

Development of Life Skills in the Fishermen Community of Indonesia

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This research aims to describe life skills developed by mentor fishermen for their community, the factors obstructing empowerment, and the productivity level after empowerment implementation. This research uses a qualitative method with ethnographic approach. Data of this research, which is sourced from fostered fishermen members and mentors of Wanita Tangguh group and Kelompok Usaha Bersama Tirto Makmur, is collected from interviews and observations. The data is analysed using data reduction, data display, and conclusion drawing verification. Credibility tests, such as source triangulation, method and period of data collection, are used for data validation. The following comprises the results: (1) Boat and net making skills for ‘catching’ fishers, training for processing fish into food products for both ‘catching’ fishers and processors, training for operating the aided fish processing machine, environment-friendly fishing and disaster management coaching; (2) Factors obstructing the empowerment of the fishermen community includes their inability to comprehend training materials—materials from mentors are considered too general and already understood which resulted in disinterest—the absence of learning facilities and properties, and a mismatch between training materials and fishermen’s needs; (3) Level of productivity in fish processing increases by 100% after the life skill training program. This productivity increase is affected by fishermen’s participation, motivation, and willingness to undertake fish processing, of which they did not do. It shows that skills and education obtained from life skill training program help to empower the fishermen community.

Key words: *Community empowerment, life skill training, productivity level.*

Introduction

A coastal community is a group of people whose economic activities depend on the utilization of sea and coast resources. Shore can be simply described as a transition area of the sea and land ecosystem. The sea ecosystem is living place for numerous sea biotas; sea animals and sea plants like coral reefs and seaweed. Fishermen are also part of the local community located on shores, which is often called a coastal community.

The life of a fishermen community highly depends on the utilization of sea resources; for instance, animals, plants, and land, those which can be used directly or need to be cultivated first. Sea resources significantly affect the life of fishermen in coastal community, and includes sea catches, particularly fish.

The fishermen are divided into several categories; 'catching' fishermen, 'processing' fishermen, 'collector' fishermen, and 'labour' fishermen. Catching fishermen are those who catch fish in the sea and processing fishermen are those who process the catches. Collector fishermen collect fishes by buying other fishermen's catches, while labour fishermen are catching and processing labourers, who do not invest any capital and only provide services. Among these categories, processing fishermen play an essential role in the coastal community economy due to their skills in processing fish catches into products that are demanded and preferred by the consumers.

The utilization of fishermen's catches is highly related to their human resources since it is the main capital in fish processing. According to Banowati (2013), human resource is one of the most important capitals in building a nation which embodies all communities, including the fishermen. Meanwhile, the quality of the human resource is determined by the level of education and training, health and nutrition, living environment, and family financial ability.

Based on the interviews, it can be inferred that the income of coastal fishermen before attending life skill training program are extremely low. It is noted that 62 out of 70 fishermen experienced over production (over fish catches), while the other 8 persons underwent low production (low fish catches). The average income of fishermen is around IDR 20,000 per day. This is caused by the low selling price of fish and thrown-away catches due to poor handling. Furthermore, the catches of fishermen are mostly self-consumed as food for their family. Lack of skill and knowledge possessed by the fishermen and their family in fish processing is the main reason for the low productivity of the catches. Hence, it minimally contributes to the overall income that should be earned by the coastal fishermen community.

Low income forces the fishermen community to have middle to low economic condition as their family members have limited skills and ability in fish processing. In regard to this

problem, a life skills training program that is based on local potential and can be used as a provision for the fishermen to work and establish their private enterprise is needed.

Therefore, the fishermen community have now established coaching groups despite the fact that they have not received comprehensive tutoring. This establishment aims to properly empower the fishermen community so that they gain better skills and greater knowledge.

Empowerment means providing resources, opportunities, knowledge and skills possessed by the community to enhance their role in determining their own future. In this discourse, empowerment covers the concept of how to provide wide opportunities for the fishermen community to decide the direction of their community's development (Suparjan & Hempri, 2003). According to Nunan (2006), empowerment is extremely important for each approach that supports the role of local community in managing the existing natural resources. Such empowerment can be implemented through training in the utilization of natural resources (fish and other sea catches).

A study of Saludung (2018) shows that life skill training programs are beneficial for coastal communities as it is able to enhance the skills and knowledge of people according to their natural surroundings. Other research from Freeman, Civera, Cortese, & Fiandrino (2018) finds that the highest level of fishermen involvement in empowerment helps to boost development of new enterprises. Life skill training should be attended by the fishermen community since their participation in training also determines the success of the empowerment program.

Perdana (2018) argues that before empowerment, the lives of family members who participated in life skill education had low skills. However, after the life skill training program, the community changed their behaviour when using their free time to elevate their family economic condition using skills obtained from life skill education. Empowerment is an actual solution to make real changes and is catalysing development in various sectors, especially in the empowerment of coastal communities in the fisheries sector (Sulfati, Rapanna, & Razak, 2018). Fisheries utilization can be done in their free time and is a means for this community to lift their family economic condition as well.

Therefore, it is expected that the skills and knowledge of the fishermen community members in processing fish can be developed through this life-skill based training so that it impacts their economic condition and general sustainability. As mentioned in Rahim (2018), empowerment programs help to elevate the economic condition of fishermen's households. Hence, this research aims to describe the life skills that are taught by mentor fishermen to the fishermen community, to identify obstructing factors of fishermen community through the empowerment program, and to determine the productivity level of processing fish-catches after the empowerment of the fishermen village.

Research Method

This study uses qualitative method since the data obtained is descriptive. Data collecting techniques employed in this study are observations and interviews. The observation focuses on life skills that are taught to the fishermen community through the empowerment program, the fish processing techniques and its processed yield. On the other hand, the interviews investigate facts relating to factors obstructing empowerment and the productivity level of processing fish catches that is done by the fishermen mentoring group, *Wanita Tangguh*, and *Kelompok Usaha Bersama* (joint business group) *Tirto Makmur*.

This research is designed using ethnographic approach. According to Harsono (2019), ethnography is the description and interpretation of the culture or system of a social group. The authors test and study the meaning of every behaviour, language, and interaction within a group. The stages of data analysis of this research are data collection, reduction, data display, and conclusion drawing verification. The validity of data is tested using credibility test (internal validation), which is source triangulation, and the technique of data collection.

Results and Discussions

Results

1. Life skills taught by mentors to the fostered fishermen through training.

A life skill is a skill which helps the community to be more independent. Training for fostered fishermen from empowerment and life skill education program increases both the knowledge and skills of the fishermen community. The skills and knowledge learnt by the fishermen community through empowerment and life skill education can be identified through the results of this research and is presented in Table 1.

Table 1: Life skill taught to fostered fishermen through training

No.	Trainings given by mentors	Skills possessed by fishermen
1.	Training of boat and net making for catching fishermen, and training of fish processing into certain food products such as tuna tofu, fish cake, smoked fish, <i>et cetera</i> , to all fishermen, including catching and processing fishermen.	Skills on making boat and net for catching fishermen, and skills of fish processing into certain food products such as tuna tofu, fish cake, smoked fish, <i>et cetera</i> , to all fishermen, including catching and processing fishermen.
2.	Training for operating fish processor obtained from aid.	Skills on operating fish processor obtained from aid.
3.	Training for environment-friendly fishing.	Skills on environment-friendly fishing.
4.	Training for disaster management during off-shore fishing.	Skills on disaster management during off-shore fishing.

Source: Observation on fishermen group *Wanita Tangguh* and *Kelompok Usaha Bersama Tirto Makmur*.

2. Obstructing factors of fishermen community empowerment.

Factors obstructing the success of fishermen community empowerment through life skill education programs for increasing fish processing productivity come from the fishermen themselves (internal factors) and also from the outside (external factors). Obstructing factors of fishermen community empowerment are described in Table 2.

Table 2: External and internal factors obstructing empowerment of fishermen in Dusun Kiteran (Kiteran village)

External Factors	Internal Factors
1. Lack of facilities and equipment for practicing during training.	1. Low ability of the fishermen in understanding advanced training materials, for example using social media as a medium to promote products.
2. Mismatch between training materials of the mentors and the needs of the fishermen	2. Fishermen are sometimes overconfident and overestimate their ability to complete the training materials given by the mentors

Source: Interviews on the Fostered Fishermen

Productivity Level of Fish Catches Processing after Training

Fish processing productivity is the function of the fishermen’s fish processing yield, which is supported with high motivation, and multiplied by individual skills obtained from training.

Productivity is affected by several factors, such as:

- a. Human related factors (motivation and willingness to make better changes)
- b. Skills on processing fish into nugget, *kaki naga* (fish drumsticks), fish sausage, smoked fish, salted dried fish, fish meatball, tuna tofu, fish *risoles* (fritters), tempura, fish cracker, steak, and fish cake, which are learned through trainings.
- c. Education (relating to fishermen’s level of knowledge)

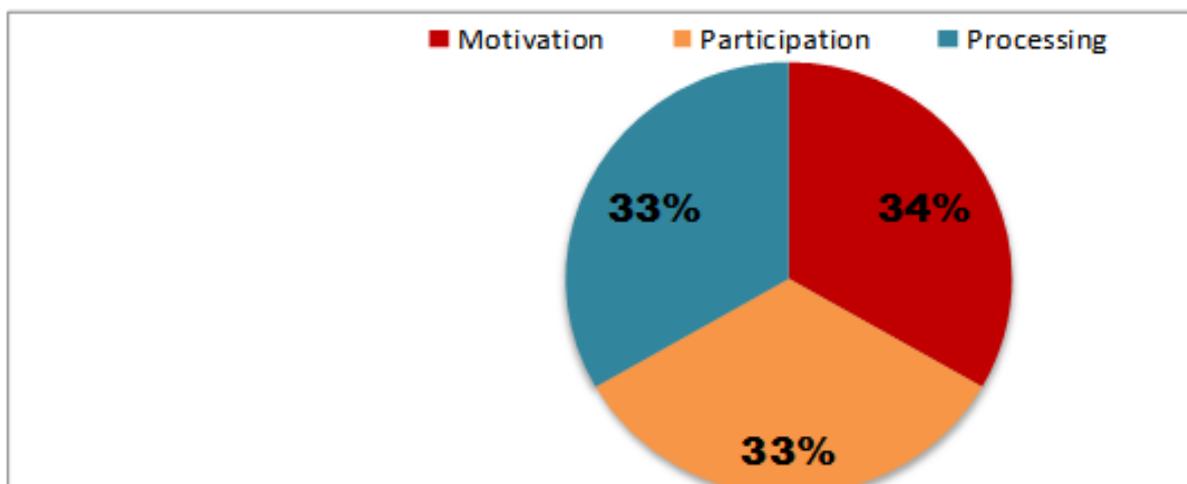
Results of interviews relating to achievement level of successful fishermen empowerment can be seen in Table 3 and Figure 1.

Table 3: Categorization of achievement indicators of successful fishermen empowerment

Descriptions	Number of respondents	Achievement score	percentage
Fishermen’s motivation	4	100	$100/300 \times 100\% = 34\%$
Fishermen’s motivation	4	100	$100/300 \times 100\% = 33\%$
Doing fish processing	4	100	$100/300 \times 100\% = 33\%$
Total Achievement Score		300	100%

Source: Interviews, processed.

Figure 1. Achievement indicator categorizations of successful empowerment of fishermen community



Source: Interview, processed.

It can be concluded from Table 3 and Figure 1 that high participation that is supported by motivation and effort to implement fish processing, resulted in fishermen empowerment through the life skill program reaching 100 percent success. The success of the fishermen consists of three factors combined: 33% participation, 34% motivation, and 33% implementation of fish processing.

The increased life skill of the fostered fishermen community can enhance the productivity of fish processing. There was no fish processing and this condition changed after the empowerment program existed. This increased level of productivity can be inferred from interviews and observation conducted by the authors.

The level of fish processing productivity increases by 100% after the life skill training program is conducted. It is due to high participation of the fishermen in the training. Active participation in the training positively affects the skill and knowledge of the fishermen; hence their motivation to process the fish catches increases as well. This growing motivation influences the fishermen to do fish processing and it results in increasing productivity of fish processing.

Discussions

Life Skills Taught to the Fostered Fishermen through Training Program

Training is an effort to increase knowledge and skills (life skills) of the fishermen. Based on Srikala & Kishore Kumar (2010), life skill education, which is taught to the program members, induces positive change and outcomes on the members in their behaviour in utilizing the existing natural resources. In this study, skills taught to the fishermen are (1) boat and net making skills for catching fishermen, (2) training of fish processing for food products such as tuna tofu, fish cake, smoked fish, et cetera, for all fishermen, including catching and processing fishermen, and (3) training for operating fish processor obtained from aid and training for environment-friendly fishing. However, this research only focuses on skills for processing fish catches.

Life skill-based community empowerment aims to increase skills and knowledge of fishermen community in processing fishes from their catches. According to Prince (2010), small scale fishing needs new skills of work. On the other hand, Nwagbara, Etuk, & Baghebo (2012) argued that empowerment are actions made to generate change for improvement. Rokhayati, Husni, & Melianingsih (2019) argue that the effect of empowerment is more effective on group independence. According to Soeprijadi, Yuli, Susilo, & Rudianto (2013) the fishermen empowerment approach is a solution to eradicate poverty. Therefore, empowerment program for fishermen community is urgently needed, especially through the life skills program, so that the fishermen possess new skills that can be used to create fishermen business enterprises.

In this research, objective achievements of the fishermen community empowerment program is identified by increasing skills of the community members who participated in the training program—making various processed food made of fish such as dried fish, tuna tofu, fish meatball, tuna nugget, *kaki naga* (fish drumstick), fish *risoles* (fritters), smoked fish, *et cetera*. In the beginning of the training, these community members only made dried fish and smoked fish. As the life skill-based training developed, these fishermen are able to produce more varied fish products as mentioned.

The success of the empowerment program conducted by mentors on the fishermen community of Dusun Kiteran, Desa Kembang Sidoharjo, Pacitan to increase their fish processing productivity can be measured by the motivation of the fishermen in processing their catches. There is community participation in the empowerment program and trainings from mentors. They also gain new skills and knowledge of fish processing which are implemented by the fishermen through establishing home industries that focus on producing and selling processed food products made from fish.

In line with previous research conducted by Rakib & Syam (2016), community empowerment through life skills programs, which are conducted through training, may increase the productivity in processing fishermen's catches. In this research, the success of this empowerment program is determined by fishermen's active participation. This can be seen from community members' participation when their attendance reaches 100 percent in Desa Lero (Lero village). The program objectives are also achieved as interviews with several community members who participated in such programs show a positive outcome: their skills, knowledge, and functional and practical skills increase. This is also accompanied by the change of their attitude towards self-employment and independent industry.

It can be learned from Saludung (2018) that the success of fishermen community empowerment through the life skills program is indicated by an increase of understanding and skills in fish processing, support from related parties, and the enthusiasm of participants in the training.

Overall, it can be concluded that the success of empowerment program through life skills training can elevate and better the participants' life condition. As explained by Prajapati, Sharma, & Sharma, (2016), such life skills training may bridge the gap between basic function and ability, so that it can strengthen individual skills to fulfil their needs and expectations of life in society.

Empowerment through life skill training may strengthen the comprehension of the community who participated in communal activities or in the mentoring group, which can support business units within the community. The empowerment program is highly recommended for developing life skills (Singh, 2016). This means that life skills are strongly needed by every

individual, particularly by the fishermen community, which is related to the utilization of existing natural resources.

Factors Obstructing Fishermen Community Empowerment through Life Skills Training Program

An obstructing factor is an obstacle to achieving the success of the community empowerment program. When conducting the empowerment program, every fisherman and mentor has to notice the obstacles of life-skill based training to produce various processed foods made of fish, such as smoked fish, dried fish, tuna tofu, fish meatball, fish nugget, *kaki naga* (fish drumstick), fish *risoles* (fritters), fish sausage, *et cetera*. The study finds several factors obstructing empowerment: inadequate equipment and tools for training, incompatibility between training materials from the mentors and needs of the fishermen, and the inability of fishermen to grasp the mentoring materials, which were either too difficult or so general that the fishermen learned nothing.

Other research confirms that obstacles in fishermen community empowerment are limited to the basic ability of the participants, and the inadequate time provided for training and learning facilities (Saludung, 2018). Meanwhile, Nugroho (2015) describes that obstructing factors of fishermen community empowerment to be (1) capital owned by the fishermen, (2) the concept of empowerment policy which has not been directed to fish industry diversification, (3) the concept of the policy which has not referred to productive economic development of a sustainable fish processing industry.

Productivity Level of Catches Processing after Life Skills Training Program

Based on this research's findings, the productivity of fish processing is determined by several factors, which can be human-related (participation, motivation, and willingness to undergo a change for the better), and include skills (fishermen's ability in fish processing) and education (related to fishermen's level of knowledge). Related to the human factor, participation holds an important role in life skill training activity since it is an active process where initiatives are taken by the community members themselves, using facilities and process where they are able to do effective control (Nurbaiti & Bambang, 2017).

This research shows that life skill training helps to shape motivation as much as 34%, participation by 33%, and the willingness to do the fish processing for 33%. Thus, the sum of these three components is 100% in influencing productivity. Productivity in fish processing is critically important for the fishermen to be improved because their catches from the sea can be optimally used to increase the welfare of the coastal community in Pacitan. In the effort of



improving fish processing productivity, human capital is the major factor to be examined as it is related to the skills and knowledge of fish processing.

Citing a study from Rakib & Syam (2016), fish processing productivity increases as life skills training programs are conducted. It is due to the improvement of skills and knowledge of the community as reflected by establishments of small fish processing industries by fishermen after participating in the training.

This research also supports the results of Marwan, Wiryawan, & Lubis (2013), where there is an increase of productivity levels in fish processing after its development is conducted by the coastal community's integrated fish processing group.

Conclusion

Skills taught by mentors to fishermen in Pacitan, East Java, Indonesia are boat and net making skills, environment-friendly fishing techniques, and disaster management. Meanwhile, training for processing fishermen are fish processing skills for producing food made from fish and processor machine operation that is obtained from aid.

Factors obstructing fishermen empowerment include the inability to comprehend training materials, the scope of the materials, their incompatibility with the needs of fishermen, and the lack of facilities and learning properties in the training. The productivity level of fish processing reaches 100% due to a change done by training participants. They once did not process fish and begin to do it after participating in the training, which results in an increase of productivity.

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