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## Business Expansion Efforts Through Empowering Business Groups With Lee Min Book

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### Abstract

Cileng Village is one of the villages located in the eastern part of Alas Tuwo Village, Poncol District, Magetan Regency with an area of 6.02 km<sup>2</sup>. The livelihoods of the population include Indonesian workers, village officials, vegetable traders, farmers, farm workers, and teachers. For residents who have higher education they tend to work outside the region, so the real situation that appears there are many people who depend on the agricultural sector. Wages as farm laborers are varied, ranging from Rp. 25,000 – Rp. 45,000/person/day. For one harvest period (4 months) it takes approximately 1 week of work. If on average a farm laborer earns between IDR 175,000 and IDR 315,000/person/week, this is very far from the word prosperous, so there needs to be a real movement from the PKK mobilizing team to provide alternative businesses for residents and their members. Through the Community Service (PKM) program funded by LPPM Universitas PGRI Madiun in 2019, training on recycling bottled beverage waste into women's bags was held as a program to foster an entrepreneurial spirit, whose activity targets were PKK women. Entrepreneurship ability based on creative industries in the form of bag crafts made from plastic bottle lips turned out to be effectively applied because it was able to become an alternative income for PKK members. For one bag, it costs IDR 50,000 – IDR 80,000 depending on the voring and the complexity of making. The raw material in the form of plastic bottle lips is quite easy to obtain from the waste bank in the village and from plastic waste collectors on the border of Alas Tuwo Village. Other raw materials such as voring, zippers, buttons, macrame rope, beads, and other decorations are also easy to get from several sewing equipment shops in Plaosan sub-district.

**Keywords:** Business Legality; Simple Bookkeeping; Group Business Marketing

### INTRODUCTION

Cileng Village is one of the villages located in the eastern part of Alas Tuwo Village, Poncol District, Magetan Regency with an area of 6.02 km<sup>2</sup>. The livelihoods of the population include Indonesian workers, village officials, vegetable traders, farmers, farm workers, and teachers. For residents who have higher education they tend to work outside the region, so the real situation that appears there are many people who depend on the agricultural sector. Wages as farm laborers are varied, ranging from Rp. 25,000 – Rp. 45,000/person/day. For one harvest period (4 months) requires processing time of approximately a week. .. If on average a farm laborer earns between IDR 175,000 and IDR 315,000/person/week it is very far from the word prosperous, so there needs to be a real movement from the PKK mobilizing team to provide alternative businesses for residents and their members. Through the Community Service (CSP) program funded by LPPM Universitas PGRI Madiun in 2019, a training on recycling bottled beverage waste into women's bags was held as a program to foster an entrepreneurial spirit, whose activity targets were PKK women.. Entrepreneurship ability based on creative industries in the form of bag crafts made from plastic bottle lips turned out to be effectively applied because it was able to become an alternative income for PKK members. For one bag, it costs IDR 50,000 – IDR 80,000 depending on the voring and the complexity of making. The

raw material in the form of plastic bottle lips is quite easy to obtain from the waste bank in the village, and from plastic waste collectors on the border of Alas Tuwo Village. Other raw materials such as; voring and zippers. Cileng Village is one of the villages located in the eastern part of Alas Tuwo Village, Poncol District, Magetan Regency with an area of 6.02 square km. The economic activities of the population include Indonesian workers, village officials, vegetable traders, farmers, farm workers, teachers. For residents who have higher education they tend to work outside the region, so the real situation that appears there are many people who depend on the agricultural sector for a living. Wages as farm laborers are varied, ranging from Rp. 25,000 – Rp. 45,000/person/day. For one harvest period (4 months) it takes approximately 1 week of work. If on average a farm laborer earns IDR 175,000 IDR 315,000/person/week. This is very far from the word prosperous, so there needs to be a real movement from the PKK mobilizing team to provide alternative businesses for residents and their members. So through the Community Service (PKM) program funded by LPPM PGRI Madiun University in 2019, training on recycling bottled beverage waste into women's bags was held as a program to foster an entrepreneurial spirit, whose activity targets were PKK women. The ability to entrepreneurship based on creative industries in the form of bag crafts made from plastic bottle lips turned out to be effectively applied because it was able to become an alternative income. For one bag, it costs IDR 50,000 – IDR 80,000 depending on the voring and the complexity of making. While the raw material in the form of plastic bottle lips is quite easy to obtain apart from the waste bank in the village, also obtained from plastic waste collectors on the border of Alas Tuwo Village. Raw materials such as voring, zipper,



Figure 1. Recycled Bags from Plastic Cup Lips

The survey results obtained that the bag production process uses a by-order system (order based production/production based by order), the capital for the production process uses family welfare program fresh money and there is no good recording, marketing is also limited to the surrounding community. Therefore, the group requires assistance in business management, business legality and bookkeeping through the community service program, through mentoring and development of Le Min Book (Legality, Business Management and Bookkeeping) as a form of sustainability from the empowerment program in the previous year. This activity is in line with the goals of the PKK movement, namely improving the community's economy through UP2K (Efforts to Increase Family Income), FBK (Family Based Enterprises) and reducing plastic waste, empowering independent villages, and improving the regional economy at the spearhead of regional development.

## COMMUNITY OVERVIEW, PROBLEMS AND PROBLEM SOLUTIONS

### General description

Cileng Village is one of the villages located in the eastern part of Alas Tuwo Village, Poncol District, Magetan Regency with an area of 6.02 km<sup>2</sup>. The livelihoods of the population include Indonesian workers, village officials, vegetable traders, farmers, farm workers, and teachers. For residents who have higher

education they tend to work outside the region, so the real situation that appears there are many people who depend on the agricultural sector. Wages as farm laborers are varied, ranging from Rp. 25,000 – Rp. 45,000/person/day. For one harvest period (4 months) requires processing time of approximately a week. .. If on average a farm laborer earns between IDR 175,000 and IDR 315,000/person/week it is very far from the word prosperous, so there needs to be a real movement from the PKK mobilizing team to provide alternative businesses for residents and their members. Through the Community Service (PKM) program funded by LPPM Universitas PGRI Madiun in 2019, a training on recycling bottled beverage waste into women's bags was held as a program to foster an entrepreneurial spirit, whose activity targets were entrepreneur group welfare women organization



Figure 2. Abdimas Batch I Activities and Place of Implementation

### Problem

The survey results found that the bag production process still uses the by-order system (production based by order), the initial capital used for the production process uses PKK fresh money and there is no good record-keeping, and the marketing system is also limited to the surrounding community.

### Target solution

Based on the general description and problems found, it can be concluded that the creative economy activity initiated by the Cileng Village PKK group still needs assistance in business management including marketing, business legality and bookkeeping. This assistance through the program of Le Min Book (Legality, Business Management and Bookkeeping).



Figure 3. Signing agreements with partners

### METHOD

The measurement in this community service is using development method through entrepreneurship training and developing business bookkeeping models and developing marketing strategies. The targets of this activity are non-economic groups, namely the PKK women's group in Cileng Village, Poncol District, Magetan Regency and some community leaders. The instrument used is a descriptive observation check list, pre and post activities. :

a. Planning

This stage consists of activities involved team coordination, identifying criteria, planning training and mentoring, planning for program implementation evaluations as well as planning an agenda for preparing reports, submitting activity reports and planning plans for writing scientific articles in national journals.

b. Conducting Coordination Meeting

At this stage, the team conducts a team task distribution meeting, scheduling coordination meetings aimed at carrying out this activity, starting from preparation, implementation and evaluation, preparing reports and submitting reports and writing articles according to the plan that has been set.

c. Preparing PKK Partners in Cileng Village

d. The determination of partners in PKM activities involves some criteria such as: having high willingness, ability and enthusiasm, having high commitment and loyalty, being physically and mentally healthy being a PKK member who are willing to participate in the mentoring and training program from beginning to end. Training

Training is a method that is given in order to provide knowledge and certain things that are brought by a trainer (Gendro Salim, 2010). The Training Method is divided into 2 (two) parts as follows:

a) Part 1 (one) training : Creativity and innovation training is aimed at enabling partners to have creativity and innovation power. In the creativity training partners are given an overview of ways to create new ideas, training to find new ways to address problems and take advantage of business opportunities in the field of making and decorating women's bags. While in innovation training partners are trained to be able to apply new ideas, especially in designing women's bag product brands.

b) Training part 2 (two): Business management training includes business legal assistance and simple bookkeeping training.

c) Accompaniment (assistance??)

The companion (assistance) method is intended so that partners can apply or implement the results of the training approach method (Masita, E. D., Maimunah, S., & Abidah, S. N., 2020). In this case, mentoring includes mentoring for creativity and innovation and mentoring in management. In this mentoring approach, partners are accompanied by a team and mentoring staff, which is intended so that partners can apply the results of the training with guidance and direction from mentors at partner locations, so that empowerment of the PKK group of women in Cileng Village can be achieved.

## RESULTS AND DISCUSSION

### 1. Entrepreneurship training

This training aims to foster creativity, innovation and new ideas and take advantage of business opportunities, especially in the field of brand design, brand names and product characteristics



Figure 4 the results of creativity and innovation in logo design and business profiles

Logo design is adapted from the philosophy of the handcrafted brand, namely AMOOR which means blending. This logo or trademark, will be a differentiator between the handwork produced by partners and

competitors. On the other hand, the PKM team also helps to register trademarks, in order to have brand legality. The meaning of the logo:

- a. The hand drawing symbolizes that this product is the handmade of the women of the PKK group in Cileng Village.
  - b. The image of Water symbolizes life, which means this hand-processed product flows blessings.
  - c. The Yellow and Blue colors symbolize the relationship between partners and the UNIPMA community service team
2. Business management training which includes business legal assistance, marketing and simple bookkeeping training.

According to (Hadiyati, 2008.) marketing is the main problem faced by SMEs, namely related to marketing and product competition, access to market information and supporting institutions for small businesses.

This PKM activity is expected to be a solution to those problems, one of which is by using brands on products owned by producers, so that products can be known by consumers and ultimately can compete in the market.

This PKM partner does not yet have business legality, so it is necessary to hold socialization on the importance of this legality, and assistance in its management. Socialization is done by sharing knowledge about the legality of MSMEs. Previously, the PKM team formed an organizational management structure which later this management was used as the responsibility center for business activities. Then the licensing assistance is integrated electronically through [www.oss.go.id](http://www.oss.go.id). After obtaining the legality of the business, it is hoped that partner businesses can be more competitive in the midst of the global era, and are trusted by consumers as good and worthy products. PKK Group Craftsman Management Structure:

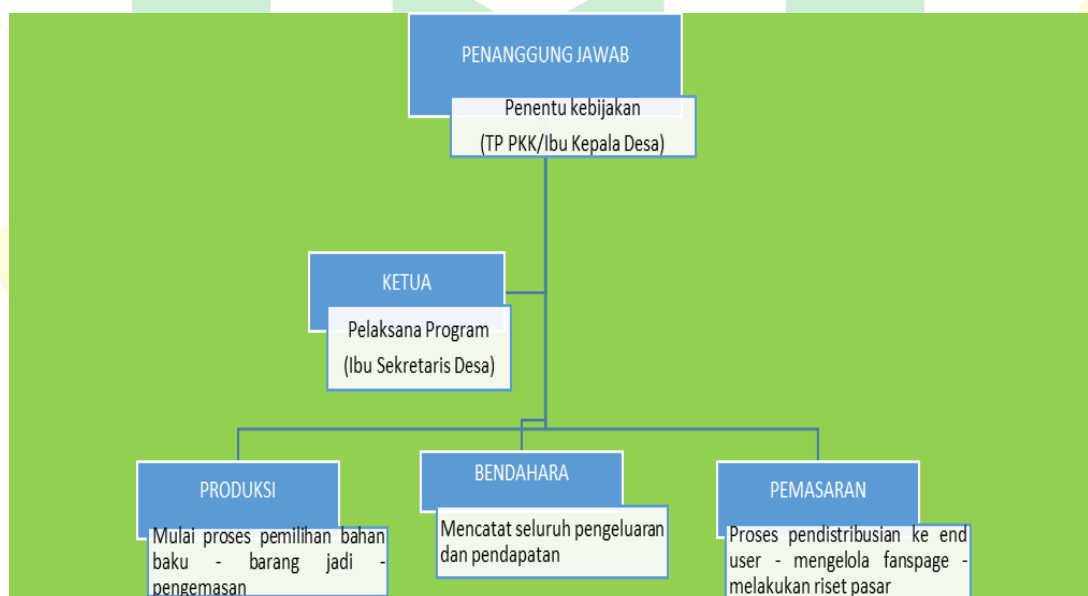


Figure 5 Management Structure

According to (Mia Ajeng, 2018) more adequate marketing training is through the introduction of e-commerce or market places and social media as a means of marketing. Meanwhile (Wijaya, 2014) states that today the number of internet users has increased significantly, thus attracting producers to use this media in marketing their products. Online marketing media makes it easier for consumers to reach producers. Prior to this activity, the partner group only relied on promotion through “getok tular”. Partners are given socialization, training and assistance in marketing products offline and online. The intended online marketing is by utilizing information technology and social media applications, namely through: 1) business instagram; 2) Facebook fan page. The activities mentioned above are carried out to reach the increasing market, by marketing products through tourist



attractions around Poncol District, as well as having the skills to market products online. Online marketing media introduced to PKM partners through training were Instagram business and social media through Facebook. To make it easier for consumers to recognize the products produced by partner groups, a name was created for the account, namely amoor\_id. Through the use of more modern marketing technology, PKM partners can be more easily inform the public their products and increase network with consumers.

Partners are given education, training and assistance in implementing simple financial bookkeeping in their businesses. This training material covers the bookkeeping of financial transactions, both expenditure and income. The purpose of this training is partners have an understanding of the basic concepts of simple financial bookkeeping, so that they have neat financial statement records related to expenditure and income transactions, and finally partners can find out the profit and loss of operations in a certain period.

On the other hand, partners are also given training on how to determine the cost of goods sold and bookkeeping daily financials in a simple way.

From the results of field observations, the PKM team tried to give quizzes related to financial recording materials, from 10 participants 4 of them answered correctly. So, this can be concluded that training and assistance in simple financial bookkeeping is very beneficial for the business continuity of partner groups.

## CONCLUSIONS AND SUGGESTIONS

The service activity program is able to improve entrepreneurial knowledge and skills in the aspects of creativity, product identity, marketing and business finance

## ACKNOWLEDGMENTS

Profound gratitude for the blessing of Allah azza wa jala, so that this community services programe can run smoothly. A big thank you to: 1) LPPM Universitas PGRI Madiun who has supported from various aspects for the realization of this community services programe, 2) Head of Cileng Village, Poncol District, Magetan Regency and his staff who have been open to accepting the community services programe team, 3) Team members of community services programe and participants who have been together during the program

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## Development of Various Processed Bananas in Murung Raya Village Banjarmasin, South Kalimantan

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### Abstract

Based on the survey, it was found that most of the women who manage banana fruit snacks can help to improve the family's economy and make banana chips a superior product in Murung Raya Village, experiencing problems in the management, product, marketing and productivity management areas. The purpose of this activity is to increase knowledge, skills in the field of product management in a safe and healthy manner, online marketing so as to increase family income. . The approach used was community development through training and assistance to economically productive partners, namely the group of women who manage banana processing. The instrument used a check list. The analysis used a descriptive qualitative. The results of the service show that there is an increase in knowledge, skills in product management, packaging, online marketing and an increase in family income. marketing, The community development approach is able to change the knowledge, skills, skills, communication and behavior of partners in managing entrepreneurship effectively and efficiently.

**Keywords:** community empowerment, product innovation, family economy

### INTRODUCTION

Based on the survey, it was found that most of the women who manage banana fruit snacks can help to improve the family economy and make banana chips a superior product in Murung Raya Village. These various processed bananas can be produced 40-50 kgs of banana chips every week at a price of Rp. 35.000/kg packed in transparent plastic, 35 packs of crispy bananas at a price of Rp. 18.000/pack, and 6 pans of banana bread at a price of Rp. 75.000 / pan. Frequently, the packaging of banana chips and crispy bananas damaged and leaks when they are in traditional stalls or when in the process of product packaging. This is due to the plastic wrapping for banana chips is thin plastic, not plastic specifically for dry foods such as banana chips. For the packaging of crispy bananas using mica plastics which are glued using only stepless. The activities starting from processing raw materials, packaging production, and marketing are carried out manually. Packaging using thin plastic then manually pressed using a candle flame to make it airtight, there is no product name so it cannot be marketed abroad or marketed in business franchises such as minimarkets, rather the products are only sales in traditional stalls, schools' canteen in the Kelurahan Murung Raya, or during religious events such as Eid al-Fitr and New Years. Therefore, most of the community wishes to have assistance and training on aspects of product design development so that they can develop production businesses, especially online packaging and sales, management and health-based management of processed bananas.

## GENERAL DESCRIPTION OF THE COMMUNITY, PROBLEMS AND TARGET SOLUTIONS

### General Description

Murung Raya Village is located in the South Banjarmasin District, Banjarmasin City, South Kalimantan Province. The total population in 2019 was 13,587 people, consisting of 6,092 males, and 6,662 females. In the north it is bordered by Kelayan Dalam Village, in the east by the Antasan River, Pemurus Baru Village and Pekapuran Raya Village, East Banjarmasin District. To the south, it is bordered by the Kelayan Antasan River, Tanjung Pagar Village, and to the west by the Kelayan River, East Kelayan Village. Partners in this community service are a group of economically productive mothers, namely banana snack managers located in Murung Raya Village, South Banjarmasin District, Banjarmasin City, South Kalimantan Province

Table 1 Characteristics of activity targets

No.	Employment	Male	Female	Total
1	Does not work	2325	2058	4383 soul
2	Taking care of household	0	3104	3104 soul
3	Student/Student	866	704	1570 soul
4	Retired	16	7	23 soul
5	civil servant	57	26	83 soul
6	TNI	6	0	6 soul
7	Police	3	0	3 soul
8	Trading	59	33	92 soul
9	Farmer	23	7	30 soul
10	Breeder	4	1	5 soul
11	Fisherman	1	0	1 soul
12	Construction	2	0	2 soul
13	Transportation	6	0	6 soul
14	Private sector employee	571	173	744 soul
15	BUMN employees	2	1	3 soul
16	BUMD Karyawan employees	2	0	2 soul
17	Honorary Employee	19	28	47 soul
18	Freelance	915	59	974 soul
19	Farm workers	19	3	22 soul
20	Fisherman Buruh	2	0	2 soul
21	Stockman	2	1	3 soul
22	Barber	5	0	5 soul
23	Electrician	2	0	2 soul
24	Bricklayer	17	0	17 soul
25	Carpenter	35	1	36 soul
26	Cobbler	3	0	3 soul
27	Welder	5	0	5 soul
28	Tailor	10	17	27 soul
29	Hairdresser	3	0	3 soul
30	mechanic	13	0	13 soul
31	Physician	1	0	1 soul
32	Imam of the Mosque	1	0	1 soul
33	chaplain	4	0	4 soul
34	Cook	2	0	2 soul
35	Members of the House of Representatives	1	0	1 soul
36	Lecturer	1	1	2 soul
37	Teacher	16	35	51 soul
38	Midwife	0	2	2 soul
39	Nurse	3	6	9 soul
40	Radio announcer	1	0	1 soul

41	Sailor	1	0	1 soul
42	Driver	27	0	27 soul
43	Broker	1	0	1 soul
44	Trader	127	108	235 soul
45	self-employed	1746	276	2022 soul
<b>Total</b>		<b>6.925</b>	<b>6.662</b>	<b>13.587</b>

Source: Murung Raya Village Office (2019)

### Problems

The economic sector in the aspect of managing banana processed products as a superior product

### Target solutions

Assistance in the development of banana processing was carried out through training activities which includes: product name design training, marketing management, packing, and entrepreneurship management

### METHOD

Based on the problems that have been raised in this PKM activity, the implementation method used was a community development approach through discussion, training, mentoring on the concept of entrepreneurship and business management, making marketing system, packaging designs using social media / online to partners, simulation, observation, and interview,

The activities were carried out at the Mitra location which is located at Murung Raya Village, South Banjarmasin District, Banjarmasin City, South Kalimantan Province. The program goes through several stages

- 1) Preparation stage consists of a knowledge survey about the concept of entrepreneurship and business management in the management of various snacks from bananas, product safety and hygiene and the marketing system
- 2) Implementation phase includes the implementation of training and mentoring activities
- 3) The evaluation stage is carried out after all the activities have been completed by monitoring the activity output, namely knowledge, skills and family income

### RESULT AND DISCUSS

The results of Community Service activities include changes in activity achievement indicators including

Table 2 Indicators of pre and post activities

Activity achievement indicators	Pre	Post
Product design knowledge and skills	not enough	
Marketing reach	Limited to the nearest shop/shop village area	Entering the convenience store
Knowledge and skills to create an online marketing system	Not enough	good
Ability to use online marketing	Not enough	good
Entrepreneurship Management	Not enough	good
Safe and healthy entrepreneurial management	Not enough	good
Family Income	not enough	good

Table 2 explains that this activity of community empowerment has a positive impact on the target, especially in generating insight (knowledge and perception, religiosity) in interpreting life so as to foster positive behavior and participation motivation. These results are in line with research by Ananda, R. and Rosyidi, H. . (2021) and Masita, E. D., & Amalia, R. (2018) which explain that empowerment is a form of communication, counseling that is able to change adequate behavior.

Table 2 describes the changes in entrepreneurial management skills and the ability to use social media as a marketing medium. This condition due to training is a form of communication, counseling, good attitude, the

application of which is directly practiced so that it affects knowledge, confidence and skills Masita, E. D., Isnaini, Y., & Lestari, P. C. A. (2021)

## CONCLUSION & SUGGESTIONS

Community Service Activities in Murung Raya Village, South Banjarmasin District with the community development method are able to increase knowledge, skills and participation of targets, namely economic productive groups to develop products that have added value in Banjarmasin City, South Kalimantan Province. It is recommended that the group of women who manage various snacks from bananas in Murung Raya Village, South Banjarmasin District, Banjarmasin City, South Kalimantan Province to be more active in increasing sales of various processed snacks from bananas by promoting online partner empowerment as an effort to improve the family economy.

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## E-Book Development at Kebonsari III Elementary School Tuban City

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### Abstract

Information and Communication Technology (ICT) in education is one of the main supporters of educational services through the development of e-books. The purpose of this activity is to increase teacher competence in utilizing ICT to prepare the 21st century education system in facing the industrial revolution 4.0. This activity uses the community development method through training, mentoring and development in the preparation of e-book learning media. Instrument achievement of implementation indicators using pretest and posttest questionnaires for knowledge and skills of e-book development for teachers at Elementary School Kebonsari III Tuban. Analysis of the results of achievement using descriptive analysis of the average value and percentage. The average pretest results of participants' abilities in developing e-books are still less visible from the results of less than 11%, very less by 77%, enough by 6%, good 4% and very good by 2% . The average posttest results of participants' ability in developing e-books increased, namely very less and less by 0%, enough by 26%, good by 60% and very good by 14%.

The community development method is able to increase the knowledge and skills of teachers in developing e-book learning media

**Keywords:** Development, learning media, e-book, industry 4.0.

### INTRODUCTION

The development of information and communication technology has grown quite rapidly and has affected all aspects of life, including the education aspect. Society in the current era is more focused on knowledge, as a consequence, all aspects of life experience changes and paradigm shifts. This paradigm shift certainly demands a fundamental change in the 21st century education system. Information and Communication Technology in education is one of the main supporters of educational services. In realizing an independent, advanced, just and prosperous Indonesian society through strengthening the education system (human capital) and technological readiness (Bappenas, 2011).

Based on the above background, the progress of ICT must be followed by the ability of educators' resources in the using and developing of e-books as learning media. The survey results by the community service team showed that some teachers and administrators have not been able to utilize information technology as a learning medium, some and most of the internet/LAN networks do not yet have special software that supports learning activities and the lack of teachers' ability to create learning media independently .

Therefore, efforts are needed to increase knowledge and skills to develop learning media in the form of e-books. It is hoped that this training can be accessed by participants because it is carried out online.

### GENERAL DESCRIPTION OF THE COMMUNITY, PROBLEMS AND TARGET SOLUTIONS

#### Community overview

One of the teacher competencies is being able to utilize information technology to develop personal, pedagogical, social, and professional competencies in accordance with Permendiknas No. 16 of 2007



concerning Teacher Competence. This is the basis of the achievement of the golden generation in 2045 and makes smart, creative and innovative students become human capital in Indonesia's social and economic development. In line with that, (Sykes, 2014) states that the characteristics of intelligent education are classes that are equipped with the right tools and technology and facilitate growing knowledge needs. Mastery of information technology is part of the demands of teacher competence, both to support the implementation of their duties (planning, presentation of learning, evaluation and analysis of evaluation results) as well as a means to find and download learning resources.

### **Problem**

This activity is based on the results of previous research, the results show that teachers are still weak in the use of information and communication technology (ICT) media in the teaching and learning process (Rifdan, 2018). In line with the results of previous research, (Wernely, 2018) also stated that teacher competence was still low in terms of using ICT as a teaching medium. Based on the analysis of the situation above, the problems include: (1) the lack of ICT skills for teachers at Elementary School Kebonsari III Tuban, (2) there are still not many learning resources developed by teachers at SDN Kebonsari III Tuban.

### **Troubleshooting Solutions**

The target of community service is carried out by random sampling of all Public and Private Elementary Schools in Tuban District. Based on the technique used by the community service team, the school obtained is SDN Kebonsari III Tuban. SDN Kebonsari III Tuban is located at Jl. Brawijaya No.62, Kebonsari, Kec. Tuban. This school really needs to do community service in improving ICT because the school is surveyed in the field, most of the teachers are still less competent in the use of ICT even though this school is a school located in a city area. One of the uses of information technology and technology for learning media is through the development of e-books, so that in its implementation it requires planning and design. (Sulistyaningrum: 2019) which consists of four stages, namely: 1) define, 2) design, 3) develop, and 4) disseminate (Thagarajan, et al., 1974

### **METHODS**

The implementation of the service uses a community development approach with the aim of improving the skills of teachers to develop e-books as learning media through several stages. namely: (1) the preparation stage, and (2) the training implementation stage. In the preparatory stage, the things that were carried out included: (a) surveys to elementary schools in Tuban sub-district, Tuban district by distributing questionnaires about knowledge of learning resources, especially electronic learning resources, (b) determining locations and targets based on survey results, and (c) preparation of training materials/materials, which include: power point slides for e-book creation training activities. The survey to schools was carried out on September 2-20 2019, determining the location and target of community service on October 12, 2019, and preparing training materials/materials on October 14-11 November 2019. At the implementation stage, the things that were carried out included: (a) explanations related to e-books, (b) explanations related to the process of making e-books, (c) training on how to compile materials in e-books, (d) assistance in completing the preparation of learning materials in e-books, (e) evaluating on the results of training and mentoring. The implementation phase at Elementary School Kebonsari III Tuban was held on 18-19 December 2019.

The population of the target community service is teachers in public and private elementary schools in the Tuban sub-district. While the target sample for community service is Elementary School Kebonsari III with the consideration that because of the school's survey in the field, most of the teachers are still less competent in the use of ICT even though this school is a school located in a city area.

The e-book training for teachers at Elementary School Kebonsari III Tuban uses sigil software because sigil has the advantages of (1) it is free and open source with a GPLv3 (open source) license and no need to buy a

license to use it, (2) it is multiplatforms: can run on Windows, Linux and Mac, (3) multiple views: Book view, Code View and Preview, (4) it can directly edit the appearance of epub in book view, (5) table of contents generator with support for multi-level headings, (6) metadata editor, (7) it can not be corrupted, because the data is stored in the form of files, and (8) the publication process is cheap and easy to disseminate. After the implementation of the e-book development training, the community service team provided a questionnaire on the knowledge and skills of teachers in the use of ICT through analysis before and after the implementation of e-book development through pretest and posttest

## RESULTS AND DISCUSSION

The implementation of community service has a positive impact on partners which can be seen from the results of questionnaire after the implementation of the e-book development training, namely many participants answered strongly agreed that (1) the training materials provided were based on the needs of the participants, (2) the training methods used were appropriate for the type of training, (3) the ability of the training instructor in providing training was as expected, (4) participants had high enthusiasm in training, (5) training could provide refreshment of the mind for participants, (6) participants were able to absorb the knowledge given after attending the training, (7) participants are able to absorb the knowledge of skills given after attending the training, (8) there is relevance of learning with the training that has been carried out. Based on the eight statement items, the 5th item, namely training can provide a refresher of the mind for participants, gave the highest result of 81.82% and the 8th item, namely that there was relevance of learning with the training that had been carried out which gave the lowest result of 54.55%.

Overall the results of the questionnaire after the training obtained results as shown in Figure 1.

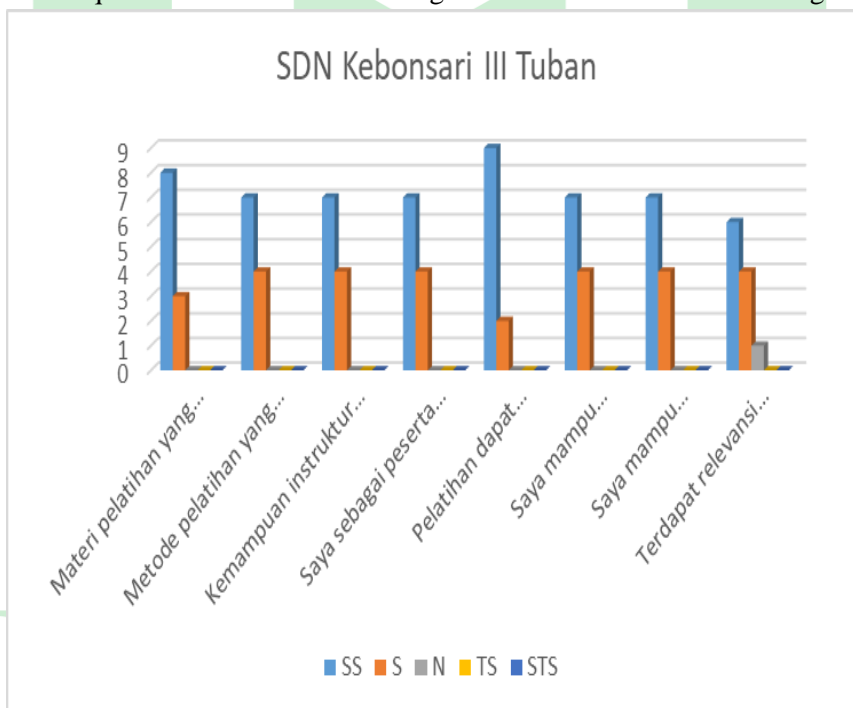


Figure 1. Response Results of E-Book Development Training Participant

The results of community service (Winata, et al., 2017), showed that the training participants showed high enthusiasm and gave a positive response. In line with that, the results of community service (Widiyanti, et al., 2017) show that training activities show a positive response from training participants both during question and answer and training including:

1. Improving knowledge and skills through the development of e-books.

To find out teachers' increase knowledge and skills in the use of ICT, pretest and posttest questionnaires were filled out. The results of the e-book development pretest can be seen in table 1.

Table 1. Results of the e-book development pretest

Material	Scale				
	1	2	3	4	5
Basic Microsoft word (Ms Word)	0	0	5	4	2
Convert Ms Word to Html	1	10	0	0	0
Install sigil	2	8	1	0	0
Inserting Html file into sigil	1	10	0	0	0
Make a cover with ppt	2	9	0	0	0
Create a table of contents disigil	1	10	0	0	0
Make a glossary disigil	1	10	0	0	0
Beautify the sigil	1	10	0	0	0
Installing ePub	2	8	1	0	0
Using e-books	1	10	0	0	0

In general, the prior ability of the trainees the e-book development training was not able to master the e-book development as seen in the average results of the e-book development pretest in Figure 2.

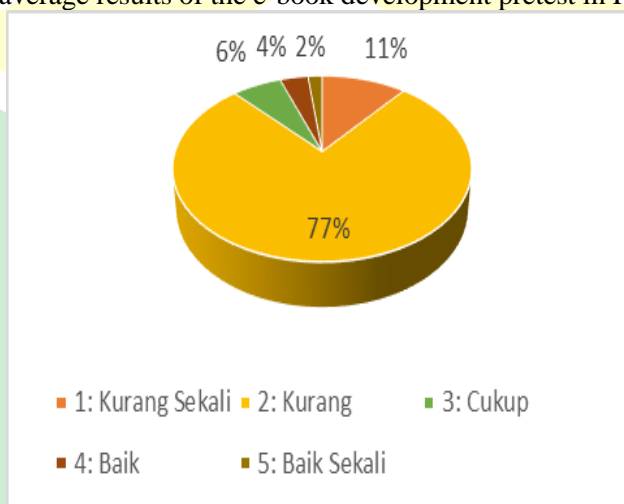


Figure 2. Average Pretest Results of e-book Development

The average pretest results of participants' abilities in developing e-books are still less visible from the results of less than 11%, very poor at 77%, sufficient at 6%, good at 4% and very good at 2%.

After 2 days of e-book development training, a posttest was given. The results of the posttest of e-book development can be seen in table 2.

Table 2. Posttest results of e-book development

Material	Scale				
	1	2	3	4	5
Basic Microsoft word (Ms Word)	0	0	2	5	4
Convert Ms Word to Html	0	0	3	7	1
Install sigil	0	0	2	8	1
Inserting Html file into sigil	0	0	3	7	1
Make a cover with ppt	0	0	1	8	2
Create a table of contents disigil	0	0	5	6	0
Make a glossary disigil	0	0	5	6	0
Beautify the sigil	0	0	5	6	0
Installing ePub	0	0	2	8	1
Using e-books	0	0	1	5	5

In general, the ability of the training participants before the e-book development training was carried out was not able to master the e-book development as seen in the average results of the e-book development pretes Figure 3

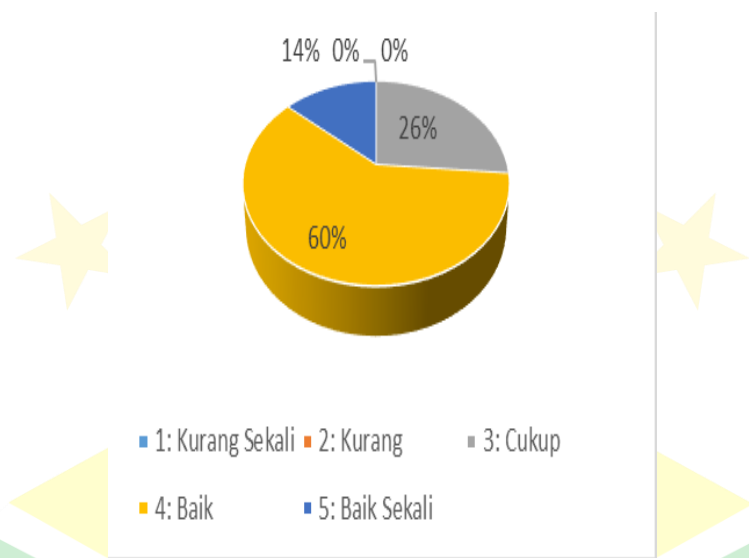


Figure 3. Average E-Book Development Posttest Results

The average posttest results of participants' ability in developing e-books increased, namely very less and less by 0%, enough by 26%, good by 60% and very good by 14%.

1. E-book innovation as a learning medium. The results of the e-book innovation by the participants can be seen in the pictures of the participants in the e-book development training on measurement materials. The following are the results made by participants as seen in Figures 4 and 5

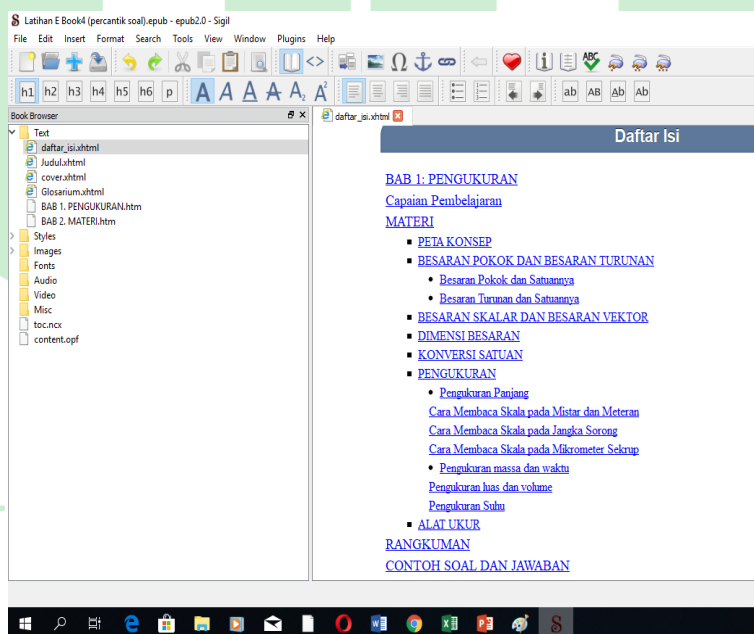


Figure 4. Results of the Participants' Table of Contents

It can be seen in Figure 4 that the training participants have been able to make a table of contents on the sigil application that has been taught by the Community Service Team. All participants have been able to practice making their own bibliography.

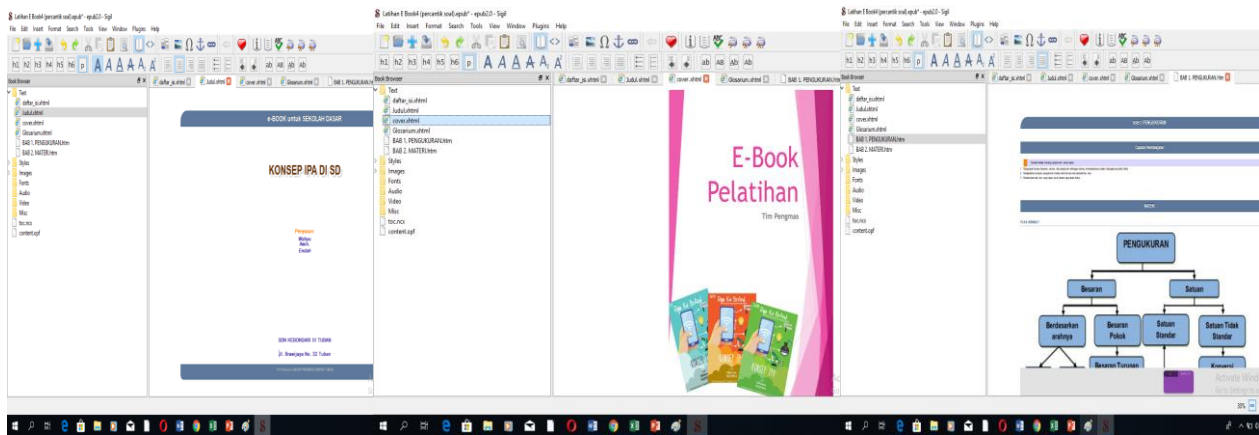


Figure 5. Results of Participant-Made Titles

It can be seen in Figure 5 that the training participants have been able to make a title on the sigil application that has been taught by the Community Service Team. All participants have been able to practice making their own titles. Not only that, some of the participants even modified it with a different look.

The training participants have been able to make a cover by making it on a power point that is entered in the sigil application that has been taught by the Community Service Team. All participants have been able to practice making their own covers and there are participants who modify it with other covers. The training participants have been able to make measurement materials on the sigil application that have been taught by the Community Service Team. All participants have been able to practice making their own material. There are participants who modify it by adding other material. Participants' e-book display that can be viewed in the Android application by installing ePub on the participant's Android cellphone and saving the sigil file that has been created on each participant's Android cellphone..

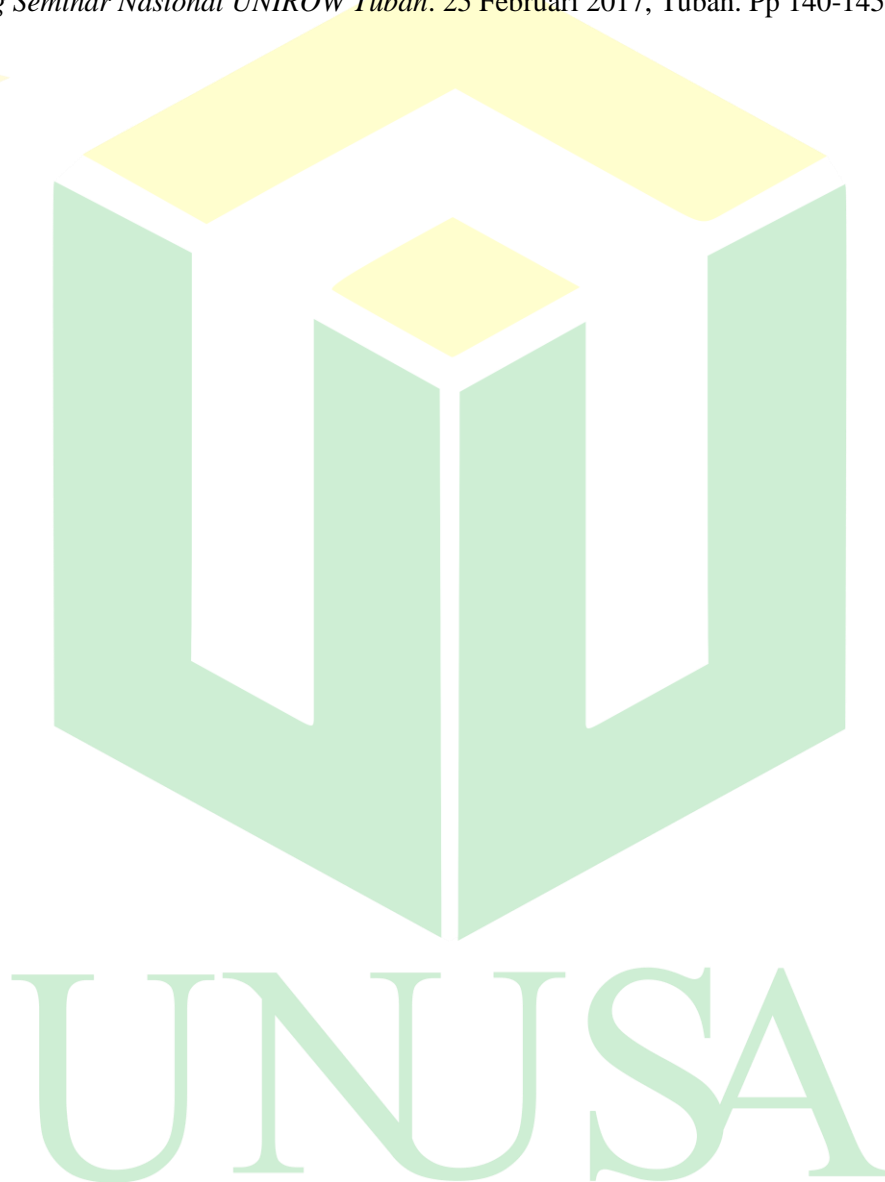
## CONCLUSION

The community service program carried out by the UNIROW Community Service Team was able to provide several results, including the creation of synergy between UNIROW and Elementary School Kebonsari III Tuban, the enthusiasm of the training participants with the results of the questionnaire of more than 50% as well as increasing the knowledge and skills of teachers at Elementary School Kebonsari III Tuban in developing e-books

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## Empowerment of Integrated Health Post Cadres through Fish Nugget Processing to Prevent Anemia in Pregnant Women

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### Abstract

Fish is a source of nutrition that is cheap and easy to get, especially in Jember Regency. One of the health problems experienced by teenage girls and pregnant women is anemia. Anemia can be prevented by consuming adequate and diverse nutrients. However, the society at Darungan *Dusun* (*Dusun* is lower than the village in Indonesia's administrative hierarchy) did not know how to make exciting and not boring processed food. Fish nugget is creations from tuna or catfish to increase fish consumption coverage in society. This activity was carried out in the Integrated Health Post at Darungan *Dusun* Kemuning Lor Village, Jember Regency. There were fourteen of the integrated health post cadres and pregnant women who participated in this activity. Community service methods used demonstrations and counseling. The counseling and demonstration of fish nugget processing improve knowledge in Integrated Health Post cadres and pregnant women. Furthermore, it can prevent anemia in pregnant women. There should be support and participation from the local government for the sustainability of this activity.

**Keywords:** Empowerment; Integrated Health Post; Cadres; Fish Nugget Processing; Anemia; Pregnant Women

### INTRODUCTION

Pregnancy is a physiological condition in women after fertilization (Ho, Flynn, and Pasupathy, 2016). A good pregnancy is a pregnancy that grows and develops without being accompanied by certain complications or diseases (Koenig, 2017). So, pregnant women must receive supervision during their pregnancy to avoid complications (Gebreweld and Tsegaye, 2018). One of the complications in pregnant women is anemia (Kamaruddin, Karlina, and Nurhayani, 2019). Anemia usually correlates with the nutritional status of pregnant women (Kamaruddin *et al.*, 2019).

The Integrated Health Post (*posyandu*) is a primary level service that becomes a reference for mothers in the community. It is an essential service as a community-based health effort best known in the community. It organizes at most minuscule five priority programs: maternal and child health, family planning, nutrition improvement, immunization, and diarrhea control. The percentage of the active cadre is one indicator that shows the participation and independence of the community in overcoming health problems that arise in its area. Didah (2020) explains that the existence of the Integrated Health Post cadres is essential in the promotive and preventive efforts to the community, especially related to the nutritional status of the community as well as maternal and child health efforts to help reduce the increase in maternal and infant mortality.

Integrated Health Post Cadres are movers in the integrated healthcare center playing an active role in mobilizing the community and helping to improve health status. According to Suhat and Hasanah (2014), the Integrated Health Post is very dependent on the cadres' role, who generally volunteers from the community. Cadres are selected from community members who have more abilities than others. One of the cadres' duties in the Integrated Health Post activities is to assist health workers in improving the health of pregnant women through examinations and counseling. Septiyaningsih *et al.* (2020) explain that cadres can provide motivation

or even education for high-risk pregnant women to routinely carry out routine pregnancy checks. Anemia is one of the complications of pregnancy that can occur at all levels of society. According to Nisa *et al.* (2019), it is a nutritional problem globally, especially in developing countries. Cadres should provide alternative solutions to this problem through modification in dietary habits. In many areas of Indonesia, pregnant women tend to consume less fish-based foodstuffs. This suboptimal consumption behavior of fish-based nutrients can result in an unbalanced nutritional intake (Hidayat, Maimun, and Sukarno, 2020). Meanwhile, all nutritional elements must be balanced during pregnancy, including folic acid, minerals, and iron (Nafsiyah, Nurilmala, and Abdullah, 2018). Malnutrition risks family nutrition, especially for adolescent girls and pregnant women (Zulhaida Lubis *et al.*, 2017). It is due to a lack of knowledge about nutrition in pregnancy (Kamaruddin, Jusni, and Amalia Sari, 2019). One of the risks caused by not meeting complete nutritional elements is anemia (Gebreweld and Tsegaye, 2018). Fish contains nutrients that the body needs to prevent anemia (Oh, Keats and Bhutta, 2020).

## GENERAL DESCRIPTION OF THE COMMUNITY, PROBLEMS, AND TARGET SOLUTIONS

### General Description

Partners in this paper were Integrated Health Post cadres at Darungan *Dusun* (*Dusun* is lower than the village in Indonesia's administrative hierarchy), Kemuning Lor village, Arjasa District. The number of active Integrated Healthcare Post at Kemuning Lor Village is eleven *posyandu* spreading over four *Dusun*; two *posyandu* at Krajan *Dusun*, two at Kopang Kebun *Dusun*, three at Darungan *Dusun*, and five at Rayap *Dusun*. Each integrated healthcare post has five cadres (Badan Pusat Statistik, 2018). The *posyandu* is carried out once a month with work programs including health services for pregnant women, immunization, toddlers growth and development monitoring, family planning, premarital counseling, and Maternal and Child Health (MCH) services. Geographically, Kemuning Lor Village is an agricultural village with future natural potential for regional economic development at the village level. According to Sugiartono *et al.* (2020), based on the existing village potential, the economy in Kemuning Lor Village still relies on the agricultural sector as the basis for driving the regional economy. Until now, agriculture as the leading sector still has a dominant and strategic role for economic development, both as a provider of food, raw materials for processed products, increasing village and community income, and absorbing significant numbers of workers. The superior resources with economic potential are in the agriculture, plantation, and forestry fields with several products produced, including rice, coffee, corn, peanuts, cassava, dragon fruit, rambutan, durian, petai beans, avocado, sengo (*Paraserianthes Falcataria L. Nielsen*), ginger, and mahogany. Dewangga *et al.* (2020) also explain that Kemuning Lor Village is geographically located in the highlands at an altitude of 175.45 above sea level and causes people to not use fish as a daily menu in their food consumption.

### Problems

The partners did not have the knowledge and skills to process food with fish-based ingredients to prevent anemia in pregnant women. Fish is a food ingredient that is easy to get, cheap, and contains a high nutritional value necessary for pregnant women. However, Cadres and pregnant women did not know about the nutrition benefits of fish to prevent anemia. In addition, they never received training or information about fish processing to become more attractive and valuable. As a result, coverage in consuming fish to fulfill daily nutrition was low.



## Target Solution

Counseling, discussion, and education entitled "anemia and its impact on the health of young and pregnant women" targeting young women, pregnant women, and posyandu cadres. In addition, there was a demonstration of processing tuna and catfish into nuggets for alternative nutrition in preventing anemia.



Figure 1. Activities in the Integrated Health Post at Kemuning Lor Village during the Covid-19 Pandemic

The output targets in this stimulus community partnership program (PKMS) were increased knowledge of anemia risk in pregnant women and teenage girls, early detection in maternal nutritional status, nutrition fulfillment for pregnant women, and benefits of alternative nutrition based on processed fish. In addition, there were improved abilities to process food with catfish and tuna and pack processed products to keep them durable.

## METHOD

The empowerment of the integrated health post cadres through processing fish nuggets did at Darungan *Dusun*, Kemuning Lor Village, Arjasa District, Jember Regency with direct counseling and demonstration. There were fourteen participants, consisted of the integrated health post cadres and pregnant women who participated in these activities. The implementation stages were as follows:

### 1. Preparation:

- 1) Coordinating with partners and taking permits at the auxiliary health center to access the integrated health post's activities during the covid period in Kemuning Lor village, Arjasa district, Jember regency.
- 2) Coordination with work teams and partners to prepare activities (schedule, place, media, and activity stages)

### 2. Implementation

The implementation of PKMS activities involved competent parties to solve problems faced by partners. The implementation team consisted of two qualified sources to transfer knowledge to partners. In addition, the team also involved two students in helping and accompanying them during activities.

### 3. Evaluation

- 1) Process: Evaluating the process of PKMS activities from beginning to end.
- 2) Results: Evaluating knowledge levels after PKMS activities. The knowledge included understanding nutrition to prevent anemia, the importance of nutrition for pregnant women, and fish nugget processing
- 3) Evaluation of the impact of activities: Observing cadres' ability to assist pregnant women in processing food to prevent anemia.

## RESULTS AND DISCUSSION

Implementing the stimulus community partnership program (PKMS) focused on assisting cadres in providing counseling about nutrition for pregnant women in preventing anemia. After counseling and demonstration, we measured knowledge through questions and answers about cadres' roles and fish nugget processing. The analysis results were shown in table 1.

Table 1. Knowledge of Cadres and Pregnant Women after counseling and demonstration

Variables	Frequency	Percentage (%)
Knowledge of cadres and pregnant women after counseling		
Good	11	78.5
Enough	3	21.5
Less	0	0
Total	14	100
Knowledge of cadres and pregnant women after the demonstration in fish nugget processing		
Good	9	64.3
Enough	4	28.6
Less	1	00.71
Total	14	100

Table 1. describes that cadres and pregnant women have good knowledge after counseling (78.5%). In addition, they also have good knowledge after training in fish nugget processing (64.3%). The activity steps were carried out as follows:

a. Preparation and licensing:

1) Coordination with the Implementation Team

A joint team from the Nursing and Agriculture study programs carried out these activities and involved students. The team coordinated to prepare this activity during the Covid period. Some agreements from coordination were: Posyandu Target, Number of Participants, Performing health protocols during the covid-19 pandemic, Activity time, Preparation for counseling and demonstration

2) Coordination with the place of implementation

We coordinated with the regional midwife at the Kemuning Lor village public health center (PHC). Then, we agreed that activity time would be done during the implementation of Integrated Health Post at the cadre's house to involve more participants. In addition, it was also agreed that this activity must comply with the health protocols.

3) Field Survey

This activity was initiated by surveying at the Arjasa Auxiliary Health Center at the Kemuning Lor village by assessing the policies and implementation in the Integrated Health Post during the Covid-19 period. The regional midwife strongly supported the stimulus community partnership program (PKMS).

4) Implementation of counseling and demonstration:

a) Counseling on the benefits of fish-based nutrition to prevent anemia in pregnant women

This activity was attended by pregnant women who checked in the Integrated Health Post at Kemuning Lor. They were very enthusiastic about listening to information about pregnancy and the effect of nutrition on pregnant women. Regional midwives also accompanied this activity. The activity began with data collection, followed by an examination of pregnant women. Then, counseling was given for 30 minutes. Cadres as movers in the Integrated Health Post were also implicated in assisting health workers in increasing knowledge among pregnant women.



Figure 2. Counseling in cadres and pregnant women

b) Demonstration of Fish Nugget Processing

The demonstration was carried out on cadres and pregnant women who come to the integrated health post. They were very enthusiastic about participating in the training activities. After the demonstration, they tried fish nuggets and said that the nuggets did not make the mother nauseous. They believed that pregnant women could consume it. The steps of fish nugget processing were as follows:

- (1) Tools and materials : Tools used in this demonstration included scales, spoons, gas stoves, bowls, plastic, pots, pans, and blenders. The ingredients used were tuna or catfish meat 150 grams, one egg, one tablespoon cornstarch, one tablespoon wheat flour, one tablespoon tapioca flour, 150 grams white bread flour, 150 grams yellow bread flour, 0.25 grams powdered broth, 0.25 grams salt, one tsp sugar, 2-3 cloves of garlic, 50 grams carrots and 50 grams scallions.
- (2) Process:
  - a) Mixed the fillet of cob or catfish with eggs, garlic, sugar, and salt, then blended in a blender.
  - b) Mixed the dough with flour, cornstarch, tapioca, white bread flour, powdered broth, pepper powder, carrots, and scallions, then stirred until smooth.
  - c) Put the dough on a banana leaf or plastic, then steamed it for 15 minutes
  - d) Cut the steamed dough and then dip it in a mixture of flour and yellow bread flour
  - e) the nuggets were packaged in plastic and then stored in the refrigerator at a temperature of  $\pm 4^{\circ}\text{C}$ .



Figure 3. Demonstration of Fish Nugget Processing

The participants wanted to try fish nugget processing in their homes as a healthy snack for pregnant women. The ingredients used are cheap and easy to get. Thus, this activity is very beneficial for all participants. It can even be a new idea for a household business.

## CONCLUSION AND SUGGESTION

The counseling and demonstration of fish nugget processing improve knowledge in Integrated Health Post cadres and pregnant women. Furthermore, it can prevent anemia in pregnant women. There should be support and participation from the local government for the sustainability of this activity.

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## Assistance In The Management Of Wood Waste For Wood Craftsmen In Tasikmalaya

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### Abstract

The informal sector business supports the economy in Indonesia. However, It has various potential hazards. Occupational safety and health (OSH) must be implemented in all workplaces, both formal and informal. OSH efforts focus more on disease prevention and health promotion to change workers' behavior meeting occupational health standards. One of them is increasing workers' knowledge. This community service aims to disseminate the study results of the potential hazards of the work environment in each process of making bamboo weaving crafts. The method used community empowering There were 20 participants consisting of bamboo SMEs owners and the craftsmen who joined the bamboo SMEs association. The results showed that most participants never knew that there were potential hazards in every stage of making woven bamboo crafts before the accompaniment. However, they became more understanding of the potential hazards in their workplace after accompaniment. In conclusion, craftsman's understanding levels of the potential hazards in the work environment increased after accompaniment. potential hazards in the process of making bamboo crafts. SMEs owners and artisans should consider potential risks in the workplace to form safe behavior at work.

**Keywords:** Potential hazard; Bamboo crafts; Craftsman; Occupational safety and health

### INTRODUCTION

Informal sector business has the characteristics of being small-scale, owned by individuals or families, using simple technology, being labor-intensive, having low education and labor skills, and relatively low wage levels (Bappenas, 2009). It usually is a form of Small and Medium Enterprises (SMEs). It supports the economy in Indonesia with significant labor absorption. In February 2020, the workforce was 137.91 million people, while the working population was 131.03 million, with 74.04 million people (56.5%) working in informal activities (BPS, 2020). One of the most numerous SMEs in Tasikmalaya Regency is bamboo handicraft SMEs. Leuwisari is one of the sub-districts in Tasikmalaya Regency with the highest number of bamboo handicraft SMEs. In addition, There are 430 craftsmen in Leuwisari District spread over nine villages. 147 of them are at Jayamukti Village (BPS Kabupaten Tasikmalaya, 2020).

As is the case with formal sector business, informal sector business also has various potential occupational hazards that risk health and safety. Bamboo has a potential threat that is riskier to health and works safety than other crafting materials. According to research Sriagustini and Supriyani (2021), there were about 23 potential hazards in making woven bamboo. Approximately 63.3% of them were a potential hazard with a moderate level of risk, so it needs immediate hazard control.

Unlike the formal sector businesses that have received sufficient attention from the government in occupational health, the informal sector business has not entirely accepted the same attention. Informal sector business usually does not get good occupational health services. In contrast, occupational health and safety (OHS) aim to protect workers from potential hazards of the work environment to remain healthy and productive. Occupational health efforts must be carried out in all formal and informal workplaces (RI, 2009). It is because all workplaces have potential health hazards originating from the work environment. The work environment

is an additional burden, in addition to the workload itself. Good workload management and work environment create healthy laborers and increase productivity (Suma'mur 2009).

Occupational safety and health (OSH) are knowledge and application efforts to prevent accidents and occupational diseases. Health efforts must be carried out comprehensively, including disease prevention, health improvement, disease treatment, and health restoration. Health efforts should focus on prevention and health improvement aiming to change the health behavior in workers, to reduce or eliminate the risk of accidents and occupational diseases. Efforts in health improvement based on occupational health standards increase health knowledge, cultivate clean and healthy living behavior, and occupational safety and health in the workplace (RI, 2019). With a better understanding of the potential hazards, workers will be more careful and not underestimate the health and safety risks in making woven bamboo crafts. Hartono's (2018) research showed that knowledge affected perception in occupational Health and Safety (OHS) implementation with an influence level of 5.6%. It is in line with a study conducted by Windhiarni (2017). The study stated that the knowledge variable contributes 14.5% to the awareness of OSH behavior.

Based on the background, artisans need to know the potential hazards in the work environment – especially in making woven bamboo – to work healthily and safely. Therefore, the purpose of this community service is to socialize the study results regarding the potential hazards of the work environment in each process of making woven bamboo crafts in artisans and craft owners to increase their understanding.

## **GENERAL DESCRIPTION OF THE COMMUNITY, PROBLEMS, AND TARGET SOLUTIONS**

### **General Description**

Serumpun Bamboo SMEs is located on RT 10 RW 05 Kampung Nangorak, Jaya Mukti Village, Leuwisari District, Tasikmalaya Regency. It is a home industry engaged in the manufacture of various woven bamboo products. There are permanent craftsmen with an age range of 43-70 years, elementary and junior high school education, and approximately 25 years of working years, while non-permanent artisans are from neighboring around the industrial area. Local communities usually weave or make handicraft materials to fill their spare time, later sold to SMEs. The method of making woven bamboo crafts is generally divided into two stages: 1) Making woven materials as the primary material for crafts. The process starts from cutting bamboo, making bamboo strands, to making plaits. 2) Creating bamboo weaving products. The manufacture of woven bamboo products differs in the activity stage from one product to another, especially when preparing additional materials and assembling the product.

### **Problem**

This community service activity implemented research results entitled "Identifying potential work environment hazards on woven bamboo craftsmen at Jayamukti Village, Leuwisari District, Tasikmalaya Regency." The study results showed that all stages of making woven bamboo crafts had potential hazards from the work environment, causing health problems and work accidents. In the step of making woven materials, there were 23 potential hazards, with details of 2 potential physical hazards, 5 potential chemical hazards, 6 potential ergonomic hazards, and 10 potential mechanical hazards. Meanwhile, there were 16 potential hazards in preparing additional materials, with details of 2 potential chemical hazards, 4 potential ergonomic hazards, and 10 potential mechanical hazards. In assembling bamboo weaving products, there were 23 potential hazards with details of 6 potential ergonomic hazards and 17 potential mechanical hazards. Finally, there were 9 potential hazards in the finishing process with detail of 2 potential physical hazards, 3 potential chemical hazards, and 4 potential ergonomic hazards.

### **Target Solutions**

The craftsmen did not comprehend the research results above. Therefore, the authors carried out socialization of potential hazards in the workplace and OSH to increase knowledge and hazard controls.

## METHOD

This community service activity was carried out with community empowering the potential hazards in the work environments, especially in each stage of making woven bamboo crafts. It was carried out directly with health protocols. It took place at Serumpun Bamboo SMEs, Jayamukti Village, Leuwisari District, on Wednesday, July 22, 2020. Twenty participants consisted of owners of bamboo SMEs and the craftsmen who joined the bamboo SMEs association. The implementation stages were as follows:

1. Preparation:
  - 1) We studied the potential hazards in each work process by observing each stage and interviewing artisans in charge of making woven bamboo crafts.
  - 2) Data analysis and study results.
  - 3) Coordination with bamboo SMEs association. Then preparation of activity plans, budgets, and events for socialization.
2. Implementation  
The accompaniment was carried out by two sources, namely from the Leuwisari Public Health Center and the community service team of STIKes Respati. The material consisted of occupational Health and Safety (OHS) and potential hazards in the work environment, especially in each process of making woven bamboo crafts
3. Evaluation  
The evaluation used a questionnaire consisting of potential hazards in the process of making woven bamboo crafts before and after the socialization

## RESULTS AND DISCUSSION

In the implementation, sources delivered research results to participants. The socialization process was going well. Even in the discussion session, participants were surprised when realizing there were many potential hazards in each stage of making woven bamboo crafts. After the socialization, we evaluated the knowledge in participants.

Table 1: Participants' Knowledge of the Potential Hazards in Each Stage of Making Woven Bamboo Crafts

Questions	Answers		
	Yes	Doubtful	No
Have you previously been aware of the potential hazards in each stage of making woven bamboo crafts?	1	3	16
After participating in this activity, do you know that there are potential hazards in every stage of making woven bamboo crafts?	18	2	0

Source: Primary Data

Most participants never knew that there were potential hazards in every stage of making woven bamboo crafts (table 1). They did not understand that the materials, tools, and work processes had potential hazards. In addition, when the potential hazard becomes a threat, they did not respond to it or as if it is normal. They believed that consequences caused by the hazard are not severe or did not cause death. However, occupational hazards must be controlled because the purpose of OHS is to protect workers from all potential risks in the workplace so that workers can live and increase work productivity (RI, 1970).

Table 2: The Craftsman's Understanding Levels of the Potential Hazards in Each Stage of Making Woven Bamboo Crafts before and after socialization.

Understanding levels	Before (n=20)		After (n=20)		
	frequency	Percentage (%)	frequency	Percentage (%)	
Classifying the potential hazards in the work environment based on the stages of making woven bamboo crafts	Understand	5	25	18	90
	Do not understand	15	75	2	10
Classifying the potential hazards in the work environment based on the types of the potential hazard	Understand	1	5	11	55
	Do not understand	19	95	9	45

Source: Primary Data

Table 2 describes that there are increased understanding levels in participants after socialization. Knowledge is the result of knowing and occurs after sensing a particular object. Meanwhile, understanding is a level of knowledge that can explain things that are known correctly or correctly interpret a material presented (Notoatmodjo, 2017). Knowledge plays an essential role in forming a person's actions or behavior. Therefore, knowledge about occupational safety and health (OSH) establishes safe and healthy behavior in workers. The most basic knowledge in OSH is comprehending potential hazards in the workplace.

The accident causes consist of two aspects, unsafe conditions and behavior. Unsafe conditions are usually related to places, work processes, or tools that have potential hazards. Meanwhile, unsafe behavior refers to incorrect actions or do not comply with safety procedures. It usually occurs due to a lack of understanding of tools, materials, work processes, and potential hazards in the workplace. Bad attitude and work behavior can later cause work accidents (Suma'mur 2009).

This study result is in line with other previous researches. A study by Murtinugraha (2021) reported that the education given to builders regarding OSH in construction increased their understanding. In addition, education provided to fishers about OSH also increased their knowledge and attitude in preventing and overcoming occupational health and safety problems so that their health status could improve (Desita, 2020). Furthermore, Wahyu (2019) reported that counseling and mentoring elevated the average knowledge score in blacksmith artisans regarding OSH, especially noise hazards in the workplace. Likewise, their attitude in the use of PPE appropriately improved. In brief, promotion efforts in the workplace can be made by providing information, education, assistance, and other knowledge-building efforts to improve health status according to standards (RI, 2019).



Figure 1: Assistance of Potential Hazards in the Process of Making Bamboo Crafts



## CONCLUSION AND SUGGESTION

Craftmans' understanding levels of the potential hazards in the work environment increased after socializing potential hazards in the process of making bamboo crafts. SMEs owners and artisans should consider potential risks in the workplace to form safe behavior at work.

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## Wood Waste Management: Sawdust as a Planting Media during the COVID-19 Pandemic at Sindangmekar Village, Dukupuntang Subdistrict, Cirebon District

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### Abstract

One of the growing industries in Indonesia is the woodworking industry. Wood waste is waste or parts of the wood that no longer has economic value but may still be used at different processes and times. The woodworking industry produces wood waste in 22% wood scraps, 8% wood chips, and 10% sawdust. The fundamental problem in the woodworking industry at Sindangmekar Village was the lack of understanding and practice in wood waste management. Through the socialization of wood waste management as planting media, community service aims to increase knowledge regarding wood waste management. In addition, it can improve practice to manage sawdust as a planting media. Furthermore, it has economic value and becomes one of the solutions to financial problems during the COVID-19 pandemic. The socialization presented materials related to wood waste management and practiced making planting media from sawdust. Thirty participants attended this activity. There was a significant increase in pre-and post-test scores after socialization. In conclusion, socialization regarding wood waste management increases knowledge levels in wood artisans and youth alliance at Sindangmekar Village. In addition, participants can manage wood sawdust as a planting medium. As a result, it can increase the selling value of wood waste, and the surrounding environment becomes clean and healthy.

**Keywords:** Wood; Waste management; Sawdust; Planting media

### INTRODUCTION

Industrial waste is one of the crucial problems in the industrial era. The urgency of industrial waste management can cause environmental problems, either in solid, liquid, or other forms of waste. Therefore waste treatment must be carried out early when the production process occurs. Otherwise, the threat of pollution will be fatal (Nasir, Saputro and Handayani, 2016). One of the growing industries in Indonesia is the woodworking industry. Wood waste is waste or parts of the wood that no longer has economic value but may still be used at different processes and times. The woodworking industry produces wood waste in 22% wood scraps, 8% wood chips, and 10% sawdust (Purwanto, 2011).

Sindangmekar Village, Dukupuntang Subdistrict, Cirebon District is a central area of the woodworking industry, and most of the people work as wood craftsmen. The problems faced by wood craftsmen in Sindangmekar Village were similar to wood artisans in general. The fundamental problem was the lack of knowledge and awareness in waste management (Nasir, Saputro and Handayani, 2016). The low knowledge levels and understanding among them were getting more complicated during the COVID-19 pandemic. The COVID-19 pandemic has increased unemployment and had a significant impact on the economic status of the community. In addition, many people complain about restricted activities during the COVID-19 pandemic (Hanoatubun, 2020). Therefore, it is necessary to socialize wood waste management to woodworkers at Sindangmekar Village during the covid-19 pandemic.

During the covid-19 pandemic, One of the changes in the social order regarding society activity is Work From Home (WFH) and Study From Home (SFH). As result of staying at home for a long time will undoubtedly foster a sense of boredom and cause stress, which can decrease the immunity system in the human body. So, it is necessary to fill the free time with positive things, one of which is gardening (Watrianthos *et al.*, 2020). The increase in public enthusiasm for gardening during the COVID-19 pandemic has become an opportunity for wood artisans at Sindangmekar Village. However, wood artisans and the community at Sindangmekar village did not understand sawdust can be a planting medium. So, the training to make sawdust as a planting media in wood artisans is necessary. Wood sawdust can be a planting medium. It is an organic material naturally decomposed by microorganisms into simple compounds. Substances resulting from this decomposition are integrated into the soil, and the ground may be fertile because it contains many nutrients needed by plants (Nasution, 2016). Sawdust was chosen because of its light texture, so the roots will grow and develop faster. Sawdust has a high porosity (soil pore) level, but its density can still be adjusted to get a controllable porosity level by adjusting the ratio of water poured (Prasetyo, 2015). Socialization is the first step of the community empowerment program. The socialization process is very influential on the sustainability of the program. Several methods of socialization that can be carried out include 1) Direct socialization, which is carried out directly by the facilitator to the community. This method is most effective because the facilitator can perform the face-to-face activity and provide detailed explanations regarding the program. The process may reduce misunderstandings because the public gets information directly from the source. 2) Indirect socialization through intermediaries. This method is efficient but less effective because people do not get information directly from the facilitator. In principle, socialization can be done anytime, anywhere, and not limited by time, place, and target. Therefore, socialization must be carried out correctly and adequately since this is the first step in determining the implementation of the following program (Hamid, 2018). The socialization of wood waste as a planting media at Sindangmekar village hopefully can increase the knowledge and practice in wood waste management among society at Sindangmekar Village. In addition, it may have economic value and become one of the community's solutions for financial problems during the COVID-19 pandemic.

## **GENERAL DESCRIPTION OF THE COMMUNITY, PROBLEMS, AND TARGET SOLUTIONS**

### **General Description**

Sindangmekar village is the center of the woodworking industry that has an essential effect in the woodworking industry in the Cirebon area. It was marked by many wood artisans, wood cutting factories, and material shops selling the equipment needed by woodworkers. Wood artisans at Sindangmekar village have been around since 1949. Sindangmekar Village has a substantial effect as a pioneer in establishing a thriving woodworking industry in Dukungpantang District.

### **Problem**

Most people at Sindangmekar Village work as farm laborers (51%) because 55% of Sindangmekar villages are rice fields, 10% are traders, and 9.6% are woodworkers. Thus, wood artisans play an essential role as a driving force for the economy in meeting the daily needs of the society in Sindangmekar village. The education levels of the people at Sindangmekar village are varied. Some are highly educated, and many have only graduated from elementary school and even dropped out.

The low level of education and the lack of public knowledge regarding wood waste management led to poor public awareness to utilize wood waste to have economic value. Sawdust can be used as a planting medium to reduce environmental pollution. The COVID-19 pandemic impacts people's activities wherein people are limited to be at home more often. As a result, gardening is becoming popular. Planting media using sawdust can be an excellent alternative solution in gardening.

## Target Solutions

Based on these conditions, the target solution in community service is socializing about the management of wood waste as a planting media during the COVID-19 pandemic at Sindangmekar Village. Thus, it may have economic value and become one of the community's solutions for financial problems during the COVID-19 pandemic. In addition, it can increase knowledge and practice in wood waste management.

## METHODS

This community service was socializing wood waste as a planting media during the COVID-19 pandemic by direct socialization. The participants were wood craftsmen at Sindangmekar Village, represented by housewives as the Harapan Jati furniture craftsmen's cooperative members – a forum for building trust and establishing good relations between fellow artisans. In addition, the socialization also involved the youth alliance at Sindangmekar Village as participants. The youth alliance's involvement will hopefully increase awareness in the younger generation in using wood waste as a planting medium to create a clean and healthy environment. Thus, 30 participants attended the socialization with health protocols during the COVID-19 pandemic by performing social distancing, wearing masks, checking temperature, and washing hands before entering the room.

The socialization methods were counseling, practice, and assistance to participants. In brief, the socialization stages included preparation, implementation, monitoring, and evaluation. The preparation stage consisted of a meeting on community service implementation strategy, site surveys, permits for community service implementation, and infrastructure preparation.

Then, the implementation stage consisted of an opening session and an introduction by the authors and participants. The socialization activity began with assessing the knowledge levels in the participants regarding the management of wood waste through a pre-test. The pre-test results were made to determine the appropriate socialization method. The further activity was delivering materials related to wood waste management, including the definition, composition, sources, management, and utilization of wood waste. In addition, the following material was the use of sawdust as a planting medium. The material presentation applied two-way communication between participants and presenters through discussion or question-and-answer sessions. After material delivery, participants practiced making planting media from sawdust while the authors assisted them.

Next, the participants signed a joint commitment to protect and maintain the surrounding environment by utilizing and managing wood waste as a planting media to reduce environmental pollution. Plants make oxygen stocks will be more abundant, and the air can be fresh.

Community service activity ended with the post-test as an evaluation. The evaluation aimed to compare knowledge levels before and after the socialization regarding the management of wood waste as a planting medium. The authors monitored participants through cooperative management and youth alliance regarding wood waste management as a planting media.

## RESULTS AND DISCUSSION

On Friday, January 29, 2021, this community service was held at the Sindangmekar Village Hall entitled "Management of Wood Waste as a Planting Media during the COVID-19 Pandemic". It was synergized with the *Pentas Ning Latar* performance organized by the Sindangmekar Village Youth Alliance. Based on the initial observation results, the Sindangmekar Village community did not utilize or manage waste from the woodworking industry. So far, they had only burned the wood waste due to low knowledge levels and lack of information regarding wood waste management.

Knowledge is the result of knowing, and this occurs after people have sensed particular objects. According to Saputra and Mulasari (2017), one factor influencing knowledge levels is access to information. Lack of information cause ineffective acts, attitudes, and beliefs. The more information obtained by a person, the better his understanding and knowledge will be. Before socialization, we evaluated knowledge levels regarding wood waste management in participants.

Table 1. Knowledge Levels before Community Service

Knowledge Levels	Frequency	Percentage (%)
High	0	0.0
Moderate	13	43.3
Low	17	56.7
Total	30	100

Table 1 describes that most participants had low knowledge levels (56.7%). Low knowledge levels regarding wood waste management were due to the lack of information. So far, they had only received information regarding the business prospects of the woodworking industry. There was no socialization regarding wood waste management. In addition, The use of wood sawdust as a planting medium was still very rarely applied by the community.

Many people have failed to use wood waste as a planting medium due to a lack of knowledge and accuracy in methods and techniques (Wardani and Sari, 2017). Therefore, one of the efforts that can be performed is delivering information through socialization. Socialization is an essential part and a milestone in the success of community service activity. Factors influencing socialization are education, socioeconomic, customs, public trust, and availability of time (Fitrianingsih, 2018). Community service activity is oriented to changing the expected behavior, namely healthy behavior. As a result, the community will have the ability to recognize health problems faced by themselves, their families, and groups and how to improve their health. Knowledge is an essential domain to form actions in individuals. Knowledge-based behavior is better than behavior that is not based on knowledge (Notoatmodjo, 2017). In this study, there were increased knowledge levels after the socialization.

Table 2: Knowledge Levels after Socialization

Knowledge Levels	Frequency	Percentage (%)
High	26	86.6
Moderate	4	13.3
Low	0	0
Total	30	100

Table 2 reveals that most participants have high knowledge levels after socialization (86.6%), and few have good knowledge levels (13.3%). A significant increase in knowledge regarding wood waste management can be observed from the differences in pre-and post-test scores. Increased knowledge forms positive behavior in wood waste management, primarily using wood sawdust as a planting media.

During the socialization activity, the community also practiced making sawdust as a planting medium. We observed that participants enthusiastically did the practice. Using sawdust as a planting medium makes the soil in the pot not mix and harden. The ground will be loose, so it will be easy to move and absorb water and air so that the plants become fertile. A mixture of one-third of the soil and two-thirds of sawdust makes the potting mass lighter when removed (Prasetyo, 2015). Wood waste contains a source of nutrients that is better for plant growth than other media. Sawdust used as a planting media must be sterile, not contain pesticides or other toxic materials. The proper selection of wood can maintain the long-lasting use of planting medium (Wardani and Sari, 2017). The steps to make sawdust as planting media consist of: (1) Grind the wood waste to a powder. The powder must be finely textured so the water can enter more efficiently and wood waste can be mixed more easily. (2) Put powder or sawdust in the container for planting plants. The container can be a

pot or another form that allows for growing plants. (3) Mix it with soil and compost. Sawdust itself is insufficient and does not have the fertilizing elements needed by plants. Therefore, the mixing needs to be done so that plants become more fertile. Then we can plant the seeds of the plants we want in the mixture. (4) Water it every day with the proper ratio. Watering plants and setting the porosity of the planting media needs to be done so that the planting media may not be dense. Setting the porosity of this planting media can be done using water. Wood waste management aims to create a product with economic value. Sawdust waste that was previously only burned becomes more valuable after being used as a planting medium. Economically, the use of wood waste as a planting medium can increase the selling value of wood waste.

## CONCLUSIONS AND RECOMMENDATION

This paper concludes that socialization regarding wood waste management increases knowledge levels in wood artisans and youth alliance at Sindangmekar Village. In addition, participants can manage wood sawdust as a planting medium. As a result, it can increase the selling value of wood waste, and the surrounding environment becomes clean and healthy. Moreover, it may reduce environmental pollution.

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