



Training Needs of Agricultural Extension Agents in Delta State, Nigeria

Ajieh, P.C¹ and Ulakpa, J.E²

^{1,2}Department of Agricultural Economics & Extension, Delta State University, Asaba Campus, Asaba, Nigeria

Abstract

This study examined the training needs of agricultural extension agents in Delta State, Nigeria. A sample of 102 respondents was drawn from extension agents in the States' Agricultural Development Programme (ADP), Ministry of Agriculture and Natural Resources (MANR) and the FADAMA Programme. Data were collected in February 2017 by using a structured and validated questionnaire. Data generated were analyzed using descriptive and inferential statistics. Mean scores, percentage, frequency count and standard deviation were used to summarize data, while Spearman Rank Order correlation coefficient (ρ) was used to determine the relationship between competence and training needs of extension agents. Results reveal that extension agents are competent in the following professional skills: teaching farmers, public speaking, determination of farmers' needs and planning extension programmes. It was also found that extension agents need training in some professional skills which include: production of teaching aids, planning excursion and field trips, providing market information and simplifying agricultural research results. Constraints to training of agricultural extension agents identified by the study include: poor funding, high cost of training, poor training incentives and limited training opportunities. A strong relationship was found between extension agents' competence and their training needs. This study therefore recommends that training opportunities should be created by relevant agencies to enable extension agents improve their competence and performance. Also, constraints to training identified in this study should be tackled to allow for sustainable training programmes.

Keywords:

Training, training needs, extension agents, extension services

1. Introduction

Agricultural extension in Nigeria is an age old development strategy for the agricultural sector. It has long been used to manage agricultural information in Nigeria with specific reference to the transfer of technological innovations, in crops, livestock, forestry, fisheries and aquaculture to farmers (Sanni *et al.*, 2009). Agricultural extension basically performs the functions of getting farmers into a frame of mind and attitude conducive to acceptance of technological change; dissemination of research output to farmers, carrying farmers' problems back to the research organization; and helping farmers gain managerial skill to operate in a commercial economy by providing training and guidance to them in decision making (Williams, Fenley and Williams, 1984).

Agricultural extension worker in this sense serves as an administrative leader and coordinator for formulating, developing, implementing and evaluating agricultural extension programs as well as developing farmers in managing resources in the rural areas. It has however been observed that the knowledge and capability of most agricultural extension agents are not adequate to achieve the desired goal of bringing about rural and agricultural development through qualitative and committed extension service in Nigeria. Sallam and Akram (2005) stated that extension agents have been criticized for not being able to effect the necessary changes in the rural communities following their inefficiency and incompetence. This is because of the predominance of poorly trained extension staff upon whom many categories of farmers depends on for information.

According to Madukwe (2005), a well-trained extension agent is the most important element for achieving the aims and objectives of extension organizations. The better trained an employee is, the more productive he will become. Training is the means of maintaining, upgrading and updating skills throughout an effective work life. Ajayi (2008) conceives training as a planned and systematic effort to modify or develop knowledge, skills or attitude through learning experience in order to achieve effective performance in a specific activity. Training is crucial in preparing intending extension agents for their positions and making those already on the job to improve their performance. For training to be effective, training programs need specific purpose with appropriate training methods.

According to Jasim (2016), Potential extension agents are usually trained in extension programme planning, educational process and human development, communication, monitoring and evaluation, agricultural extension management and rural sociology. Since it is obvious that pre - service training alone cannot adequately prepare intending agents for the task ahead, their training is usually augmented with on - the - job trainings. Such trainings require determining the present level of competence of the agents in their tasks so as to ascertain areas of critical training needs (Malone, 1984).

Brown (2002) opined that conducting needs assessment is important to the success of all training programmes. It helps the organization to channel resources to areas where they will contribute the most in enhancing employees' morale and organizational performance. Effective training needs assessment is vital in today's changing workplace as new technologies and flexible work practices are widespread, leading to a corresponding change in skills and abilities. McClelland (1993) stated that training needs assessment of extension agents will provide a detailed picture of extension agents' skills, knowledge and talent base while gradually directing attention to priority areas of training needs.

This study is therefore designed to examine the training needs of extension agents in Delta State, Nigeria. Specifically the study focused on the following objectives:

- i) ascertain the present competence level of extension agents;
- ii) identify the perceived areas of training by extension agents;
- iii) identify constraints to training of extension agent and;
- iv) determine the relationship between extension agents' competence and their perceived training needs.

2. Materials and methods

This study was conducted in Delta State, Nigeria. Extension agents in the State formed the population from which sample for the study was drawn. Extension agents of the State's Agricultural Development Programme (ADP), Ministry of Agriculture and Natural Resources (MANR), and FADMA Programme were involved in the study.

Fifty percent of extension agents in ADP were randomly selected for the study, while all the 25 extension agents in MANR and 20 extension agents in the FADMA Programme were also sampled. This sampling procedure gave a total of 102 extension agents that served as the respondents of the study as presented in Table 1.

Table 1. Sample Composition

| Extension Agency/Ministry | No of Extension Agents | No Sampled |
|---------------------------|------------------------|------------|
| ADP | 114 | 57 |
| MANR | 25 | 25 |
| FADMA | 20 | 20 |
| Total | 159 | 102 |

Level of competence was measured by requesting the respondents to assess their competence in performing a range of professional skills. A four point Likert- type scale of: not competent=1, fairly competent=2; competent=3; and very competent=4 was used to ascertain their responses. The mean score of the response values which is 2.5 was taken as the cut - off point. This implies that professional skills with score of 2.5 and above are those that extension agents are competent in; while skills with score of below 2.5 are those they have no competency for.

Perceived training needs of extension agents were measured by requesting respondents to indicate the professional skill in which they need training. A four point Likert- type scale of: not needed = 1; fairly needed = 2; needed =3 and highly needed = 4 was used to ascertain their responses. The training need index for each professional skill was then calculated. For the purpose of the study, the mean training need index which is 70% was used as the cut – off point. Professional skills with score of 70% and above were assumed to be those that extension agents need training.

$$\text{Training Need Index} = \frac{\text{Score by all Respondents}}{\text{Maximum possible score}} * \frac{100}{1}$$

Constraints to training of extension agents was determined by requesting respondents to rate the importance of possible constraints along a four point Likert- type scale of: not important = 1; somewhat important = 2; important = 3; and very important = 4. The mid-point of the response values which is 2.5

was used as the cut-off point for important constraints.

Data generated for the study were analyzed using descriptive and inferential statistics. Descriptive statistics was used to organize and summarize data, while Spearman Rank Order Correlation Coefficient (ρ) was used to determine the relationship between extension agents' competence and their perceived of training needs. The formula for ρ is given as:

$$r = 1 - \frac{6\sum D^2}{n(n^2 - 1)}$$

3. Results and discussion

3.1 Respondents' level of Competence

Data in Table 2 show mean scores and standard deviation of competence possessed by extension agents. Results revealed that respondents have competence for 10 of the 18 professional skills used to investigate their competency level. Respondents had the highest competence in teaching farmers ($M=2.94$). This was followed by public speaking ($M=2.88$); verbal communication skill ($M = 2.86$); determination of farmers' needs ($M=2.83$); planning extension programmes ($M=2.74$); report writing ($M=2.73$); use of audio visual aids ($M= 2.68$); evaluation of trials ($M=2.59$); effective use of extension methods ($M= 2.58$) and conducting method demonstrations ($M=2.57$) in that order.

Among professional skills in which extension agents lacked competence include: production of teaching aids ($M=2.46$); use of the computer ($M=2.46$); Planning excursion and field trips ($M=2.40$); optimum use of financial resources ($M=2.40$); simplifying research results ($M=2.40$); providing market information ($M=2.40$) and editing agricultural reports ($M=2.38$). The least level of competence was found in writing of agricultural scripts ($M=2.36$).

Findings of this study with respect to competency level of extension agents suggest that they are competent in performing most of their professional skills. This assertion is in line with earlier submissions by scholars on the subject of extension agents' competence in relation to their job performance. Agbamu (2004) reported high competency level of agricultural media practitioners in public relation job, simplifying agricultural research results and verbal communication skills. Similarly, Neda, Khairuddin, Jegak and Azimi (2010) found that extension agents were more competent in performing roles of programme planning, use of teaching methods, programme implementation and evaluation.

Gibson and Hillison (1994) and Cooper and Graham (2001) in separate studies also reported that

extension agents were most competent in programme planning. Competent extension agents have been found to perform higher in executing their professional skills. The need for agents to be competent can therefore not be over emphasized since the effectiveness of any extension service depends greatly on competent extension agents. This is because; it is the agents that deal directly with the farmers.

3.2 Respondents' perception of areas of training need

Entries in Table 3 show the training need index and rankings for respondents' perceived training needs. Result show that respondents need training in 10 of the 18 professional skills. In line with the expectation of the researchers, these included the 8 professional skills in which extension agents were found to lack competence. These are: use of computer (85%); planning excursion and field trips (83%); editing agricultural reports (79%); writing agricultural scripts (79%); optimum use of financial resources (79%); production of teaching aids (72%); simplifying research results (62%) and providing market information (74%).

Extension agents also indicated that they need training in two skills in which they have competency for. These are: effective use of extension methods (81%) and conducting method demonstrations (79%). This may be due to issues associated with the skills. For instance, there are varieties of extension methods and this requires continuous training to become skillful in using them. Competency therefore may be specific with methods. Similarly, competency in conducting method demonstration requires constant practice on the part of the agents.

Training has been found to enhance competence and job performance. Agricultural extension agents therefore need to be trained on regular basis through the various in - service training options so as to update their skills and improve their performance (Neda, Khairuddin, Jegak and Azimi; 2010).

3.3 Constraints to the training of extension agents

Data in Table 4 show the mean scores and standard deviation of constraints to the training of extension agents. Results revealed that 10 of the 15 constraints listed in the study were considered important. These include: Poor funding ($M = 3.68$); High cost of training ($M = 3.24$); poor training incentives ($M=3.03$); failure of management to accept responsibility for training ($M = 3.03$); limited training opportunities ($M = 3.02$); inadequacy of training materials ($M = 3.02$); inadequacy of qualified trainers ($M = 3.01$); poor organization of training

programmes (M = 2.98) and limited approvals for staff training (M = 2.85).

These findings with respect to constraints to the training of training of extension agents are in line with the expectation of the researchers. Poor funding for instance can affect the training of extension agents by limiting the budgetary allocation for staff

training. Similarly high cost of training can significantly affect by reducing the number of staff that can be granted study leave or given any other kind of training in a particular period. This assertion corroborates that of Jamagani (2003) who reported that poor funding is one of the major constraints in the implementation of training programmes.

Table 2. Mean Score of Extension Agents' Competence Level

| Professional Skills | Mean | Std. Deviation | Rank |
|------------------------------------|-------|----------------|------|
| Teaching farmers | 2.94* | 0.729 | 1 |
| Public speaking | 2.88* | 0.775 | 2 |
| Verbal communication skills | 2.86* | 0.771 | 3 |
| Determination of farmers' needs | 2.83* | 0.809 | 4 |
| Planning extension programmes | 2.74* | 0.881 | 5 |
| Report writing | 2.73* | 0.927 | 6 |
| Use of audio visual aids | 2.68* | 0.869 | 7 |
| Evaluation of trials | 2.59* | 0.837 | 8 |
| Effective use of extension methods | 2.58* | 0.959 | 9 |
| Conducting method demonstrations | 2.57* | 0.928 | 10 |
| Production of teaching aids | 2.46 | 0.952 | 11 |
| Use of the computer | 2.46 | 0.952 | 11 |
| Planning excursion and field trips | 2.43 | 0.853 | 13 |
| Optimum use of financial resources | 2.42 | 0.817 | 14 |
| Simplifying research results | 2.40 | 0.919 | 15 |
| Providing market information | 2.40 | 0.919 | 15 |
| Editing agricultural reports | 2.38 | 0.868 | 17 |
| Writing agricultural scripts | 2.36 | 0.983 | 18 |

*= competent

Table 3. Training Needs Index of Extension Agents' Professional Skills

| Professional Skills | Training need index(%) | Rank |
|------------------------------------|------------------------|------|
| Use of the computer | 85* | 1 |
| Planning excursion and field trips | 83* | 2 |
| Effective use of extension method | 81* | 3 |
| Editing agricultural reports | 79* | 4 |
| Writing agricultural scripts | 79* | 4 |
| Optimum use of financial resources | 79* | 4 |
| Conducting method demonstrations | 79* | 4 |
| Planning extension programmes | 73* | 8 |
| Providing market information | 74* | 9 |
| Production of teaching aids | 72* | 10 |
| Report writing | 68 | 11 |
| Determination farmers needs | 66 | 12 |
| Teaching farmers | 64 | 13 |
| Evaluation of trials | 62 | 14 |
| Simplifying research results | 62 | 14 |
| Public speaking | 58 | 16 |
| Use of audio visual aids | 55 | 17 |
| Verbal communication skills | 52 | 18 |
| Cut – off point = 70% | | |

*= Training needed

Table 4. Mean Scores and Standard Deviation of Constraints to Training of Extension Agents

| Constraints | Mean | Std.Deviation |
|---|-------|---------------|
| Poor funding | 3.68* | 0.566 |
| High cost of training | 3.24* | 0.760 |
| Ineffective training method | 2.36 | 0.649 |
| Ineffective promotion criteria | 2.11 | 0.831 |
| Poor training incentives | 3.03* | 0.906 |
| Short period of training | 2.25 | 0.850 |
| Failure of management to accept responsibility for training | 3.03* | 0.814 |
| Limited training opportunities | 3.02* | 0.820 |
| inadequacy of training materials | 3.02* | 0.856 |
| Inadequacy qualified trainers | 3.01* | 0.844 |
| Poor organization of training programmes | 2.98* | 0.923 |
| Poor attitude of trainers towards training | 2.96* | 0.832 |
| Few staff training centers | 2.14 | 0.904 |
| Long distance to training location | 2.39 | 0.889 |
| Limited approvals for staff training | 2.85* | 0.894 |

*= important constraints

Table 5. Relationship between Extension Agents' Competence and Their Training Needs

| Professional skills | Competence Score | Rank | Training need score | Rank |
|---|------------------|------|---------------------|------|
| Teaching farmers | 2.94 | 1 | 64 | 13 |
| Public speaking | 2.88 | 2 | 58 | 16 |
| Verbal communication skill | 2.86 | 3 | 52 | 18 |
| Determination of farmers' needs | 2.83 | 4 | 66 | 12 |
| Planning extension programmes | 2.74 | 5 | 73 | 8 |
| Report writing | 2.73 | 6 | 68 | 11 |
| Use of audio visuals | 2.68 | 7 | 55 | 17 |
| Evaluation of trials | 2.59 | 8 | 62 | 14 |
| Effective use of extension methods | 2.58 | 9 | 81 | 3 |
| Conducting method demonstration | 2.57 | 10 | 79 | 4 |
| Production of teaching aids | 2.46 | 11 | 72 | 10 |
| Computer appreciation | 2.46 | 11 | 85 | 1 |
| Planning excursion and field trips. | 2.43 | 13 | 83 | 2 |
| Optimum use of financial resources | 2.42 | 14 | 79 | 4 |
| Simplifying agricultural research results | 2.40 | 15 | 62 | 14 |
| Providing market information | 2.40 | 15 | 74 | 9 |
| Editing reports | 2.38 | 17 | 79 | 4 |
| Writing agricultural scripts | 2.36 | 18 | 79 | 4 |

Spearman Rank Order Correlation Coefficient Corrected for Ties = - 0.61

3.4 Relationship between extension agents' competence and their training needs

Data in Table 5 show results of the analysis on the relationship between extension agents' competence and their training needs. Spearman Rank Order correlation coefficient (ρ) was - 0.61. This suggests that there is a strong relationship between competence and training needs. Training enhances competence, therefore when a staff is competent in a particular skill, the need for further training in that skill will be low and when training need is high, it implies that competency is low.

4. Conclusion

Training makes an employee to be competent and productive. A well trained extension agent is the most important element for achieving the aims and objectives of extension services. Training however, can be hampered by a variety of constraints as revealed in this study. These include poor funding, high cost of training, limited training opportunities, and limited approvals for staff training.

It is therefore recommended that extension agents in Delta State should be given regular training to update their skills and improve performance in those professional skills in which they expressed low

competency. Essentially, training should be given in the use of computer, planning excursion and field trips, editing agricultural reports, optimum use of financial resources and the production of teaching aids, amongst others. Similarly, constraints to effective training that have been identified by this study should be tackled by the relevant agencies to ensure sustainable training programmes for agricultural extension agents in Delta State.

References

1. Agbamu, J. U. (2004) Training needs of agricultural media practitioners in the Niger Delta area of Delta State, Nigeria. *Journal of Sustainable Development*, Amstys Book and Publishing House, 1(2): 32 – 40
2. Ajayi, A. O. (2008). Training in Agricultural Extension, In: Akinyemiju, O.A. and D.O. Torimiro (Eds.), Ikeja, Nigeria ABC Agricultural Systems Ltd, Pp 200-213
3. Brown, J. (2000). Training Needs Assessment: A must for developing an effective training programme, *Public Personnel Management*, 31 (4): pp.569-579
4. Cooper, A. W and Graham, D. L. (2001). Competencies needed to be successful County agents and County Supervisors. *Journal of Extension*, 39(1): 1 – 8
5. Gibson, A and Hillison, J. (1994). Training needs of area specialized extension agents, *Journal of Extension*, 32(3).
6. Jamagani Z. B. (2013). Relationship between problems and needs of extension workers: A case study of Maigana and Samaru zones of Kaduna State Agricultural Development Project, Nigeria. Agricultural Consultant No 11 Idris Gidado Road Hanwa GRA Zaria, Kaduna State Nigeria.
7. Jasim, E. (2016). Training Needs of Agriculture Extension Officers in Iraq, *International Journal of Scientific and Research Publications*, 6(2): 2250-3153
8. Madukwe, M. C. (2005). Motivation in extension: In Adedodoyin, S. F. (Ed.): *Agricultural extension in Nigeria*. Ilorin ARMTI, Pp. 197 – 198.
9. Malone, V. M. (1984). In service training and staff development, In: Swanson, B.E, *improving agricultural extension. A reference manual*; Rome FAO. Pp.209
10. McClelland, S.D. (2002). A training needs assessment for united way of Dunn County Wisconsin, *MSc Dissertation*, University of Wisconsin-Stout, USA.
11. Neda, T., Khairuddin, I., Jegak, U and Azimi, H. (2010). Competencies influencing extension workers' job performance in relation to good Agricultural Practices in Malaysia. *American Journal of Applied Sciences*, 7(10): 1379-1386
12. Sanni, A. O., Olowosegun, T., Sule, A. M., Muhammed, A., Yem, I. Y & Onimisi, H. U. (2009). Capacity building and training requirement for effective fisheries and aquaculture extension in Nigeria - A Review: *Nature and Science*; 7(4): 1545-0740.
13. Sallam, M. and Akram, B. (2005). Agriculture extension situation in Dhamar province, Dhamar Rural Development Project, Ministry of Agriculture and Irrigation, Yemen.
14. Williams, S. K. T., Fenley, J. M and Williams, C. E. (1984). *A manual for agricultural extension workers in Nigeria*, Ibadan, Les Shyraden Publishers.