



Training and Retraining Of Fishing Artisans for Food Security and Better Output

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Abstract

There are challenges and possibilities in any career, no matter how large or little. Fishing artisans have difficulties in ensuring food security and increasing productivity. One approach would be to retrain or instruct fishing craftspeople to make better use of the tools already at their disposal. Enhancing food safety and fish yield is a direct result of developing fish-generating potentials. Although it requires a lot of manual labour and non-motorized wooden boats, the artisan fish farming method has become the dominant method of fish production. However hard these fishermen work, they are unable to provide the yearly demand for seafood. Fish spoils quickly, therefore, it is important to train fishermen in proper processing techniques so they can get the most out of their catches. This study investigates the impact of training and retraining on artisan fish farmers. The study was carried out among 150 fishermen randomly selected and a questionnaire was adopted for data collection. Frequencies and percentages were adopted for data collection and the result indicated that adequate and frequent training improves artisan farmers' productivity to yield better results by using modern equipment. The study, therefore, concluded that training is inevitable in enhancing productivity and thus recommends that the government must get involved and provide training in the necessary technologies.

Keywords: Artisan, fishery, training, retraining, food security, better output

I. Introduction

The fishery sector in Nigeria can be described as underdeveloped and comprised mainly of artisans (Sule, 2021). In this modern day, ensuring food security is almost impossible without the application of technology. Herein lays the challenge as most fish artisans are not knowledgeable about opportunities accessible to them for their development (Ogunremi, 2016). In seeking a global solution to hunger and food-related issues, Nigeria, like most developing countries is

challenged by difficulties. The goal of increasing food production has led to the consideration of reducing fish loss post-harvest, given the burden placed on small-scale fish farmers to make fish available locally as a measure against food insecurity. The losses faced by these small-scale fish farmers also referred to as fish artisans contribute to their inability to produce a bountiful harvest and preserve it accordingly (Akintola&Fakoya, 2017). Millions of people are engaged in aquaculture production, implying that fishing plays an important role global. Furthermore, a lot of people are dependent on this sector, either for consumption or employment. This gives an indication of the importance of the sector to food security. Nigeria has great potential for large-scale fish production, given the availability of lakes, rivers, streams and ponds. Ogunremi (2016) defined artisanal fishery as the act of harvesting fish from rivers by fishermen on a small scale with the aid of both traditional and modern fishing gear. This profession is one that is associated with poor income, low productivity, and inadequate infrastructural backing and financing (Daniel &Monsi, 2019). This is an indication of a poor production capacity in Nigeria which makes it seem like the only solution to the constant demand for fish is through importation (Akintola &Fakoya, 2017).

To enhance food security and fish production, it is important to identify and develop fish production potentials. Achieving this requires government intervention in the use of appropriate technologies through organized training. There are three means to making fish available in Nigeria; importation, capture and artisanal fish farming. Of these methods, the artisan fish farming method dominates fish production and requires a lot of physical labour, and its operations are executed mainly through the use of wooden unmotorized canoes (Agu-Aguiyi, Onyia, Umehali&Sotonye, 2018). In spite of the efforts by these artisans at fish production, there is still a shortfall experienced as the yearly requirements are not achieved. Given the foregoing, it becomes important to train fishing



artisans on various strategies that can be applied to enhance their harvest output, due to the perishable nature of fish, which necessitates the use of effective processing methods.

Statement of research problem

Due to the under exploited status of the fisheries sector, the financial and economic contribution to both the nation and household food security has been reported to be very poor. This has been attributed to the inadequate capacity of fishermen to produce, poor market linkages, the under developed domestic market and inadequacy of fisheries infrastructure amongst other factors.

The application of technologies to agricultural production is assured to result to higher productivity mainly achieved through training. In the quest for food security and increased food production, challenges are encountered, and is made even more so when no efforts is made to train the producers. Artisan fishermen largely depend on traditional means of production leading to poor output and post harvest loss. The constant experience of this loss has economic effects to the artisans as well as the nation, which makes it important to carry out an orientation on the necessity of training and retraining to boost food security and ensure a better output in fish farming.

Research Objectives

The study specifically seeks to

1. Ascertain the challenges faced by fishing artisans in fish farming
2. Determine the training requirements for fish artisans to increase productivity.
3. Examine the impact of training and retraining fish artisans on food security.

Research questions

1. What are the challenges faced by fishing artisans in fish farming?
2. What are the training requirements for fish artisans to increase productivity?
3. What is the impact of training and retraining fish artisans on food security?

II. Literature Review

Concept of training

Training refers to the process of acquiring skills, in order to enhance productivity or performance in a specific environment (Famuwagun, 2015). Olorunfemi, et al., (2017) opined that the inability of fish farmers to identify and utilize the potentials in the fishery sector can be attributed to the inadequate use of initiatives that add value. Thus, Sule (2021) opined that training is

significant to human performance as it enables an individual acquire important information and skills necessary to enhance enhance productivity. Training becomes effective when the trainee is able to effectively apply the information derived to real life situations and effect positive changes.

Overview of artisanal fishery

Artisanal fishery describes the process of harvesting fish from rivers by small scale fishermen using fishing gears available to them (Ogunremi, 2016). Artisanal fishery is found mainly in developing nations and is characterized by low productivity and income. They depend on the use of small technology and crude gears for the provision of fish to the populace (Adisa et al., 2021).

Artisanal fishers are challenged by issues such as inadequate infrastructure which comprises of access to good means of preservation and processing facilities, as well as power supply, poor means of transportation, high cost of importation of fishing gears, among others. They are also challenged by the unavailability of a good network or distribution system which facilitates the movement of the fish from the harvest point to the final consumers in good condition, leaving them to depend on middlemen (Sogbesan&Kwaji, 2018). The inadequate training on personal and equipment safety is another challenge confronting fishermen leading to loss of life and resources. Finally, the constant changes in the climate and economic recession contributes to poor production of fish. The aforementioned challenges has led to artisan fishers resorting to the use of chemicals and unsustainable fishing methods

Status of Fisheries and Aquaculture in Nigeria

Nigeria boasts of a very extensive coastline, inter connecting lagoons and vast sea areas measuring about 800km and 256000 square kilometers respectively (Tobor, 1993). The country is also surrounded by several man-made lakes with diverse fish resources with the potential of producing over half a million tonnes of fish annually, if properly developed (Sanni, et al., 2009). The implication of this is that Nigeria is yet to tap from its aquaculture potentials. In spite of the insignificant contribution of fisheries to the G.D.P, and its poor resources, it significantly provides employment to thousands of people. In the bid to effectively manage agricultural resources comprising of livestock, crop, fisheries and forestry, the extension department of the Agricultural Development Programme (ADP) under the aegis or the Federal Ministry of Agricultural and Rural



Development was saddled with this responsibility. The rationale behind this concept was that to effectively modernize the various aspects of Nigerian agriculture, it is important to integrate various factors such as market strategy, technology, and physical inputs (Akpoko, 1993).

The promotion of fisheries extension in Nigeria dates back to the colonial days during which the focus was on the improvement of fishing gear, craft and post harvest handling. The fishing technologies introduced at this time in the 1960's included the use of hooks, nylon fishing net, hooks, cement anchors, cement made sinkers, ropes, buoys and flags. Over the years, this has evolved to trainings on mechanized equipments and fishing vessels in order to capture the interest of people in the fisheries sector. In 1990, a new concept was created which focused on regularly having contact with farmers and delivering messages on agricultural resource management (Okoye, 2000); a situation which did not seem to be welcomed given the criticism of not being properly coordinated, thus causing confusion to the farmers. This implies that a high degree of commitment is required to effectively train personnel and intensify capacity building to meet the expectation of fish farmers, thus requiring financial and man power commitment to recruitment, training and retraining in addition to monitoring and evaluation for a desirable production.

Empirical review

Sule (2021) examined the impact of training and retraining of fisheries artisan on harvest output using descriptive survey research method. Data was derived from 80 fisheries artisans in Ogun state using questionnaire, and analyzed descriptively using frequencies and percentages. The study found the study area to be lacking in terms of infrastructure and financing resulting in low productivity and income. Several challenges were identified as issues confronting fish artisans and they include funds, poor storage and processing facilities, Ineffective channels of distribution; and high cost of materials; thus necessitating the need for training. Training needs identified by the study includes preservation methods; record keeping; maintenance and construction; and alternative sources of funds to improve fishing output. Muddam et al., (2020) found that among fish farmers, there is inadequate knowledge of modern and scientific fish culture, thus requiring the adoption of training for

improved production. Famuwagun (2015) also found that fish artisans require training in various aspects such as record keeping to positively improve their knowledge. Adisa (2017) found a positive and significant relationship between farmers' knowledge level and their marital status, and membership of cooperative society and fish farming association.

Theoretical review: Expectancy theory

The Expectancy theory formulated on the components of Valance, Instrumentality and Expectation was propounded by Edward C. Tolman and Victor H. Vroom (Vroom, 1964). The argument of this theory is that individuals believe that a desirable outcome is subject to effort and performance. This is thus the motivating factor behind human actions to achieve an expected performance or output. Expectancy in this context refers to a person's effort to contribute to the achievement of a desirable outcome; instrumentality entails being rewarded for meeting up with expectations; while valance describes the value which is attached by an individual to a reward (Osadebamwen, 2015). Adopting this theory, training fishing artisans on various aspects of food production should be valued as significant to the ensuring food security. However, based on the proposition of the theory, the perception of the benefits attached to training is influenced by the willingness of the artisans to be trained in modern strategies and techniques.

III. Methodology

The study adopts the use of the descriptive survey research method in examining the training and retraining of fisheries artisan to improve Food Security and better output. Thus, the Epe area of Lagos state was purposively selected as the area of study, due to its characteristics as a fishing community comprising of artisan fishers. The study further utilized the random sampling method in selecting 150 small scale fishermen. The study made use of questionnaires, designed using a four likert scale format and distributed to the respondents, in deriving data for the study. In distributing questionnaires, the service of research assistants was sought in the distribution of questionnaires to the fishermen, many of whom were illiterates and thus required assistance in filling the questionnaire. The data derived was descriptively analyzed using mean and percentages.



Data presentation and analysis

RQ1: What are the challenges faced by fishing artisans in fish farming?

Table 1: The challenges faced by fishing artisans in fish farming

Items	SA/A	D/SD	Total % in agreement
Inadequacy of capital	144	6	96.0
Inadequate extension services	138	12	92.0
Ineffective distribution channels	140	10	93.3
Obsolete preservation methods	133	17	88.7
Ignorance of loan facility	143	7	95.3
Unfavourable government policies	147	3	98.0
High cost of raw materials	145	5	96.7

Field Survey (2022)

The following were the challenges identified from the field survey carried out as affecting the fishing artisans in Nigeria: Inadequacy of capital (96.0%); Inadequate extension services (92.0%); Ineffective distribution channels(93.3%); Obsolete preservation methods (88.7%); Ignorance of loan facility(95.3%); Unfavourable government policies(98.0%); and High cost of raw materials (96.7%), according to this study.

RQ2 What are the training requirements for fish artisans to increase productivity?

Table 2: The training requirements for fish artisans to increase productivity

Items	SA/A	D/SD	Total % in agreement
Breeding and pond maintenance management	149	1	99.3
Improved food security	140	10	93.3
Use of modern fishing technologies	140	10	93.3
Effective networking and marketing skills	137	13	91.3
Modern methods of preservation	143	7	95.3
Diversified income opportunities	147	3	98.0
Means of accessing loans	145	5	96.7

Field Survey (2022)

The data collected from the survey carried out indicated the following as training requirements for fish artisans to increase: breeding and pond maintenance management (**99.3%**); Improved food security(93.3%); Use of modern fishing technologies (93.3%); Effective networking and marketing skills (91.3%); Modern methods of preservation (95.3%);Diversified income opportunities (98.0%); and Means of accessing loans(96.7%).

RQ3 What is the impact of training and retraining fish artisans on food security?

Table 3: The impact of training and retraining fish artisans on food security

Items	SA/A	D/SD	Total % in agreement
Training will enable early detection of challenges during harvest	144	6	96.0
Training will enable them to improve their safety practices	138	12	92.0
Training will improve their preservation methods	140	10	93.3
Training will update their knowledge level	133	17	88.7
Training and retraining will influence the quality fish products produced	143	7	95.3

Field Survey (2022)

The final research objective was formed to investigate the impact of training and retraining fish artisans on food security. The result indicates that training will enable early detection of challenges during harvest (96.0%); Training will enable them to improve their safety practices (92.0%); Training



will improve their preservation methods (93.3%); Training will update their knowledge level (88.7), and training and retraining will influence the quality fish products produced (95.3%).

IV. Discussion, Conclusion, and Recommendation

Based on the analysis conducted, training and retraining of fishing artisans significantly enhance food security and improve production output. Consistent with the findings made is the study by Famuwagun (2015) which found that a person's skills improve with training, thus in training fish artisans they are made more aware of their limitations as well as the skills needed to be efficient and productive. Also consistent with this finding is the study by Umunna et al., (2019) and Muddam et al., (2020) which found that productivity is enhanced with training. Clearly shown in the study are the challenges faced by fish artisans, which is an indication that training is required to improve the underdevelopment of the sector using different kinds of pieces of training (Akintola & Fakoya, 2017). As shown by the study, the absence of training and retraining in the fishery sector makes them unable to identify financial opportunities, and access loan facilities, and leaves them ignorant of modern fishing methodologies. It is in view of these findings that this study recommends the constant organization of training programmes for artisanal fishermen to enhance their productivity. The issue of logistics should be considered when implementing training programmes, as organizing pieces of training away from the fishing community might discourage the farmers from attendance. Thus, to enhance the interest of fishing artisans in development and training programs, trainers should be mobilized to meet the fisherman in their locations to encourage attendance and acceptance of the training content.

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REQUEST FOR INFORMATION

Dear Respondent,

I am carrying out a study on “Training and Retraining of Fishing artisans for Food Security and better output”, and you have been chosen to be part of the study. This questionnaire is only for academic purposes. Kindly select the response which applies to you and all information will be kept confidential

Instructions: Please tick (√) as appropriate where

Key: Strongly agree (4), Agree (3), Disagree (2), and strongly disagree (1).

SECTION B:

Instructions: Please tick (√) as appropriate where

SA = Strongly Agree (SA), A = Agree, D = Disagree (D), SD = Strongly Disagree (SD)

Key: Strongly agree (5), Agree (3), Disagree (2), and strongly disagree (1).

S/N	ITEMS	SA	A	D	SD
RQ1	What are the challenges faced by fishing artisans in fish farming?				
1	Inadequacy of capital				
2	Inadequate extension services				
3	Ineffective distribution channels				
4	Obsolete preservation methods				
5	Ignorance of loan facility				
6	Unfavourable government policies				
7	High cost of raw materials				
RQ2	What are the training requirements for fish artisans to increase productivity?				
8	Breeding and pond maintenance management				
9	Improved food security				
10	Use of modern fishing technologies				
11	Effective networking and marketing skills				
12	Modern methods of preservation				
13	Diversified income opportunities				
14	Means of accessing loans				
RQ3	What is the impact of training and retraining fish artisans on food security?				
15	Training will enable early detection of challenges during harvest				
16	Training will enable them improve their safety practices				
17	Training will improve their preservation methods				
18	Training will update their knowledge level				
19	Training and retraining will influence the quality fish products produced				

Thank you