ASSESSMENT OF FARMERS' PERCEPTION OF THE EFFECTIVENESS OF SONGHAI - DELTA FISH CULTURE TRAINING PROGRAMME IN DELTA STATE, NIGERIA

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ABSTRACT

The study assessed the effectiveness of Songhai-Delta fish culture training programme. A structured questionnaire was used to elicit information from forty two trainees. A majority (86.7%) of the respondents were male, aged between 30-49 years with majority having secondary and tertiary education. The respondents had good perception of the trainers and the training programme organization and administration but felt that the content of the training was not fully relevant to the respondents' problems ($\overline{x}$= 3.47). Also, there was insufficient time for practice ($\overline{x}$ =3.3) and training duration and time were inadequate ($\overline{x}$= 2.40). The respondents reported that there was no significant increase in their knowledge and skills after the training programme. They however adopted many fish culture technologies after the training. Major perceived constraint to the training programme was distance to the training centre ($\overline{x}$ = 3.67). It was recommended that there is a need for proper training needs analysis before training activities are carried out and there is a need for re-training of the centre's staff in areas of adult training to make the centre's training more effective.

Key words: Farmers' perception, effectiveness, Songhai-Delta, training programme

INTRODUCTION

Training can be regarded as an age long concept which performs the therapeutic function of shaping knowledge, skill and attitude that are required for effective performance of duties and or assignment (Adisa and Okunade, 2005). The training of people engaged in agricultural and community development programs aim at communicating information, knowledge and skills, replacing old attitudes by new ones, exchanging opinion and experiences, removing doubts and difficulties (Raab, 1991).

Training according to Halim and Ali (1988) is carried out so as to be fitted, qualified and proficient. The purpose is to impact knowledge and skills to an individual so that he can perform some desirable tasks. Okwu and Ejembi (2005) refer to farmers' training as 'an intensive learning activity for a group of selected farmers, assisted by competent trainers to understand and practice the skills required in the adoption of technology at a place where appropriate facilities exist and at a time and duration considered suitable by farmers. The

need for training subsumes a deficit situation in the knowledge and skill level of the practicing farmers as well as the availability of appropriate applicable information, the utilization of which will correct the problem situation (Okwu and Ejembi, 2005).

Training provides whatever additional specific items of knowledge, skill or attitude they need to perform up to that standard. Training is conducted whenever an individual engages in an activity that results in the ability to exercise a skill that he does not previously have. The training generally involves four basic components (1) acquiring knowledge of the skill; (2) observing a model perform the skill; (3) practicing the skill; and (4) reinforcing the newly acquired behaviour Meenambigai and Seetharaman (2003) asserted that training is the most singular factor affecting individuals' attitude, productivity, improvement, minimization of risks and quality of job performance in any endeavour.

Aquaculture as in other areas or sub-sectors of agriculture has certain complexities (Ajieh, 2004). For example, the provision of young fish to stock ponds, pond fertilization and

food provision require considerable sophistication (Ajieh, 2004). The farmer therefore needs competency in knowledge, skills and techniques involved in the efficient management of fish to maximize production. Farmers' competencies in aquaculture could be enhanced through proper training. Training can reduce if not eliminate this gap. The aim shall be to impact new knowledge, teach better skills and bring about more effective performance in the production of food and livestock.

Although local fish production Nigeria is mainly through capture fisheries with its finite nature, prominence is given to fish farming as a supplement. Naylon, Holdbury, Primavera, Kautsky, Beneridge, Clay, Folke and Troell (2001) and Samaki News (2003) noted that contrary to the leveling in production from capture fisheries, aquaculture is expanding rapidly, especially in the developing world and many governments have included aquaculture in development goals. In relation to this, the Nigeria Institute of Oceanographic and Marine Research (NIOMR), State Agricultural Development Programmes (ADPs) and other related bodies have made some remarkable effort in the area of specialization, manpower development and training of fish farmers, especially in some of the coastal States of Nigeria. Ajieh (2004) reported that in order to boost fish production through fish farming in Delta State of Nigeria, fish farming innovations are developed and disseminated by the Delta State ADP to ensure maximum productivity. This is because a significant relationship has been found between training and adoption of technologies by farmers (Ajayi, 2005).

Songhai-Delta is a Delta State Government establishment charged with improving agricultural production through provision of specialized training on integrated agricultural production (aquaculture, animal husbandry, and crop production, food processing and related areas). The center's training on aquaculture is aimed at improving the technical efficiency of practicing fish farmers based on the proposition that the knowledge and skills they possessed are inadequate to the task requirement of their jobs. Periodic assessment of the views of trainees that attended the centre becomes very important as this would be useful for the centre in making necessary adjustments so as to meet the set goals.

The study therefore assessed the perception of farmers on the effectiveness of the Songhai-Delta training programme in enhancing aquaculture knowledge and skills of fish farmers. The specific objectives were to:

- examine the personal characteristics of the respondents;
- assess respondents' perception of the training programme as regards trainers' performance, organization and administration;
- determine respondents' perceived knowledge and skills gained after the training;
- identify improved practices adopted by respondents as a result of the training programme; and
- identify respondents' perceived constraints associated with the training programme

MATERIALS AND METHODS

The study was conducted in Delta State, Nigeria. The study population comprised farmers who have participated in the fish culture training programme in the Songhai-Delta Training Center after a year of attendance. From the list of 75 trainees obtained from the Songhai-Delta Training Center, a simple random sampling technique was used in selecting 15 trainees from each of the 3 senatorial districts in the state to give a total of 45 respondents.

Data were collected using an interview schedule to elicit information relevant to the stated objectives. To ascertain trainees perception of the effectiveness of the training programme in terms of the trainers performance, organization and administration, a five point Likert-type scale ranging from "undecided" (scale 1) to "strongly agree" (scale 5) were used. The level of knowledge and skills gained as a result of the training programme were measured on a four point Likert- type scale ranging from "poor" to "very good" and scaled 1 to 4 respectively. Respondents' assessment of constraints associated with the training programme was measured on a five point Likert-type scale with response options ranging from "undecided" (scale 1) to "very serious" (scale 5). Responses of the 4-point and 5-point scales were categorized according to their mean scores. Responses on 5 point Likert-scale with mean scores of 3.50 or above were classified as good, while those with mean scores below 3.50 were classified as poor. On the other hand, responses on 4 point Likert-scale with mean scores of 2.50 or above were classified as good, while those with mean scores below 2.50 were classified as poor. Frequencies and percentages were used to analyze the demographic characteristics of the respondents, and adoption of improved fishing technologies, while means and standard deviation were used to describe the perception domains of objectives 2, 3 and 5. The z- test was used to test the significant difference between respondents' knowledge and skills possessed before and after the training programme.

RESULTS AND DISCUSSION
Personal characteristics of respondents

Table 1 shows the selected personal characteristics of the respondents. A majority (86.7%) of the respondents are male and belonged to the active age group of between 30-49 years (83.3%). The result confirms the general view that modern aquaculture, as in other modern farming required people of age group that have skills and knowledge (Adisa, Adeokun and Oladoja, 2006). Table 1 also shows that majority of the respondents had secondary (46.7%) and tertiary education (46.7%). This is an indication that many of the respondents are literate which could assist them to cope with the training. According to Adisa, *et al* (2006) training is a process by which the skill and ability of people are improved to perform specific job better and require some level of literacy on the part of the trainees to cope. About 93% of the respondents had 3 or more years experience in fish farming.

Respondents' perception of the training programme in terms of trainers' performance, organization and administration

The result in Table 2(a) shows that the respondents agreed with all the 10 statements indicating a good perception of the performance of the trainers during the training programme. Ranking the statements in this domain, it was found that respondents strongly agreed with four statements that the trainer "used relevant examples to illustrate training"; "had an effective style of presentation"; "displayed good abilities such as being self confident and knowledgeable about additional resources"; and "was flexible and showed respect for trainees"; indicating that trainers performed relatively well in those areas. Although respondents agreed with the remaining statements but with the low ranking such as "allowed enough time to practice", and "summarized exercises and examples at the end of session" it was probably an indication that respondents wanted an improvement in those areas. The reaction of the respondents is not unexpected because they are practicing farmers that will require practical skills rather than theoretical knowledge.

Table 2(b) shows the trainees' perception of the organization and administration of the training programme. The result shows that respondents had a good perception of the organization and administration of the training programme. However, with respondents' disagreement with some statements like "the content of the training was relevant to their problems" ($\overline{X} = 3.47$) and "training duration and time were adequate" ($\overline{X} = 2.40$) it is also probably an indication that respondents were not satisfied with these two areas. This is because according to Okwu and Ejembi (2005), adequate course content that is relevant to the training needs of the participating farmers is one of the most important determinants of a successful training programme.

Table 1: Distribution of respondents according to selected personal characteristics

Variables	Frequency	%
Gender		
Male	39	86.7
Female	6	13.3
Age (years)		
Less than 30	8	16.7
30-39	23	50.0
40-49	15	33.3
Above 50	0	0.0
Education		
No formal education	0	0.0
Primary	3	6.6
Secondary	24	53.4
Tertiary education	18	40.0
Fish farming experience (years)		
Less than 3	3	6.7
3-5	29	64.4
Greater than 5	13	28.9

Source: Field Survey, 2007

Respondents' perceived change in knowledge and skills after the training programme

To determine whether significant improvement was made in the knowledge and skills of the trainees after the training programme, the mean ratings of respondents on knowledge and skills in the various aspects of aquaculture before and after the training programme were compared. The result in Table 3 shows that there was a positive increase in knowledge of trainees as a result of the training in the following areas of aquaculture; fish handling methods ($\overline{X}$ =2.60); pond site selection ($\overline{X}$ = 3.07); dike construction ($\overline{X}$ = 3.00); fish feeding ($\overline{X}$ = 3.0); pond management ($\overline{X}$ = 3.07); and harvesting ($\overline{X}$ = 3.00). The table also shows negative mean differences in the areas of land clearing ($\overline{X}$ = -0.40); liming of pond ($\overline{X}$ = -0.20); and fish culture methods ($\overline{X}$ = -0.14), indicating no changes in the knowledge after training. On the other hand,, there were positive changes after the training in respondents' skills in all the production techniques identified. Though there were increases in the knowledge and skills of respondents after the training, the increases were not significant. This might not be unconnected with respondents' perception of not having enough practical sessions and non-relevance of some subject matter to their needs as indicated in Tables 2(a) and 2(b). Respondents' adoption of fish production techniques after the training

Table 4 shows the distribution of fish production techniques adopted by the respondents as a result of the training programme attended. The result shows that technologies relating to nine (9) areas of fish farming were all adopted, with fish handling methods and stocking of ponds (93.3%, respectively) being highest adopted. The high adoption of these technologies might be due to the fact that these farmers are fish farmers and would like to adopt improved technologies that would meet their needs.

Table 2(a): Respondents' perception of the effectiveness of the trainers

Trainees' performance	Mean ($\overline{X}$)	SD	Rank
Communication method used by trainer was adequate.	4.4	0.498	5
Allowed enough time to practice	3.3	0.743	9
Used relevant examples to illustrate training	4.5	0.500	1
Answered questions clearly and asked questions.	4.4	0.580	5
Summarized exercises and examples at end of session	3.2	0.510	10
Had effective style of presentation	4.5	0.670	1
Was flexible and allowed respect for trainees	4.5	0.630	1
Knowledgeable about subject matter	4.0	0.743	8
Displayed good abilities, was self confident and knowledgeable about additional resources	4.5	0.630	1
Gave clear instructions.	4.3	0.440	7

Source: Field survey, 2007.

Table 2(b): Respondents' perception of the organization and administration of training

Organization and administration of training	Mean	SD.	Rank
Training environment (classroom, field) were adequate	4.53	0.73	1
Materials and equipment were adequate	4.20	0.76	2
Logistic needs and interests of trainees were met	4.20	0.87	2
Useful information were provided	3.80	0.55	3
Content of training was fully relevant to trainees problems	3.47	0.81	6
Training duration and time were adequate	3.40	0.81	7
Training objectives were met	3.80	0.56	3

Source: Field survey, 2007

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Table 3: Respondents' perception of change in knowledge and skills after the training programme.

Fishery production	Knowledge				Skills acquired			
	Mean Before Training	Mean After Training	Mean Diff	z – Value	Before Training	After Training	Mean Diff	z – Value
Fish handling methods	1.67	2.60	0.93	-2.856	2.80	3.40	0.60	-2.562
Pond site selection	2.80	3.07	0.27	-1.198	2.07	3.47	1.40	4.435
Land clearing process	3.00	2.60	0.40	-1.763	2.40	3.60	1.20	-4.650
Dike construction	2.73	3.00	0.27	-1.263	2.67	3.13	0.46	-1.744
Fish feeding	2.60	3.00	0.40	-1.937	2.08	3.40	0.60	-2.190
Liming of pond	3.13	2.93	0.20	-1.137	2.73	2.93	0.20	-0.585
Fish culture methods	3.27	3.13	0.14	-0.326	2.53	3.53	1.00	-2.880
Pond management	2.67	3.07	0.40	-2.030	2.53	3.07	0.54	-2.333
Pond stocking	2.80	2.87	0.07	-0.253	2.53	3.13	0.60	-2.110
Cropping or harvesting of pond	2.87	3.00	0.13	-0.400				

Table 4: Distribution of respondents by adoption of fish production techniques (n = 45)

Fish production techniques	Frequency	Percentages (%)*
Fish handling method	42	93.3
Pond site selection	27	60.0
Land clearing process	33	73.3
Dike construction	39	86.7
Fish feeding	36	80.0
Liming of pond	39	86.7
Stocking of pond	42	93.3
Fish culture method	36	80.0
Harvesting of pond	39	86.7

* Multiple responses

Table 5: Respondents' perceived constraints faced during the training programme

Constraints	Mean ($\overline{X}$)	SD	Decision
Training center distance	3.67	1.47	Serious
Inadequate training facilities	3.47	1.22	Not serious
Inadequate training staff	3.07	1.41	"
Low literacy level	3.00	1.57	"

Source: Survey, 2007

Constraints faced by trainees in the training programme

Table 5 reveals that distance from the respondents' locations to the training center was the major perceived constraint ($\overline{X}$ = 3.67). Inadequate training facilities ($\overline{X}$ = 3.47), inadequate training staff ($\overline{X}$ = 3.07), and low level of literacy of trainees' ($\overline{X}$ = 3.00) were not perceived to be serious constraints to the smooth operation of the training programme.

CONCLUSIONS AND RECOMMENDATIONS

Respondents had a good perception of the Songhai-Delta Training Centre as there were changes in their attitudes and the rate of adoption of fish culture technologies was high after the training. Based on the findings of the study, the following recommendations were suggested:

(i) There is a need for carrying out training needs assessment before a training course so that course content meets the trainees' needs.

(ii) Government should encourage more participation of farmers in this type of training

(iii) There may be a need to review the course duration and times of training to enable farmers utilize the knowledge and skills gained at the appropriate time.

(iv) The possibility of providing transportation for farmer trainees who live far away from the training centre may be a good incentive and motivation.

(v) There is a need to provide frequent in-service training for the centre staff especially in areas of adult training so as to make the centre's training more effective.

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