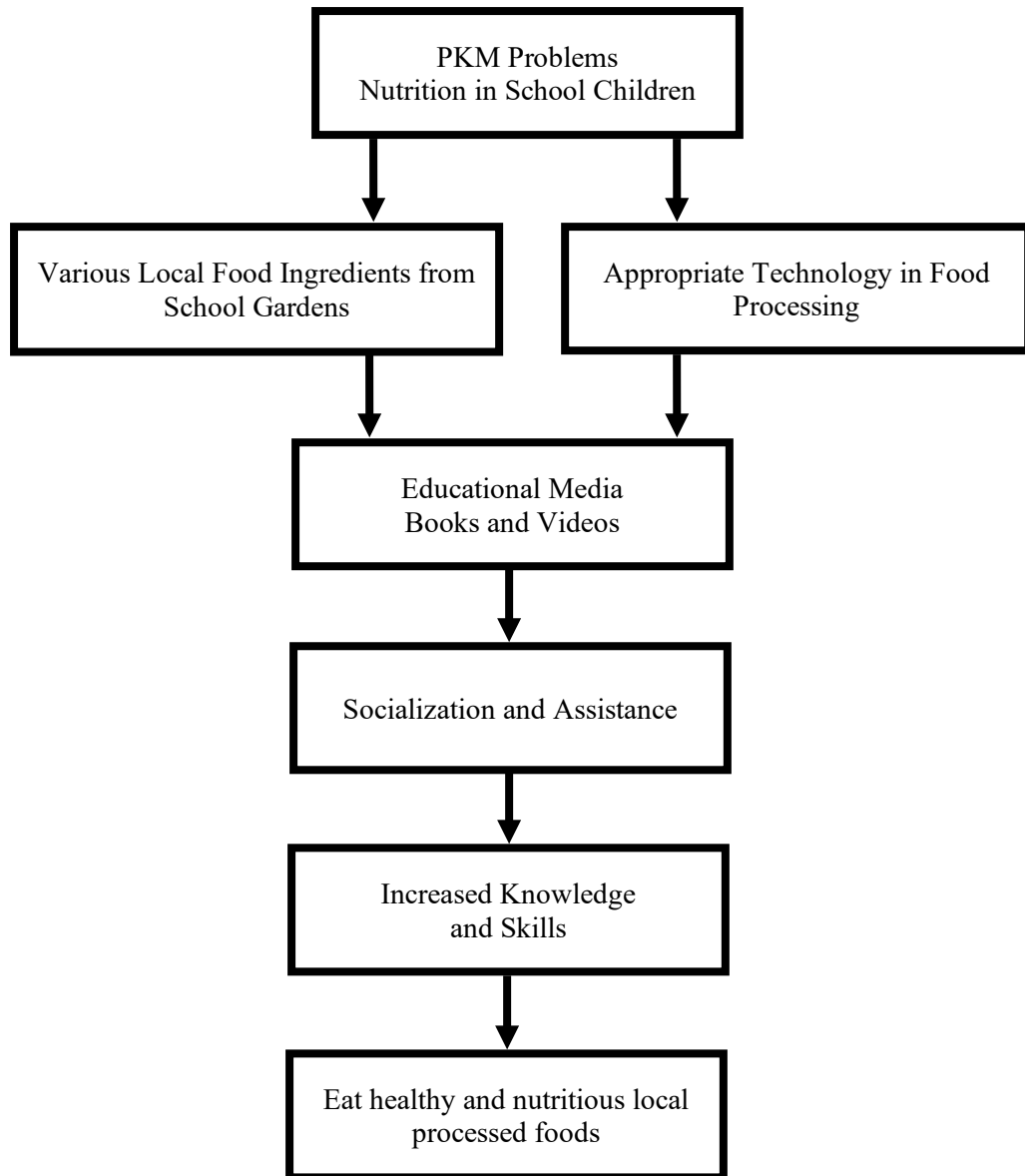
#### **B. Output Target**

1. Educational Videos on Healthy, Nutritious and Safe Local Food Made from Local Ingredients from School Gardens (IPR)
2. Book "Various Nugget Recipes Based on Local Food Ingredients from School Gardens" (IPR)

### **Troubleshooting Framework**

Community service is carried out as one of the implementations of the Tri Dharma of Higher Education for Lecturers within the Poltekkes of the Ministry of Health, Tasikmalaya, Cirebon campus and SEAMEO RECFON as a multi rate institution under the ministry of Education, one of whose activities is to improve the nutrition of school children and is a partner that has collaborated with the Poltekkes.

This activity was carried out in selected schools that needed to be handled related to nutritional problems. This community service activity is a continuation of the NGTS program that has been implemented in 2019 in 4 (four) schools. Our hope from this activity is that it is expected to be one of the ways to solve/help nutrition problems through NGTS model schools (pilot) and will be carried out in a sustainable manner with education and assistance activities regarding processed healthy, safe and nutritious food with local ingredients that are expected to be used by schools.



**Figure 3.1 Flow Chart Framework for Solving Community Partnership Programs**

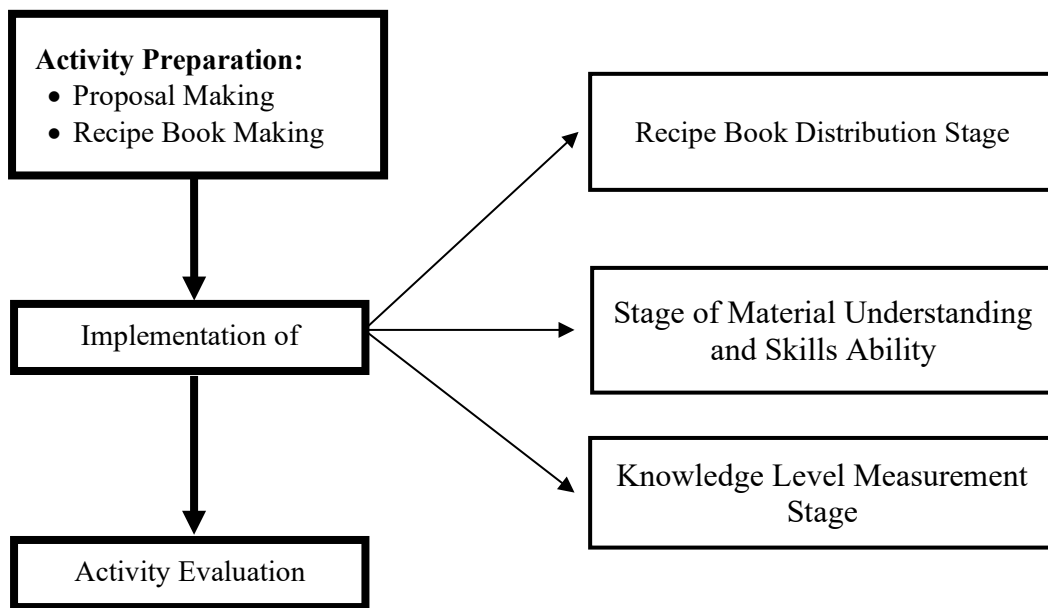
Solving problems in school children's nutrition with the implementation method in this PKM program is by the knowledge transfer method from the Lecturer team of the Nutrition Department of the Ministry of Health Tasikmalaya Polytechnic assisted by students and related parties, teachers, students and residents of 4 partner schools in Tasikmalaya City. The framework for solving problems in the PKM activity program is in Figure 3.1 as follows:

**A. Realization of Problem Solving**

**1. Method of Implementation Problem Solving**

The method used in this community service activity is a knowledge transfer program by conducting sociology activities to assist schools in utilizing local food based on ingredients from nugget-making training as an effort to increase the knowledge of teachers and students in achieving improved welfare in the health sector.

- The stages that will be carried out in this service cooperation activity are as follows:
- a. The preparation stage and site survey.  
This stage is intended to find out the extent of the characteristics and what local food ingredients are available in the school garden in each school.
  - b. The stage of compiling the book Various Nugget Recipes.  
This stage is the creation of a book by designing in an attractive form and designing in simple sentences. At this stage, it is hoped that teachers and students will understand about one of the health media, namely the book "Various Nugget Recipes Made from Local Food Based on School Garden Products."
  - c. Nugget processing video making stage  
This stage is an activity to be able to provide educational facilities in mentoring activities.
  - d. Mentoring stage  
The next stage is to distribute the book Miscellaneous Nugget Recipes and materials through videos of the process of making nuggets to teachers and students about how to make nuggets at school. At this stage, it is hoped that teachers and students understand the use of local food from school garden products as processed food that is useful for improving the nutrition of school children. Next, the measurement stage of knowledge improvement is carried out.



**Figure 3.2. Flow Chart of the Stages of Community Partnership Program Implementation**

The measurement of knowledge improvement is carried out by spreading questions in the form of knowledge questionnaires to assess the improvement of knowledge of teachers and students. This effort is expected to have an objective assessment of the knowledge of teachers and students both before and after the giving of books and video screenings.

**Table 3.1. Details of PKM Implementation**

| Meeting         | Teaching Materials  | Time (Minutes) | Tools/Materials / Teaching Resources | Valuation  |
|-----------------|---|----------------|--------------------------------------|--|
| 1st             | Socialization and Meeting with the Principal and stakeholders | 120            | Material Socialization Activities    | Participation and Partner Cooperation                            |
| 2 <sup>nd</sup> | Giving soft copies of the book Miscellaneous Nugget Recipes   | 60             | Miscellaneous Books Nugget recipe    | Participant participation, participant activity. <i>Pre-test</i> |
| 3 <sup>rd</sup> | Video Playback of how to make nuggets                         | 30             | Material                             | Participant participation, participant activity.                 |
| 5th             | Evaluation  | 30             | Questionnaire                        | <i>Post Test</i>   |

**B. Object (Target Audience) Community Service**

The eligibility of the activity targets includes the criteria for the selected SMP N and Elementary Partner Schools are:

1. Administrative Requirements
  - a. Schools are willing and have high commitment
  - b. Approved by the local education office
  - c. Willing to sign a Cooperation Agreement (PKS)
  - d. Schools are willing to provide their resources for educational and mentoring activities
2. The condition for the availability of supporting facilities is to have land to be used as a nutrient garden and be willing to continue as a means of continuous education

**C. Time and Place**

This community service started from the preparation stage in April-May 2021, followed by mentoring activities on June 2, 2021 at SMPN 7, July 3 at SMPN 5 and October 2 at SD Sidamulya and October 9, 2021.

**D. Number of Population**

This community service activity was carried out in 4 NGTS locus schools, then the participants who were involved in this activity were 25-50 participants during the mentoring activity.

**E. Facilities and Tools Used**

The facilities used in this activity are video recordings of making nuggets made with local food ingredients as well as books on various nugget recipes as well as equipment and materials for making nuggets and processed foods made from local food.

## F. Evaluation Design

Evaluation activities are carried out at the end of the activity to see the progress of the implementation of the educational activities that have been carried out. Monitoring is carried out every 2 weeks and evaluation is carried out at the end of the activity. Monitoring and evaluation are carried out by the community service team from the Nutrition Study Program and SEAMEO.

This evaluation aims to see the development of the program implemented, to find out the existing obstacles and how to handle them, so that the service program carried out is really effective and optimal. The evaluation carried out was in the form of giving a written exam (questionnaire) at the beginning before the giving of the book *Miscellaneous Recipes Nugget (pre test)* and at the end of giving the book *Miscellaneous Recipes Nugget (post test)*, so that later it will be known how much understanding the teacher and students get after understanding the material. The assessment results showed that from the results of *the pretest* and *posttest* scores, there was an increase in scores. This shows that there has been an increase in knowledge. The following is the calculation of the assessment percentage value:

Evaluation : Post Test Score > Pre Test Score

Measurement of Knowledge Level

Good : Percentage yield 76% - 100%

Enough : Percentage yield 56%-75%

Less : The percentage result < 56% (Arikunto, 2006)

## OUTCOMES ACHIEVED

### A. Implementation

This education and mentoring activity is a follow-up to the 2019 community service activity of the NGTS (*Nutrition Go to School*) model school pilot which was carried out in partnership with SEAMEO RECFON Jakarta. This Community Service activity is carried out by 3 (three) lecturers involving 1 (one) administrative staff and 3 (three) students. This activity was carried out from June to October 2021.

The activities that have been carried out since June 2021 are in the form of socialization, education and mentoring. The activity in question is in the form of education and assistance in making safe, healthy, nutritious food made from local ingredients and revitalization of nutrition gardens at SD Sidamulya and SD Pahlawan Cirebon City, so that later leaflets, posters/recipes and video tutorials will be obtained that can be used as a guide in making healthy, safe and nutritious food and made from local food that can be used as an example for other schools in the Cirebon city area.

### B. External Achievement Results

The stages of activities that have been carried out are as follows:

#### 1. Socialization and Survey of School Gardens

The Lecturer Team conducted socialization of educational and mentoring activities as a continuation of NGTS activities to SMP N 7, SMPN 5, SD Sidamulya and SD Pahlawan. As a school that is used as a partner. At SMP N 7, SMPN 5, SD Sidamulya and SD Pahlawan, the activity has been carried out since June 2021 with



the attendance of the Principal and teachers. In this activity, the Community Service team explained the continuation of NGTS activities that have been carried out since 2019. In this socialization activity, the Community Service team also conducted a survey of school gardens and their use so far.

The results of the survey that have been carried out are as follows: Based on the results of field observations in the form of surveys, supporting data for school gardens were obtained. This survey was carried out on Wednesday, June 9, 2021 at SMP Negeri 7 with the name of the school garden, namely Kebun Hijau. The purpose of establishing the garden is to optimize vacant land so that it is productive and can provide results as consumption materials for school residents and it is hoped that in addition to being consumed, later the school can produce processed products that can have economic value. The garden has been established since 2011 and the person in charge of the garden was handed over to one of the teachers.

Plants planted in school gardens vary including pokcoy, kale, chili, moringa leaves, noni fruits, manga fruits, guava fruits, banana fruits, avocado fruits, papaya leaves, acha acha leaves, suji leaves and spice commodities, fig fruit commodities, ear mushroom commodities, and leafhopper leaves. The variety of gardens here is very complete, in addition to this school garden is also accompanied by a catfish pond. The length of plant growth varies greatly, the plants that have been harvested for the longest time in the garden are avocados while the fastest and easiest are spinach and kale.

Partner Schools have carried out and participated in training and cooperation with NGTS *training "Nutritionist goes to School"* by the Tasikmalaya Ministry of Health Polytechnic and SEAMEO and the Environment Agency training. The maintenance of the school garden program is carried out routinely with daily control, in the maintenance of the garden all school residents participate in contributing from the principal, teachers, students, school guards, and all other school residents. The school has created a management team structure responsible for hydroponics and aquaponics consisting of teachers and students.

Funding for this school program comes from several sources. For the procurement of plant seeds, fish seeds, and facilities and infrastructure for this program, the school collaborates with several related institutions such as DPPKP, DLH, PUPR, and the local RW 07 in the context of waste utilization. Meanwhile, for maintenance, the source of funds used comes from the boss's fund and funds that have been prepared by the school.

The use of the harvest of this program is used for consumption by teachers and staff with students (usually a meal is held between teachers and students when the harvest time arrives), sold in fresh form for oyster mushroom or ear mushroom plants, and used as processed products. The school has made processed products derived from oyster mushrooms. Oyster mushrooms are processed and made into crispy mushrooms and the final result is resold to students or teachers at a low selling price of Rp. 5000 for one kilogram of crispy mushrooms.

The school garden at SMP N 7 has been pioneered by empowering teachers and students, all of whom play an active role in maintaining their school gardens. Local plants in the school garden at SMP N 7 consist of hydroponic plants such as pokcoy, kale, mustard greens, celery are also planted with eggplant, tomatoes and chili peppers in the school yard in front of the classroom. In addition, the junior high school also has a fish pond such as tilapia in the front yard of SMPN 7. This

school has also cultivated oyster mushrooms and has processed oyster mushrooms into oyster mushroom chips. The potential for local foods to be used as processed are tilapia, pokcoy, and oyster mushrooms.

Based on the results of field observations in the form of surveys, data to support school gardens was obtained. This survey was carried out on Wednesday, June 9, 2021 at SMP Negeri 5 with the name of the school garden, namely the Toga garden. The purpose of the establishment of the garden is to utilize the local wisdom of the school so that it is productive and can provide results as a consumption material for school residents who have been established since 2016 and the current person in charge of the garden, Mr. Maman, is assisted by the performance of students, but due to the COVID-19 pandemic conditions, this garden is less effective and is not maintained as it should. Plants planted in the school garden include pokcoy, kale, chili, manga fruit, guava fruit, and the most familiar commodity in this garden is breadfruit. The length of plant growth varies, the plants that have been harvested for the longest time in the garden are breadfruit while the fastest and easiest are spinach and kale.

This school has carried out and participated in training and cooperation with NGTS training "*Nutritionist goes to School*" by the Tasikmalaya Ministry of Health Polytechnic and SEAMEO as well as the training of the Environment Agency. The maintenance of the school garden program is carried out routinely with daily control, in the maintenance of the garden all school residents participate in contributing from the principal, teachers, students, school guards, and all other school residents. The maintenance of the garden program is taken from school allowance funds or School Operational Assistance (BOSS). The use of school garden products is in the form of crops consumed for school residents and no sales products have been produced. The school garden in SMP N 5 consists of a school garden in the form of hydroponic plants such as kale, pokcoy and mustard greens as well as perennial plants such as breadfruit and mango trees. So far, the results of the school garden have been used and processed in *cooking class* activities and eating with school residents. The most likely potential to be developed as a processed food for local food is pokcoy and breadfruit from the school's garden.

The school garden at SD Sidamulya has existed since 2016 and has 1 (one) person in charge, namely the school guard. In addition, principals, teachers and students also play an active role in maintaining the school garden. Plants in the school garden are pokcoy, kale, Japanese papaya leaves, moringa, avocado, noni and guava. The results of the school garden have been used for teachers and students so far; *Cooking Class* activities, cooking and eating together.

The school garden at SD Pahlawan has existed since 2013, and there is 1 (one) person responsible. In addition to the person in charge, the principal, teachers, and students also participate in the maintenance of the school garden. The plants in the school garden are various, namely spinach, kale, chili, moringa, noni, manga, guava fruit, banana tree, and catfish pond. The results of the school garden have been used by teachers and students until now, including cooking and eating together.

## 2. Education for teachers and students at partner schools on:

### a. Healthy, nutritious local food/food

The community service team carried out mentoring activities at SMP N 7 in June 2021, the event was packaged in an activity with the theme "Building nutrition

for an outstanding healthy nation". The activity began by preparing to send a video about the processing of various nuggets based on school garden products. The educational activities carried out at SMP N 5 in July 2021 were packed with outdoor cooking classes. At SD Sidamulya and SD Pahlawan in September and October. This is adjusted to the schedule at partner schools. In this mentoring, the Community Service team provided education through video screenings accompanied by explanations and questions and answers.

Before the video screening, a pre-test was carried out and after the completion of the post test was carried out regarding the material shown in the video. The video shown is the use of school garden products in the form of vegetables and fish in the form of nuggets. This nugget is socialized because nuggets are one of the foods that children love and are easy to make. In addition, these nuggets have a good value because they have been modified with additional fiber and vitamins (there are additional vegetables) and can be stored for a relatively long time in the *freezer*. Nuggets also have a good selling value if they are produced and managed properly.

The results of the pre test and post test show that there are several criteria, most of which have increased their knowledge scores compared to the beginning, although there are some and fixed and there are a small number that have decreased their scores. Based on the results of the question and answer, this decrease in score is due to the fact that the teachers have experienced fatigue because it is done after learning so that they lack concentration. From the results of the pre and post tests obtained in SMP N 5, from all students who experienced an increase of = 9 (60%) people, 2 (13.3%) people decreased and 4 (26.7%) people were the same

#### **b. Utilization of nutrient garden products in schools**

The results of the school garden, both at SMP N 7, SMP N 5, SD Sidamulya and SD Pahlawan, have been used by teachers and students in the form of cooking and eating together. In this case, SMP N 7 and SMP N 5 schools have used school garden products such as making crispy mushrooms, stir-fried pokcoy vegetables, kale and sponge made from breadfruit, emprit ginger drinks, sweet and sour fish. Sidamulya Elementary School and Pahlawan Elementary School have not made durable products or products that can be sold to school residents, both teachers or students and the surrounding community.

The community service team provides education so that the use of school gardens is not only for teachers and students, but can also provide added value/economic value for schools in the form of product innovation. The suggested product innovation is the use of existing school garden products or in accordance with those produced by each school garden. Thus each school has specific product innovations. This activity is carried out in conjunction with education on healthy, nutritious local food/food and the process of making it.

### **3. Assistance**

The mentoring activities were carried out by the Cirebon Nutrition Study Program Lecturer Team and Tasikmalaya Nutrition Study Program. This activity is carried out in June, July, September and October, because it adjusts to the school agenda. In this activity, SMP N 7 and SMP N 5, made processed nuggets made from tilapia, vegetable pokcoy and carrots as well as chicken nuggets and carrot vegetable pokcoy. Meanwhile, SMP N 5 makes processed nugget products made

from catfish and breadfruit, pokcoy vegetables and carrots. And chicken nuggets made from chicken, vegetable pokcoy and carrots.

The innovations carried out at SD Sidamulya and SD Pahlawan made product innovations that were in accordance with the results of the school garden after receiving education at the previous time. Innovation was carried out at SD Sidamulya by making pudding using a mixture of pandan leaves. This pudding does not use additional dyes, but it is still attractive due to the green color of the pandan leaves. In addition, there is a drink made using avocados grown in the school garden in the form of avocado juice. This avocado juice is great for schoolchildren to consume because it contains a lot of vitamins and minerals. In addition, it also has a fresh taste and attractive color, so it is expected to reduce the consumption of school children in packaged drinks that contain dyes, preservatives and artificial sweeteners.

SD Pahlawan innovates by utilizing catfish from fish ponds and noni leaves. The products made are rolled omelette filled with fish and vegetables and noni leaf urap. Rolled omelette is made with catfish meat that has been separated from the spines as a source of animal protein, coupled with tofu as a source of vegetable protein and chickpeas and carrots as a source of vitamins, minerals and fiber. This omelette produces a great taste, good color combination and attractive shape. It is hoped that this can be used as one of the snacks or side dishes for students. Noni leaf urap is made with the addition of other vegetables such as bean sprouts and carrots to produce a balanced color combination. These noni leaves are harvested from school gardens, and there is no bitterness because there is already a boiling process. This urap can also be used as an alternative vegetable for students.

Acceptability Test of Local Processed Food Products Based on School Garden Products. The acceptance test of processed nugget products is in the form of giving samples to respondents then each respondent can fill out a questionnaire containing a choice of fillings in the form of likes/dislikes for the product consumed at that time. Then all scores will be calculated based on the number of likes and dislikes on the product, the product that has the highest like score means that it has the best rating and acceptability based on the respondent's assessment.

The taste test with a type made from chicken with breadfruit was attended by 19 consisting of students, representatives of the education office and the food security service. The taste test with catfish-based types with breadfruit was attended by 17 students, 1 person from the education office, 2 people from the food security office. The results of the taste test of chicken-based types with breadfruit, pokcoy vegetables and carrots were followed by 19 participants, the taste, color, and texture were obtained from likes (68.4%), somewhat liked (31.5%), disliked (0%).

The results of the taste test of catfish-based nuggets with breadfruit were followed by 19 participants, obtained from the taste, color, and texture obtained from likes (73.7%), somewhat likes (21.1%), and dislikes (5.3%). After conducting a mind test accompanied by representatives from the education office, they provided reinforcement on the use of local food, especially breadfruit-based, which is increasingly bold and full of creativity.

#### **4. Monitoring and Evaluation**

Evaluation activities are carried out at the end of the activity to see the progress of the implementation of the educational activities that have been carried

out. Monitoring is carried out every 2 weeks by communicating with both schools of SMP N 7, SMP N 5, SD Sidamulya and SD Pahlawan. Based on monitoring, each school has continued to provide education to its students. Even students were invited to cook together to make nuggets as had been done by the Cirebon Nutrition Study Program Community Service team. The making of nuggets by the students was also made in the form of a video, so that it would be disseminated to other students.

The evaluation was carried out at the end of the activity based on the stages of the activities carried out, both SD Sidamulya and SD Pahlawan were able to participate in the activities well. The two elementary schools were ultimately able to make product innovations and make them in the form of videos. The videos that have been made by each school can be used as educational materials for students and parents to have insight into the knowledge of using school garden products and gardens in their respective homes properly. The community service team gave appreciation to the school, among others, by providing a little assistance for the activity, giving various books of various Nugget Recipes made from local food based on school garden products. This nugget recipe has been tested by the Community Service Team and provided a video soft file so that it can be disseminated to students and parents as an educational medium. The sustainability of this PKM program is with the involvement of nutrition study program lecturers in training activities and education and training for Adolescent Health cadres (KKR) with material on nutrition for school children.

## **CONCLUSIONS AND SUGGESTIONS**

### **A. Conclusion :**

1. The role of school principals, teachers, employees and managers of the NGTS program in each school is very large in the sustainability of the NGTS program, especially in maintenance activities for school gardens.
2. Each school has the potential of local food. In SMPN 7, there are tilapia, oyster mushrooms and pokcoy, while SMPN 5 has the potential to be breadfruit and pokcoy and ginger vegetables. The potential food ingredients at SD Pahlawan are catfish and kale, while at SD Sidamulya are pokcoy, avocado, and moringa.
3. After education such as video screenings and training on the nugget-making process, teachers and students at partner schools already know and are skilled about how to make healthy and nutritious nuggets.

### **B. Suggestion**

The suggestions that can be conveyed in this final report are expected to be followed up on mentoring activities like this to increase the creativity of teachers and students in processing local food from school gardens in other processed forms and increase cooperation with related agencies.

## **BIBLIOGRAPHY**

Bergamaschi, V., A. Olsen, M. Laureati, S. Zangenberg, E. Pagliarini, W. L. P.

Bredie. 2016. Variety in Snack Servings as Determinant for Acceptance in School

Children. Journal. Appetite, Vol 96 pp 628-635

Cahyadi, S. (2006). *Analysis and Health Aspects of Food Additives*, Cet. 1, Jakarta: Bumi Aksara.

Damayanti, Didit Muhilal, *Balanced Nutrition for Elementary School Children*. Jakarta EGC, 2006.

Directorate General of Basic Education of the Ministry of National Education. (2011). *Guide to Healthy Canteens at School*, Jakarta.

Dainur. (1995). *Subject Materials of Public Health Sciences*, Jakarta: Widya Medika.

Mukono. (1999). *Basic Principles of Environmental Health*, Surabaya: Airlangga University Press.

Nasir, Syifa Qolbiyah. 2018. Development of Corn-Based Extrusion Products, Winged Bean Sprouts and Winged Bean Sprouts as Healthy Snack Alternatives for Children Aged 7-9 Years. Thesis. Department of Agricultural Product Technology, Faculty of Agricultural Technology, University of Brawijaya, Malang.

Notoatmodjo, Soekidjo. (2003). *Health Education and Behavior*. Jakarta: Rineka Cipta.

Government Regulation Number 19 of 2005 concerning National Education Standards (SNP).

Raudatina. 2011. Overview of Local Food Consumption at Household Level in Fishing Village, North Hulu Sungai Regency in 2010. Thesis. Nutrition Study Program, Husada College of Health Sciences Borneo Banjarbaru.

Law Number 23 of 1992 concerning Health

Yulia, Cica. 2017. Revitalization of Supplementary Feeding and Integration of Nutrition Education Based on Local Wisdom in Schools as an Effort to Improve Nutrition of School-Age Children. *Education, Nutrition and Culinary Media*, Vol 6, No 1.