RESEARCH ARTICLE

Comparative Analysis of the Training Needs and Job Performance Constraints among Field Extension Agents in Abia and Akwa Ibom States, Nigeria

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ABSTRACT

Comparative analysis of the training needs and job performance constraints among field extension workers in Abia and Akwa Ibom States was studied. The study utilized both primary and secondary data collected through structured questionnaire and analyzed using both descriptive and inferential statistics. The sample size comprised 112 extension agents drawn from Abia and Akwa Ibom States. Data analysis involved descriptive statistics such as frequency counts, percentages, means, and z-test. Result of data analysis shows that enumeration areas (EAs) in Abia and Akwa Ibom States had greatest needs for training in livestock management on construction of pen with mean scores of $X = 3.70$ and $X = 3.79$; in fishery practices, site selection for pond construction ($X = 3.88$) and ($X = 4.02$); in extension message delivery, the greatest needs were on Small Plot Adoption Techniques (SPATs) establishment with mean scores of $X = 4.46$ and $X = 4.43$; in soil science, they had need for training in fertilizer application methods ($X = 4.25$) and ($X = 4.36$); and in Agroforestry, there was greatest need in establishment of snail farm ($X = 3.92$) and ($X = 3.61$) for Abia and Akwa Ibom States. In agronomic practices, there was great need for training in site selection and land preparation ($X = 4.46$) and ($X = 4.46$) in Abia and site selection ($X = 4.48$) for Akwa Ibom State. In Abia State, 96.4% of EAs perceived lack of tangible facility for movement on the field as their major problem, followed by 92.9% who perceived irregular supply of On-Farm Adaptive Research inputs as a major problem. Furthermore, irregular supply of SPAT inputs was seen as a major problem by 91.1% of EAs in Abia State Agricultural Development Programme (ADP), whereas in Akwa Ibom State, the sampled EAs perceived their major problems to be poor input backup, lack of extension kits, irregular payment of mobility allowance, and irregular supply of SPAT inputs with percentages of 98.2, 98.2, 96.4, and 96.4, respectively. The implication is that Akwa Ibom EAs perceived more problems than EAs in Abia State as seen in their percentages of responses. The null hypothesis of no significant difference between the training needs of field extension workers in Abia and Akwa Ibom States ADPs was rejected since z-calculated 3.668 for EAs was greater than z-tabulated (1.658). Necessary recommendations were made based on findings.

Key words: Abia and Akwa Ibom states, constraints, extension agents, job performance, Nigeria, training needs

INTRODUCTION

It is a well-known fact that extension agents play a critical role in any extension service; the success or failure of any extension programs is

dependent on effective performance by extension agents.[1] Unfortunately, majority of the agents are not sufficiently trained as the training programs are mostly technical and the outcome is usually an extension agent who has a general knowledge on a variety of subjects.[2]

Extension agents with relevant training are specialists in extension methodology and human behavior as well as being technically

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knowledgeable. Willingness by such agents to apply their knowledge in practice and dedication to the job is also essential to ensure effective performance in extension work.[3]

Two types of training, pre-service and in-service training, are essential for producing capable extension workers. Pre-service training provides the initial job training. Continuous upgrading of staff through in-service training is also necessary to ensure coping with the job changes and the varied needs of the clients.

In addition, knowledge and awareness are considered prerequisites for adoption of new technologies; similarly, change agent success in securing adoption is related to clients' perception of change agent credibility.[4] Thus, extension agent knowledge and practical competence are a vital resource in the implementation of extension policy. The provision of in-service educational and training programs before program delivery is one strategy for improving extension agent competence and credibility.[5]

In Nigeria, efforts over several decades to avail farmers with beneficial research-based agricultural technologies do not seem to have yielded the expected impact. The majority of Nigerian rural farmers are still tradition bound in their production methods and, therefore, contrived to suffer as a result from low productivity, low income, and deprivation. Quite often, the farmers are totally blamed or considered to be change resistant and, therefore, responsible for the country's slow agricultural and industrial take off. The technologies being introduced to the farmers are viewed as being taken for granted so are the extension agents who are the promoters of the technologies.[6,7]

Due to the functions of these extension workers, they need to be adequately trained to be able to render first-grade quality service to the farmers. In this case, programs are designed in such a way as to provide for wide and better use of the extension staff in terms of performance. However, no program or plan either by government or any other agency for rural development can be optimistic of success if it lacks extension officials who are committed and hardworking. If extension staff is not competent, extension programs (new technologies) no matter how lofty, technically or economically viable cannot achieve more than partial success.[8] These desirable skills and competencies are acquired through training. Competence refers to the ability of the extension

staff to undertake extension duties effectively utilizing human capabilities acquired through training, experience, and practice.

However, there seem to exist a gap in knowledge on the training needs of extension workers and their job performance constraints in Abia and Akwa Ibom States. As a result, this study was designed to investigate and compare the training needs and job performance constraints among extension workers in Abia and Akwa Ibom States. It was necessary to provide answers to the following research questions. What are the training needs of extension workers in Abia and Akwa Ibom States? What are the job performance constraints of extension workers in Abia and Akwa Ibom States?

Objectives of the study

The broad objective of this study was to comparatively analyze the training needs and job performance constraints of extension agents in Abia and Akwa Ibom States. The specific objectives were to:

I. Compare the training needs of field extension workers in Abia and Akwa Ibom States;

II. Compare the problems militating against the job performance of extension agents in Abia and Akwa Ibom States.

Hypothesis

$H0_1$: There is no significant difference between the training needs of field extension agents in Abia and Akwa Ibom States.

METHODOLOGY

The research was carried out in Abia State of Nigeria which lies between longitudes $70\ 00^1$ and 8^010^1E and latitudes 4^045^1 and 6^017^1 N in Eastern part of Nigeria. The climate is typically hot and warm all year round. The mean annual rainfall is between 20,000 mm and 25,000 mm. Temperatures are constantly high with the annual daily maximum and minimum temperatures of around 31°C and 22°C, respectively. Relative humidity is usually high and highest at the height of the rains and lowest during the harmattan months of December–February. High ranges of between 80% and 87% at 10 am (Nigerian time) occur during the rainy season (Anambra State Agricultural Development Programme [ASADP],

Report, 2000). The vegetation of the area is predominantly lowland rain forest. The major crops cultivated include yams, cassava, rice, maize, cocoyams, banana, and vegetables. Abia has a population of 4,222,476 with three agricultural zones, namely Aba, Ohafia, and Umuahia (ASADP, Report, 2000). A purposive sampling method was used to select two agricultural zones from the three zones in Abia State. Second, a simple random selection was used to select seven blocks from the list of blocks that make up each selected zone. Third, four circles were randomly selected. A total of 112 extension agents were randomly selected for the study. Both primary and secondary data were collected. Primary data were sourced directly from the extension workers through a well-structured questionnaire. Secondary data were collected from related literature such as agricultural journals and books. Both descriptive and inferential statistics were employed in data analysis. Descriptive statistics such as frequency counts, means, and percentages were used to analyze objective 1, while objective 2 was analyzed using four functional forms of multiple regression analysis. The null hypothesis was tested at 5% level of significance.

MODEL SPECIFICATION

Decision rule for training needs

The responses were summed to get the mean scores
1.00–2.99 = Disagree they have need for training.
3.00–5.00 = Agree they have need for training.
The grand mean score was used in deciding whether there is training need or not for extension workers in each area of agriculture.
The models are specified, thus:
The formula is $z = X_1 - X_2$
SP_1^2
Where:
X_1 = Mean for training needs variables for sample one (Abia State)
X_2 = Mean for training needs variables for sample two (Akwa Ibom State)
n_1 = Number of observations of training needs variables for sample 1
N_2 = Number of observations of training needs variables for sample 2
Sp = Pooled variance for each of the samples (1 and 2).

RESULTS AND DISCUSSION

Table 1 shows the training needs of enumeration areas (EAs) in livestock management both in Abia and Akwa Ibom States. The EAs in Abia State had highest need for training in the construction of livestock pen (X = 3.70). Akwa Ibom State EAs had highest need also in construction of livestock pen (X = 3.79). The mean scores show that even though Abia State EAs had need in livestock management, Akwa Ibom EAs had more training needs as shown in cluster of means (3.07 and 3.39) for Abia and Akwa Ibom States, respectively.
Data in Table 2 show the means of training need indices for EAs in Abia and Akwa Ibom States. The Abia State EAs and Akwa Ibom State EAs had highest need for training in site selection for pond construction (X = 3.88) and (X = 4.02) for Abia and Akwa Ibom States, respectively. The EAs in both states agreed that they had a need for more training in fishery practices. The grand mean shows that Akwa Ibom State EAs had more needs as shown by the mean of 3.29 and 3.49

Table 1: Training needs in livestock management for extension agents

Variables	X	D	X	D
Construction of livestock pens	3.70	A	3.79	A
Selection of animal foundation stock	3.45	A	3.38	A
Diagnosis of sick animals	2.89	DA	3.55	A
Drug selection and administration	2.61	DA	3.27	A
Feed formulation for small ruminants	2.79	DA	3.32	A
Feed formulation for poultry	3.41	A	3.21	A
Feed formulation for monogastrics	2.83	DA	3.21	A
Identification of livestock diseases	3.14	A	3.32	A
Proffering solution to livestock diseases	2.96	DA	3.43	A
Control of ectoparasites	2.98	DA	3.39	A
Control of endoparasites	3.05	A	3.39	A
Total	33.81		37.26	
Grand mean	3.07	A	3.39	A

Source: Field Survey, 2009

Table 2: Training needs in fishery practices for extension agents

Variables	X	D	X	D
Site selection for pond	3.88	A	4.02	A
Fish pond construction	3.64	A	3.77	A
Fish feed formulation	3.34	A	3.07	A
Fish pond management	3.55	A	3.41	A
Maintenance of fishing gear	2.83	DA	3.50	A
Polyculture management	2.50	DA	3.16	A
Total	19.74		20.93	
Grand mean	30.29	A	3.49	A

Source: Field Survey, 2009

for EAs in Abia State and Akwa Ibom State, respectively.

The training needs of EAs in extension message delivery are presented in Table 3. Both EAs in Abia State and Akwa Ibom State agreed that they had much training needs in extension as shown from the high means of 4.09 and 4.20, respectively, for Abia and Akwa Ibom States. EAs in both Abia and Akwa Ibom States had highest need in establishment of Small Plot Adoption Techniques (SPATs) with mean scores of X = 4.61 and X = 4.43 for Abia State and Akwa Ibom State, respectively. Table 4 shows training needs of EAs in soil science. Both states agreed that they had more needs for training in soil science as shown in mean scores of 3.91 and 4.10 for Abia and Akwa Ibom States, respectively. Both states had highest needs

in fertilizer application methods with mean scores of 4.25 and 4.36 for Abia and Akwa Ibom States, respectively.

Table 5 shows the training needs of EAs in Agroforestry. The clusters of mean show that both EAs in Abia and Akwa Ibom States had need for training in Agroforestry. Abia State had 3.54 and Akwa Ibom 3.08. The indication is that Abia State EAs had higher training needs in Agroforestry. Abia State EAs had highest needs in establishment of snail farm also Akwa Ibom EAs had highest needs in establishment of snail farm and harvesting of snails as shown in their mean scores.

The training needs of EAs in Agronomic practices are shown in Table 6. Both Abia State EAs and Akwa Ibom EAs had more need for training. Akwa

Table 3: Training needs in extension message delivery for extension agents

Variables	X	D	X	D
Method/result demonstration	4.13	A	4.23	A
Conduction of field days	4.11	A	4.20	A
Establishment of On-Farm Applied Research Trials	3.88	A	4.13	A
Simple/statistical analysis	3.63	A	3.86	A
Ability to speak local/native language	3.89	A	4.02	A
Ability to speak English fluently	4.02	A	4.25	A
Reporting farming/field problems	4.21	A	4.34	A
Formation/organizing farmers group	4.12	A	4.34	A
Establishment of Small Plot Adoption Technique	4.61	A	4.43	A
Advisory visits to farmers	4.38	A	4.29	A
Identification of new farmers	4.25	A	4.25	A
Keeping of farm diary	3.96	A	4.20	A
Compilation of farmers registers	3.75	A	4.12	A
Coordination of farmers meeting	4.16	A	4.04	A
Registration of farmers group	3.86	A	4.05	A
Participation at FNT	4.59	A	4.45	A
Total	65.55		67.20	
Grand mean	4.09	A	4.20	A

Source: Field Survey, 2009

Table 4: Training needs in soil science for extension agents

Variables	X	D	X	D
Erosion control measures	3.61	A	3.89	A
Fertilizer application methods	4.25	A	4.36	A
Soil conservation techniques	4.04	A	4.16	A
Soil water conservation techniques	3.91	A	4.09	A
Conservation of soil microorganisms	3.72	A	3.98	A
Total			20.48	
Grand mean	3.91	A	4.10	A

Source: Field Survey, 2009

Table 5: Training needs in Agroforestry for extension agents

Variables	X	D	X	D
Setting of beehive	3.71	A	3.25	A
Techniques in handling bees	3.54	A	2.96	DA
Harvesting of honey	3.04	A	2.91	DA
Establishment of snail farm	3.92	A	3.61	A
Selection of snail stock	3.62	A	3.23	A
Snail feed formulation	3.41	A	3.21	A
Harvesting of snails	3.66	A	3.61	A
Establishment of mushroom farm	2.41	A	2.59	DA
Techniques involved in planting mushroom	3.43	A	2.71	DA
Mushroom harvesting	3.64	A	2.75	DA
Total	35.39		30.83	
Grand mean	3.54	A	3.08	A

Source: Field Survey, 2009

Table 6: Training needs in agronomic practices for extension agents

Variables	X	D	X	D
Site selection for crops	4.46	A	4.48	A
Land preparation for crops	4.46	A	4.30	A
Making/pegging for crops	3.45	A	4.25	A
Planting techniques	4.36	A	4.30	A
Identification and diagnosis of crops diseases	3.61	A	4.09	A
Proffering solution to crop diseases	3.54	A	4.05	A
Weed and pests control measures	3.71	A	4.41	A
Use and maintenance of knapsack sprayer	3.07	A	4.09	A
Identification of common crop pests	3.46	A	3.93	A
Proffering solution to crop diseases	3.38	A	3.32	A
Fertilizer application	4.16	A	4.34	A
Harvesting	4.27	A	4.30	A
Total	45.92		49.87	
Grand mean	3.83	A	4.16	A

Source: Field Survey, 2009

Ibom EAs had higher needs for training as shown in cluster of means for Abia (3.83) and Akwa Ibom (4.16) [Table 7]. The Abia EAs had highest needs in site selection and land preparation for crops with grand mean of 4.46 while Akwa Ibom State EAs also had highest mean of 4.48 in site selection for crops [Table 8].

In Abia State, 96.4% of EAs perceived lack of tangible facility for movement on the field as their major problem, followed by 92.9% who perceived irregular supply of On-Farm Adaptive Research inputs as a problem. Furthermore, irregular supply of SPAT inputs was seen as a problem by 91.1% of EAs in Abia State ADP, whereas in Akwa Ibom State, the sampled EAs perceived their major problems to be poor input backup, lack of extension kits, irregular payment of mobility allowance, and irregular supply of SPAT inputs with percentages of 98.2, 98.2, 96.4, and 96.4, respectively. The implication is that Akwa Ibom EAs perceived more problems than EAs in Abia State as seen in their percentages of responses.

Table 7: Percentage distribution of respondents according to challenges that militate against extension agents job performance in Abia and Akwa Ibom States ADPs

Variables	Abia State (%)	Akwa Ibom State (%)
Inappropriateness of FNT curricular	16.0	57.1
High farmers/VEA ratio	32.1	53.6
Poor input backup	88.9	98.2
Lack of tangible facility for movement on the field	96.4	89.3
Inadequate/irregular payment of mobility allowance	89.3	96.4
Inadequate practical during FNT/BM session	64.3	67.9
Incompetence on the part of the trainers	32.1	75.0
Irregular supply of SPAT inputs	91.1	96.4
Irregular supply of On-Farm Adaptive Research inputs	92.9	89.3
Irregular provision of refreshment during training	58.9	83.9
Lack of motivational welfare packages	83.9	89.3
Non-conduciveness of training venues	69.6	91.1
Poor delivery of SPAT inputs	58.9	85.7
Poor delivery of On-Farm Adaptive Research inputs	62.5	85.7
Poor access to farmers	39.3	71.4
Non-cooperative attitude of extension agents	48.2	80.3
Inability to diagnose field problems	44.7	62.3
Lack of interest in extension work	42.1	67.9
Lack of extension kits	66.1	98.2
Poor communication network	53.6	73.2
Lack of extracurricular activity facilities	35.7	75
Strenuous nature of extension work	33.9	71.4
Lack of experience in extension	41.1	50

Source: Field Survey, 2009

Test of hypothesis

If z-calculated is greater than (>) z-tabulated then reject the null hypothesis and accept the alternative hypothesis. The result of z-test shows that z-calculated 3.668 for EAs was greater than t-tabulated (1.658). Therefore, the null hypothesis of no significant difference between the training needs of field extension workers in Abia and Akwa Ibom States ADPs was rejected and the alternative hypothesis of a significant difference between the training needs of field extension workers in Abia and Akwa Ibom States was accepted. The implication of this result is that there is a variation in the training needs of Abia State ADP field extension workers when compared to their counterparts in Akwa Ibom State.

CONCLUSION AND RECOMMENDATIONS

The result of this study had shown that extension workers in Abia and Akwa Ibom States are still in need of training, but their training needs were similar in some aspects and differ slightly. Based on the findings, it was recommended that

i.   There should be constant training for extension workers which can be in the form of seminars,

Table 8: Result of test of hypothesis of no significant difference between the training needs of extension agents in Abia and Akwa Ibom States

Variables	Individual mean	Pooled mean	z-calculated	z-tabulated	Level of significance (%)
Training in livestock management for extension agents in Abia State. Training in livestock management for extension agents in Akwa Ibom State	3.0736			1.658	5
	3.3873	0.31364	3.668	1.658	5

Source: Data Analysis, 2009

workshops, and conferences to enable them upgrade and meet up with changing trends in agricultural extension delivery.

ii. The Federal, State, and Local Governments as well as Non-governmental organizations interested in extension services delivery should provide funds to enable extension workers engage in training within and outside Nigeria.

iii. Extension organizations should allow extension workers promotion to flow automatically once they attend the required qualification and years of services as a way of motivating their welfare.

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