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Management Skills in Fish Farming Needed by Retired Civil and Public Servants for Sustainable Income in Ebonyi State

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Abstract
This study identified the management skills in fish farming needed by retired civil and public servants for sustainable income in Ebonyi State of Nigeria. The study was a survey research design. The population of the study was 33. It comprised of 10 lecturers and 2 technologists in the department of fisheries, 4 lecturers and 2 technologists in the Agricultural Education unit, Technology and Vocational Education, Ebonyi State University and 15 registered fish farmers in Ebonyi State. There was no sampling; the whole population was used for the study. The instrument used for data collection was a structured questionnaire which has four points rating scales of Highly Needed (HN), Averagely Needed (AV), Little Needed (LN), and Not Needed (NN). The instrument contained 32 items and was validated by 3 experts from the department of Fisheries in Ebonyi State University. The reliability of the instrument was determined by using Cronbach alpha technique to determine the internal consistency of the instruments which yielded a reliability coefficient of 0.84. The data for the study was collected by the researcher personally visiting the respondents. The data collected were analyzed using weighted mean and standard deviation while the t-test was used to test the hypotheses formulated at 0.05 level of significant. Based on the analysis of the data, the following results emanated; the retired civil and public servants need the management skills in pond construction, management skills in breeding of fish and maintenance of fish pond, management skills in preservation and storage of fish and fish products; and management skills in marketing and distribution of fish and fish products. It was discovered that there was no significant difference between the mean ratings of the registered fish farmers and the lecturers on management skills in breeding of fish, maintenance of fish pond, and management skills in marketing and distribution of fish and fish products. It was recommended among others that the Government of Ebonyi State should incorporate the identified skills into the training modules of the skills acquisition centre of the State and be used to train retired civil and public servants.
Keywords: Management: Skill: Fish Farming: Civil and Public Servants and Sustainable Income.

INTRODUCTION

Fish farming which is referred to as fishery is the rearing of fish and other aquatic organism in a confined water body.

Ofuku (2006) reported that fish farming is the process of breeding and rearing fish in controlled environment whose adequate care are being taken. These cares include; feeding, disease control and other management activities. He went further to explain that fish farming also include the rearing of other aquatic organisms in the pond for commercial or domestic utilization.

Fish farming according to Mathias (2008) is the process of rearing fish in an enclosed water body for industrial, domestic and human consumption. Fish farming is an ancient occupation that provides the people with employment opportunities, provides income to the producer, foreign exchange to the nation through exploitation. Fish farming provides an alternative animal protein for man.

Fish farming according to Mathias (2008) occupies an important nitch in the national economic development. He further stressed that fish farming requires a little land space with little capital for startment. This means that it is possible to establish fish pond at the backyard of a residential house or alternatively plastic container can be used as a movable pond to rear the fish. Fish can be fed with some local ingredients which could be affordable by the farmers.

Ofuku (2006) reported that fish farming involves performance of certain management skills such construction of fish pond, provision of clean water free from toxic substances, provision of healthy fingerlings, feeding of the fish, disease and pest control, control of predators, disilting of the pond, changing water in the pond at intervals and controlled harvesting of the matured fish (cropping).

Management according to Steiner (1998) is a process of planning, organizing, controlling, directing, co-ordinating, implementing and evaluating the limited resources such as land, labour, capital for the production of goods and services for the utilization of man. Management involves prudent utilization of the limited resources to achieve maximal output in the form of goods and services. Prudent management implies reduction of waste and skillful usage of inputs. For one to manage any project, effectively, such a person must possess management skills. Skills according to Okorie (2000) is human capacity to perform any activity with dexterity and competent. Management skills in fish farming comprised the skills ranging from site selection where the fish pond will be

constructed to harvesting and marketing of fish and fish product. A civil or public servant who acquires management skills in fish farming will use the skills to establish and manage a fish farm which will provide financial security to the retiree.

A retired civil or public servant in the context of this study are persons who have successfully served their employers either in public or private organization for a period of thirty five years (35 years) or has attained the age of sixty five years in the Nigerian context.

According to Umofia (2005) some civil or public servants becomes apprehensive when they noticed that they are moving close to retirement. The fear of retirement servants sometimes lead the individual to be tensed up because of the unexpected or uncertainties of life and economic security after retirement. Experience has shown that many retired civil and public servants suffer economic security and are faced with health challenges, challenges of maintaining the family and for a comfortable life. These challenges arise, sometimes as a result of non-payment of gratuities and pensions by the former employers of these retirees. In such a situation, the retirees face multitude of challenges which may a times lead to untimely death.

To avoid this ugly situation, it is imperative for every servicing officer to plan for his retirement to ensure a robust financial security. It is on this basis that this research is designed to identify the management skills needed by retired civil and public servants in fish farming for sustainable income.

Statement of the Problem

In Nigeria, especially in Ebonyi State, many public and civil servants are faced with numerous challenges. For instance, civil servants develop fears and stress when they notice that their retirement periods are near. This is prominently because they are not sure of their gratuity and pension allowances. Sometimes if the gratuities are paid, most retires do not know the right business to invest their money in order to achieve success. Other challenges are health challenges, maintenance and feeding of family and relatives as well as the challenges to live a comfortable life. These challenges which befall on the retirees sometimes come as a result of lack of planning when one is still in active service. It is vital for an individual to plan for retirement, either by saving or acquisition of management skill which will enable one to manage a small scale business. To avoid the situation it is necessary to prepare for retirement and ensure robust financial security.

It is on the basis of this, that this research is designed to identify the management skills in fish farming needed by the retired civil and public servants for sustainable income in Ebonyi State.

Purpose of the Study

The main purpose of this study is to determine the management skills needed by the retired civil and public servants for sustainable income in fish farming for sustainable income in Ebonyi State; specifically;

1. Determine the management skills needed by the retired civil and public servants on pond construction.
2. Determine the management skills needed by the retired civil and public servants in breeding of and maintenance of the pond.
3. Determine the management skills needed by the retire civil and public servants on preservation and storage of fish and fish products
4. Determine the management skills needed by the retired civil and public servants in the marketing and distribution of the fish and fish products.

Research Questions

The following research questions guided the study:

1. What are the management skills needed by the retired civil and public servants in pond construction?
2. What are the management skills needed by the retired civil and public servant on breeding of the fish and pond maintenance?
3. What are the management skills needed by the civil and public servants in preservation and storage of fish and fish products?
4. What are the management skills needed by the civil and public servants in marketing and distribution of fish and fish products?

Hypothesis

The following hypotheses guided the study;

HO1: There will be no significant difference between the mean ratings of the registered fish farmers and the lecturers in the department of fishery in Ebonyi State University on the management skills needed by the civil servants in breeding of fish and maintenance of the fish pond.

HO2: There will be no significant difference between the mean ratings of the registered fish farmers and the lecturers in the fishery department, Ebonyi State University on the management skills needed by the civil and public servant in distribution and marketing of fish and fish pond.

Methodology

This study adopted survey research design. Four purposes of study and four corresponding research questions guided the study. Two null hypotheses were formulated. The population of the study was 33 comprising 15 registered commercial fish farmers in Ebonyi State, 10 lecturers and 2 technologists in fishery department, and 4 lecturers and 2 technologists in Agricultural Unit in the department of Technology and Vocational Education of Ebonyi State University, Abakaliki. The entire population was studied. The instrument used for data collection was a structured question of 32 items. The questionnaire had 4 points rating scales of Highly Needed (HN), Averagely Needed (AN), Needed (N), Little Needed (LN) and Not Needed (NN), with their nominal values of 4, 3, 2 and 1 respectively. The instrument was face validated by 3 experts in the department of fisheries, Ebonyi State University, Abakaliki. Cronbach alpha statistics was used to determine the internal consistency of the instrument which yielded a reliability coefficient of 0.93, 0.92 and 0.89 for the three clusters of the instrument.

The data were collected by the researcher administering the entire 33 questionnaire to the respondents with the aid of 3 research assistants. Out of the 33 questionnaires distributed, 30 were returned, which represents 90.9 percent retrieval. The data collected were analyzed using weighted mean and standard deviation, while t-test was used to test for the hypotheses formulated.

In answering the research questions, 2.50 was used as the cut-off point, any item in the questionnaire with the mean score of 2.50 and above was regarded as the management skills needed while any item with the mean score of below 2.50 was regarded as the management skills not needed. In testing the hypothesis any item with the t-calculated less than the t-critical, the null hypotheses was accepted and when the t-calculated was greater than the t-table, the null hypotheses was rejected.

Results and Discussion

The result of the findings of this study is presented and discussed as below;

Research Question 1

What are the management skills in pond construction needed in fish farming by retired civil and public servants for sustainable income in Ebonyi State of Nigeria?

Table 1; Mean responses of the respondents of management skills in pond construction.

S/N	Management skills in pond construction	$\bar{x}$	SD	Remarks
	Ability to:			
1	clear the suitable site for the fish pond	4.00	0.82	Needed
2	clear the site, stump and park out the debris	3.88	0.95	Needed
3	measure the dimensions of the pond	3.86	0.91	Needed
4	dig the pond to reach the appropriate dept of 6ft	3.56	1.05	Needed
5	construct the inlet and out-let dikes	3.68	0.99	Needed
6	place sharp pebbles at the bottom of the pond	3.52	1.05	Needed
7	cover the inlet and outlet dikes with wire-net to prevent fish from swimming out of the pond	3.62	1.00	Needed

Table 1 reveals that all the items had their mean scores above the cut-off point of 2.50 with their corresponding standard deviations. This implies that all the skills in pond construction are needed by retired civil and public servants for sustainable income.

Research Question 2:

What are the management skills in breeding of fish and pond maintenance needed by the civil servants for sustainable income?

Table 2: mean responses of the respondents on management skills in fish breeding and maintenance of fish pond.

S/N	Management skills in breeding of fish and pond maintenance	$\bar{x}$	SD	Remarks
	Ability to:			
1	acquire healthy fingerlings	3.94	0.90	Needed
2	introduce clean water free from toxic substances into the pond	3.85	0.94	Needed
3	feed the fish with the appropriate feeds	3.92	0.95	Needed
4	identify when the water is polluted and being replaced with clean water	3.98	0.98	Needed
5	disilt the pond when it is dirty	3.52	1.05	Needed
6	detect weeds on the pond and remove them	3.87	0.73	Needed
7	detect the diseased fish in the pond and deal with the situation	3.59	0.98	Needed
8	prevent the invasion of predators from eating the fish such as the hawk, snakes and cats	3.51	0.80	Needed
9	detect when the fish is matured for harvesting	3.75	0.97	Needed
10	carry out selective harvesting in the pond	3.54	0.78	Needed

Table 2 reveals that all the items had their mean scores above the cut-off point of 2.50. This implies that

all the skills are needed in breeding of fish and maintenance of fish pond by the retired civil and public servants for sustainable income.

Research Question 3:

What are the management skills in preservation and storage of fish and fish products needed by the retired civil and public servant for sustainable income?

Table 3: mean responses of the respondents on management skills in preservation and storage of fish and fish products.

S/N	Management skills in preservation and storage of fish and fish products	$\bar{x}$	SD	Remarks
	Ability to:	3.72	0.99	Needed
1	select effective and economical preservation techniques			
2	preserve fish by drying	3.88	0.72	Needed
3	preserve fish by keeping them in refrigerator and in cold rooms	3.98	0.98	Needed
4	preserve fish by salting	3.29	0.76	Needed
5	preserve fish by smoking	3.58	0.87	Needed
6	Preserve fish by canning	3.32	0.83	Needed

Table 3 shows that all the items had their mean scores above the cut-off point of 2.50; this shows that all the skills in preservation and storage of fish and fish products are needed by the retired civil and public servants for sustainable income.

Research Question 4:

What are the management skills in marketing and distribution of fish and fish products needed by the civil and public servants for sustainable income?

Table 4: mean responses of the respondents on management skills in marketing and distribution of fish and fish products

S/N	Management skills in distribution and marketing of fish and fish products	$\bar{x}$	SD	Remarks
1	Skill to: advertise fish products patronage and create awareness	3.36	0.81	Needed
2	identify profitable markets and prospective fish buyers	3.94	0.90	Needed
3	carry out market survey to determine the price of fish in the market and the public demand	3.19	1.13	Needed
4	forecast when best to supply fish in the market for maximum profit	3.68	0.99	Needed
5	fix the price of different sizes of fish	3.85	0.98	Needed
6	carry the life fish to the market	3.88	0.72	Needed
7	satisfy the customers at different locations	3.62	1.00	Needed
8	keep accurate records of sales of the fish	3.51	0.80	Needed
9	Determine when profit is made and how much profit made.	3.77	0.96	Needed

Table 4 reveals that all the items had level of 2.50. This implies that all the management skills in marketing and distribution of fish are needed by the retired civil and public servants for sustainable income.

Hypotheses

HO1: there will be no significant difference between the mean ratings of the commercial registered fish farmers and the lecturers on the management skills in breeding of fish and maintenance of fish pond needed by the civil and public servants for sustainable income.

Table 5 t-test analysis of mean scores of the respondents on management skills in breeding of fish and maintenance of fish pond needed by civil and public servants for sustainable income

S/N	Management skills in breeding of fish and pond maintenance	Fish Farmers $\bar{x}_1$	Lecturers $\bar{x}_2$	S_1^2	S_2^2	t-cal	t-tab	Remarks
	Ability to:	3.02	3.06	0.64	0.97	-0.40	2.04	*
1	acquire healthy fingerlings							
2	introduce clean water free from toxic substances into the pond	3.30	3.26	0.83	0.74	0.40	2.04	*
3	feed the fish with the appropriate feeds	3.34	3.01	0.33	0.86	2.35	2.04	**
4	identify when the water is polluted and being replaced with clean water	3.23	3.23	0.56	0.72	0.10	2.04	*
5	disilt the pond when it is dirty	3.08	3.28	0.80	0.71	-2.00	2.04	*
6	detect weeds on the pond and remove it	3.30	3.01	0.44	1.03	2.90	2.04	**
7	detect the diseased fish in the pond and deal with the situation	3.02	3.13	0.22	0.93	-1.10	2.04	*
8	prevent the invasion of predators from eating the fish such as the hawk, snakes and cats	3.19	3.15	0.77	0.97	0.40	2.04	*
9	detect when the fish is matured for harvesting	3.25	3.05	0.66	0.99	0.70	2.04	*
10	carry out selective harvesting in the pond	3.10	2.86	0.75	1.10	-7.50	2.04	*

N_1=18,N_2=15, df=31,
*=no significant difference
**=significant difference

Table 5 reveals that items 1, 2, 3, 4, 5, 7, 8, 9 and 10 had their t-calculated less than the critical table of 2.04. While items 3 and 6 had their t-calculated greater than the critical table at 0.05 level of significant at 31 degree of freedom. Therefore, the null hypothesis was accepted in 8 items and rejected in only 2 items. This implies that the opinions of the commercial fish farmers did not differ in 8 items but differs in 2 items in the management skills needed in breeding of fish and maintenance of fish pond.

Table 6: t-test analysis of mean scores of the respondents on management skills in marketing and distribution of fish and fish products needed by retired civil and public servants for sustainable income

S/N	Management skills marketing and distribution fish and fish products	Fish Farmers $\bar{x}_1$	Lecturers $\bar{x}_2$	S_1^2	S_2^2	t-cal	t-tab	Remarks
1	Ability to: advertise fish products to enhance patronage and create awareness	3.17	3.06	0.80	1.11	0.78	2.04	*
2	identify profitable markets and prospective fish buyers	2.81	3.18	0.70	1.27	2.64	2.04	**
3	carry out market survey to determine the price of fish in the market and determine the public demand	3.06	2.83	0.74	1.32	1.64	2.04	*
4	Forecast when best to supply fish in the market for maximum profit.	3.24	2.96	0.67	0.98	2.30	2.04	**
5	fix the price of different size of fish	3.31	3.13	0.47	0.82	1.80	2.04	*
6	carry the life fish to the market	3.10	2.96	0.79	1.11	1.40	2.04	*
7	satisfy the customers at different locations	3.17	2.98	0.69	1.03	1.90	2.04	*
8	keep accurate records of sales of the fish	3.18	3.05	0.81	1.10	0.78	2.04	*
9	determine when profit is made and how much profit made	3.06	3.05	0.74	0.65	0.63	2.04	*

Table 6 reveals that items 1, 3, 5, 6, 7, 8, 9 had their t-calculated less than the t-tabulated. The null

hypothesis was accepted while items 2 and 4 had their t-calculated greater than the t-table. Then the null hypothesis was rejected in these two items. This implies that the respondents' opinions did not differ in 7 items while their opinions differs in 2 items on the management skills needed by the retired civil and public servants in the marketing and distribution of fish and fish products at 0.05 level of significant.

Findings

Based on the analysis of the data, the following findings emanated;

1. The civil and public servants need management skills in pond construction in fish farming for sustainable income.
2. The civil and public servants need management skills in breeding of fish and maintenance of fish pond for fish farming for sustainable income.
3. The civil and public servants need management skills in preservation and storage of fish and fish products in fish farming for sustainable income.
4. The civil and public servants need management skills in marketing and distribution of fish and fish products in fish farming for sustainable income.
5. There was no significant difference between the opinions of the commercial fish farmers and the university lecturers on the management skills on breeding of fish, maintenance of fish pond, marketing and distribution of fish and fish products.

Conclusion

The agony of civil and public servants when retired from active service can be minimized by exposing the retirees to certain management skills which can enable them to establish and manage any enterprise for sustainable income and financial security. One of the attractive enterprise is fish farming.

The result of this study has revealed that retired civil and public servants need management skills in pond construction, breeding of fish and maintenance of fish pond, preservation and storage of fish, marketing and distribution of fish and fish products in fish farming for sustainable income.

Recommendations

Based on the findings of this work, the following recommendations have been put forward;

1. The management skills identified in fish farming should be integrated into the modules of skill acquisition centers of Ebonyi State for the training of the retired civil and public servants in fish farming.
2. The government of Ebonyi State should incorporate the identified skills into the agricultural science curriculum at the senior secondary school for the training of the students who will make use of the skills on graduation
3. Unemployed youths should be given training on the identified management skills which will enable them to enter into fish farming enterprise and to reduce unemployment in Ebonyi State.

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