

Analysis of Competency and Training Needs Among Agricultural Extension Personnel in Lagos State

Timothy A. Okeowo

Department of Agricultural Extension & Management
Lagos State Polytechnic, Ikorodu, Lagos, Nigeria
biodunokeowo2005@yahoo.com

Abstract: *This study assessed the determinants of training needs among Agricultural Extension personnel in Lagos State. A total of fifty extension personnel in the Lagos State Agricultural Development Authority were sampled. Data analysis using descriptive and Pearson product correlation were used to analyse the data. Findings from the study established that there were more male extension agents than female. The study also showed that majority of the respondents were highly educated with majority having 6-10 years of working experience. It was also revealed that many of the respondents were relatively efficient in the important subject matter areas such as communication skills, planning demonstration, evaluation of trials, farmers training and selection of contact farmers. The implication of these findings is that most of these subject areas are likely to have been acquired during post-service training of extension agents in ADAs.*

Keywords: *Training, Agricultural Extension personnel, Determinants, Lagos State.*

1. INTRODUCTION

The Agricultural Development Authority (ADA) system in Nigeria was institutionalized in 1974 with funding assistance from the World Bank, Federal and State Governments. The services of Lagos State ADP have been in the areas of agriculture, natural resource and human development. Extension, as an educational input, can make an important contribution to sustainable agricultural production and rural development. One of the strategies adopted by Lagos State ADP in achieving its set objectives was the dissemination of improved agricultural technologies to the farmers, coupled with education about the technologies. Crowder (1996) reported that there is a critical need for a large number of well-trained extension workers in many developing countries. The data collected in a study conducted by FAO Global Consultation on Agricultural Extension (1990) revealed that in the USA, Canada and Europe one extension agent covers about 400 economically active persons in agriculture, even before counting the services provided by the private sector. Higher figure was obtained in four developing regions of Africa, Asia, Latin America and the Near East where an extension worker covers on average about 2,500 active persons in agriculture.

Today, educational programmes delivered by extension agents are more varied than ever and will continue to change to meet the needs of the clientele they serve. Radhakvishna and Thomson (1996) further stated that extension agents particularly require experiential learning that provides them with opportunities to relate to rural people in an interactive process that combines scientific technical knowledge with local indigenous knowledge in client-centered problem solving activities. To satisfy this requirement, there is a need to regularly analyze the technical competence and job performance of extension staff in the organization. Yondeowei and Kwarteng (2006) defined training need as the difference between the required level of individual competence and his present level of competence. Allo (2001) pointed out that one of the main factors limiting the development of effective training programmes for agricultural professionals in developing countries is the inadequacy of information on their training needs. In this regard, there is also the need to rationalize training to minimize repetition of the same message, more exposure to relevant technology and communication techniques, more avenues for personal career development and frequent contact between various categories of extension personnel.

Training in any form is intrinsic to organizational effectiveness and efficiency. Ovwigho and Ifie (2009) identified two major types of training programs: on-the-job training and pre-employment

training. They stated that on-the-job training is the type of training given to an individual who is gainfully employed but requires certain knowledge and skills to improve his efficiency. In-service training and induction courses were classified as on the job training. Changes in technology could also lead to on-the-job training. They explained that pre-employment training is the type of training program given to an individual who has tentatively chosen a vocation or discipline but requires basic education to function effectively. According to Dahama (1999), and Ekpere (1980), training is the process of acquiring specific skills to perform a job better. It involves the processes of teaching, informing and educating people. It helps them to become qualified and proficient in performing their duties, Obibuaku (1983) states that the ability of an extension agent to guide farmers from the awareness stage to sustained adoption of agricultural innovations was dependent on his training and experience in agriculture and extension methods. He emphasizes that training is one of the primary means by which the principles and functions of agricultural extension services can be put into practice. Agricultural Extension personnel play an important role in the diffusion and dissemination of new agricultural technologies and thus, should be given priority for training. This would enable the farmer to be benefited for proper utilization of new technological packages (Abamu, 2006).

According to Ovwigho and Ifie (2009), the training of agricultural extension workers is an integral part of the overall agricultural production process. It is the duty of agricultural extension agents to reach farmers scattered around the country with useful and practical information for increased agricultural production. Agricultural Development Authority (ADAs) are the main organizations charged with the responsibilities of agricultural extension delivery. But, it is clear that Agricultural extension in Nigeria has drastically reduced in its effectiveness over the years, and as such has been a major factor that has caused the decline in agricultural productivity. This is as a result of lack of adequate skills on the part of the agents in carrying out their assigned task of information dissemination to farmers (Igbokwe and Enwere, 2001). This project is of utmost significant as it will provide policy makers with information regarding the need for training and also on how to carry out training of extension personnel. The findings of this research will also bring to limelight, the areas of competence of extension agents, and how to tap into the wealth of knowledge of training needs assessment towards better performance and improved productivity. To the agents, the findings from this study will also spur them to develop themselves as it will help them identify areas of weakness and seek for training for improved performance.

2. OBJECTIVES OF THE STUDY

The main objective of this study is to examine the determinants of training needs among Agricultural Extension Personnel in Lagos State. The specific objectives are to:

- examine the demographic characteristics of extension personnel in the study area;
- assess the areas of competence of agricultural extension personnel in the study area;
- identify areas of need for training of extension personnel in the study area; and
- examine the socio-economic characteristics of the extension personnel in relation to their training needs.

3. METHODOLOGY

This study was conducted in Lagos State. It has a land mass of about 3,577 square kilometers with about 787 constituting lagoons, swamps, marches and creeks. According to the 2006 census, the state is considered the second most populous state in the federation. It borders Ogun State to the north and east, Atlantic Ocean to the south; it stretches for about 180 km along the Atlantic coast and also borders the republic of Benin to the West. Extension personnel under the Lagos State Agricultural Development Programme constitute the target population for this study. Due to identification problems, convenience sampling method was used to select respondents. The study made use of a sample of fifty Extension Personnel as respondents. Despite the use of convenient sampling technique, the researcher made sure the selection of extension personnel as respondents cut across almost all the local government in the State. This was done with a survey of the attendees to the monthly meeting in terms of their location of duty. Hence, the researcher only picked two extension personnel from each local government in the state that were present at the meeting, totaling 40 extension personnel serving in twenty local government areas in Lagos State. The remainder was conveniently selected from the personnel at the service station of the ADP at Oko-Oba, Agege where the monthly meeting was held.

Both primary and secondary data were used. Primary data were collected through survey. The sampled extension personnel were administered the questionnaire in order to obtain their responses concerning the training needs. Selected demographic characteristics of respondents namely age; gender, educational status and job experience were measured. The process of analysis of training needs of an organization as stated by McGee and Paul (1961) comprised a threefold approach, namely: organizational, job or occupational and man analysis. This study adopted the job or occupational analysis. It entails identifying tasks performed by the organizational staff and identifying the tasks in which staff require further re-training to perform them well. Seventeen (17) of such tasks were identified in this study and the respondents were asked to indicate the tasks they perform in which they require re-training. This study made use of an adaptation of Carnevale, Gainer, and Villet's (1991) questions to ask to obtain strategic information so as to collect relevant data aimed at achieving the goals of the research. The questionnaire had (two) 2 parts. The first section examined respondents' demographic. The second section asked questions relating to identification of training needs. Data were analysed using descriptive statistics such as frequency counts, percentages and means. Correlation analysis was used to test the hypothesis of the study. Some of the variables were measured using a Likert-type-scale. For example, a 5- point likert- scale ranging from "Strongly Agree" (5). "Agree" (4), "Undecided" (3), "Disagree" (2), to "Strongly Disagree" (1) was used to assess respondents perception of competence level in specific technical areas. A mean score of 2.50 and above indicates areas of training needs while a mean score lower than 2.50 indicates areas where training are not needed.

4. RESULTS AND DISCUSSION

4.1. Demographic Characteristics Of The Respondents

The demographic characteristics of the respondents are presented in Table 1. More than half (85.5%) of the respondents were in the age group of between 20 and 49 years. This implies that most (85.5%) of the extension staff in Lagos State ADP are still young. This implies that skills acquired through re-training and training programmes can still be utilized in the organization. This is in concordance with the findings of Ejembi *et al.* (2006). 74% of the respondents were male while 26% were female. In the past, extension job was reserved for men only believing that it was only men that were farmers (Airemen, 2005). Presently, women are also farmers and need to be reached to achieve increased productivity thus the employment of female extension workers. More than half of the respondents were graduates (56%). It is generally assumed in Nigeria that extension job is a low-status job fit only for job applicants possessing low academic qualifications (Ejembi *et al.*, 2006). Result of this study however contradicts this view Oladoja (2004) indicated that the process of technology transfer should not focus only on the transfer of innovations but also on the transfer of scientific and managerial skills. Most (42%) of the respondents had working experience as extension staff for between 6 and 10 years. The length of service is probably an indication of a person's commitment to the chosen career (Ejembi *et al.*, 2006).

Table1. *Percentage distribution of respondents*

Variables	Categories	Frequency	Percentage
Age (Years)	20 - 30 yrs	21	43.8
	31 - 50 yrs	20	41.7
	50 yrs and above	7	14.6
Sex	Male	36	75.0
	Female	12	25.0
Marital Status	Single	13	27.0
	Married	35	73.0
Educational Background	Undergraduate	2	4.0
	Graduate	27	56.0
	PG & Ph.D	19	40.0
Religious background	Christianity	19	38.0
	Islam	24	50.0
	Others	5	12.0
Experience as an extension officer (years)	1 - 5 years	18	38.0
	6 - 10 years	20	42.0
	11 - 15 years	5	10.0
	16 - 20 years	5	10.0

according to demographic characteristics

Source: Field Survey, 2014

4.2. Area of Competence of Agricultural Extension Personnel

Before a concise assessment of the training needs of extension personnel in the study area, this study sought to evaluate the areas of competence of the extension personnel. The respondents were asked to state their level of agreement in relation to how competent they were in certain aspects which covers extension organization, programme planning, communication, resource management, human development, educational process, social system and efficient thinking. Their responses are as summarized in Table 2.

From their responses, it could be deduced that the respondents are most competent in extension organization ($\bar{x} = 4.72$), efficient thinking ($\bar{x} = 4.52$), communication ($\bar{x} = 4.20$), human development ($\bar{x} = 4.12$), educational process ($\bar{x} = 4.02$), resource management ($\bar{x} = 3.92$), and programme planning ($\bar{x} = 3.80$). Their least competent skill is in social system ($\bar{x} = 3.76$). As adjudged by the respondents, extension staff needs to be efficient in thinking, with psychological reasoning to understand farmers' problems' and how to tackle them. Oladoja (2004) stated that for effective delivery of extension service, agents must be able to put themselves in the shoes of farmers by critically evaluating the challenges of farmers for effective intervention. Communication is an element in an organization such as extension organization needs, especially dealing with farmers who constantly need to hear expert judgments of their problems and challenges. It is well known that communication plays a vital role and such a role of communication is widely advocated in daily activities. Extension personnel therefore need to possess extensive oral and written communication skills so as to help them discharge their functions effectively (Adelanwa, 2002). Constant development of personal and organizational skills is paramount for extension personnel that meet with farmers who are confronted with varying problems in agribusiness. New problems such climate change and global warming need new knowledge and skills for effective decision making (Ejembi *et al.*, 2006). Thus, development of competencies is of great importance to extension personnel. An understanding of the educational process by extension personnel will provide them with the knowledge and know-how of how to pass innovative solutions for farmers and the need to be patient with trainings and retraining for effective adoption of the innovation. Ejembi *et al.*, (2006) reported that the need for competency in resource management is to ensure extension personnel adequately utilize the resources at their disposal to meet the needs and demands of farmers, and also to ensure that they succeed in an atmosphere where limitations exist in resources needed for effective extension delivery service.

Table 2. Competence level of the Extension Personnel

Competence areas	Frequency counts					Total	Mean	Remarks
	SA	A	N	D	SD			
I possess valuable knowledge and experience in extension organization	180	56	0	0	0	236	4.72	Accept
My thinking and reasoning skills are excellent.	60	132	30	24	0	50	4.52	Accept
I effectively communicate, both verbally and in written form.	16	28	6	0	0	50	4.20	Accept
I am passionate about development of my skills, knowledge and attitudes.	14	28	8	0	0	50	4.12	Accept
I have a large knowledge and experience in the educational process	11	31	6	2	0	50	4.02	Accept
My Resource Management skills are excellent	14	26	6	2	0	50	3.92	Accept
I can plan and execute programmes excellently	8	30	10	0	0	50	3.8	Accept
I quickly learn and adapt into the social system wherever I am posted to.	14	22	6	6	0	50	3.76	Accept

Note: 5 = Strongly Disagree, 4 = Disagree, 3 = Indifferent, 2 = Agree, 1 = Strongly Agree

Key: Accept if mean > 2.50, reject if mean < 2.50

Source: Field Survey, 2014

4.3. Training Needs Assessment of Agricultural Extension Personnel

From the analysis of extension personnel training needs, as summarized in Table 3, it shows the perception of the respondents as regard their expected training needs. The respondents ranked the need to train them as farmers' trainers as most important so they could discharge their duties more

effectively. This follows the report of Ejembi *et al* (2006) when they stated that the core task of extension personnel is training and capacity building of farmers, and as such, the need for agricultural training institutions. Ranked next to farmers’ training is the need to expose them to operation and maintenance of agricultural machines, as they affirm that this skill will ensure they pass innovative mechanization to farmers for improved productivity. Ejembi *et al* (2006) also confirms this in their work when they reported that the technical know-how of operation and maintenance of agricultural machinery is a paramount need by extension agents as they serve as a knowledge database that farmers rely on for information.

Livestock production and disease control training was ranked third among the need for training for extension agents, while the fourth ranked was training on value addition on agricultural commodities so that they could pass information. Fifth is training on storage and post-harvest technology, while sixth ranked training need is on crop production technology. The least ranked training need is on Nutrition and food utilization demonstration, as extension agents felt that this training does not translate to improved productivity of farmers. The deficiency in extension methodology observed in Table 3 could be as a result of inadequate pre-service training of the respondents. According to Van Crowder (1996), extension methodology is often by-passed in many intermediate levels whose primary function is to train students to work as field extension agents in an effort to insert specialized technical agriculture in the curriculum.

Table3. Respondents’ perception of areas of training needs (n =48).

Training Needs	Frequency	Percent	Rank
Operation and maintenance of agricultural machines	20	11.6	1 nd
Livestock Production and Disease control	16	9.2	2 rd
Value Addition on agricultural commodities	16	9.2	3 th
Storage and Post-harvest technology	14	8.1	4 th
Crop Production Technology	12	6.9	5 th
Marketing of Agricultural commodities	11	6.4	6 th
Rodents and Pest Control	9	5.2	7 th
Irrigation farming	8	4.6	8 th
ICT in Agriculture	7	4.0	9 th
Planning demonstrations	7	4.0	10 th
Recording and Reporting	7	4.0	11 th
Selection of contact farmers	6	3.5	12 th
Formation of Women Groups	5	2.9	13 th
Establishment of SPAT	4	2.3	14 th
Communication skill	3	1.7	15 th
Evaluation of trials	2	1.2	16 th
Nutrition and food utilization demonstration	1	0.6	17 th

Source: Field Survey, 2014

4.4. Assessment, Frequency and Duration of Training Needs

From the response of the extension agents, majority (89.6%) of the respondents affirmed that the organization has a well laid-down process for assessing and identifying needs for training of the personnel. This is in accordance with the findings of Jibowo (2005) who stated that the ADPs has its plan of assessment procedures for training of extension agents. Future training and professional development needs of extension personnel at LSADA as stated by majority of the respondents (50%) is usually done by the Human Resource Department of the organization, while 34% reported that the Block Extension Supervisor (BEA) is the one that evaluates and recommend needs for training of extension personnel. Only 16% reported that they evaluate themselves on the need for training. The plan so created is subject to review, and as such the respondents were asked on the frequency of review of the training needs assessment plan of agricultural extension agents at LSADA. 32% of the respondents believe that the assessment plan is subject to review annually, while another 32% of the respondents were of the view that the training needs assessment plan is usually reviewed after every 6 months. In contrast, 30% of the respondents were of the opinion that the assessment plan of training needs is subject to review monthly, while only 8% disagreed that the plan is reviewed. 52% said the plan usually last for a year (12 calendar months), while 22% reported that the plan covers 18 months (1 year and 6 months).

Table 4. Responses on assessors, duration and frequency of training needs of Extension personnel

Variable	Categories	Frequency	Percent
Assessors	Human Resource Dept.	25	50.0
	Supervisor (BEA)	17	34.0
	Self	8	16.0
Duration			
	6 months	7	14.0
	12 months	26	52.0
	18 months	11	22.0
	24 months	6	12.0
Frequency			
	Not at all	4	8.0
	Monthly	15	30.0
	Biennially	15	30.0
	Annually	16	32.0

Source: Field Survey, 2014

Table 5 shows that most of them are satisfied with the existing process of identifying and meeting training needs of respondents as utilized by the management of the organization (mean = 3.64). Also, concerning threatening of the effectiveness of the existing process, most (51%) responded that the process is effective in most regards, while only 4% believed that assessment process is completely ineffective. A mean value of 3.59 shows response well over average of 2.50, indicating affirmative response on the effectiveness of the existing process of training needs assessment implemented at LSADA for extension personnel.

Table 5: Rating of existing process and effectiveness of training needs assessment

Responses	Frequency	Percent
Satisfaction of existing process		
1 = Not at all confident	0	0.0
2 = Not confident in most regards	4	8.0
3 = Moderately confident	16	32.0
4 = Confident in most regards	24.0	48.0
5 = Completely confident	6	12.0

Effectiveness

1 = Completely ineffective	2	4.1
2 = Ineffective in most regards	0	0.0
3 = Moderately effective	18	36.7
4 = Effective in most regards	25	51.0
5 = Completely effective	4	8.2

Source: Field Survey, 2014

4.5. Relationship Between Selected Respondents’ Demographic Characteristics and Their Training Needs

Table 6 shows the relationship between respondents’ demographic characteristics and their training needs. The table shows that education had significant relationship ($p \leq 0.05$) with many areas of training needs: farmer identification ($r = -0.190$), nutrition and food utilization ($r = 0.339$), communication skills ($r = 0.190$), planning demonstration ($r = 0.190$), recording and reporting ($r = 0.260$), evaluation of trials ($r = 0.190$), and rodents and pest control ($r = 0.236$). This is because most of the extension personnel are well educated. This result is not unexpected because technical skills are easily acquired through education (Oladoja, 2004). Similarly, job experience had significant ($p \leq 0.05$) relationship with the respondents’ training need in the area of planning demonstration ($r = 0.190$). This is because experience of the extension personnel helped them understand the importance of planning. This however faults the works of Androuhdkis and Siardos (2005). On the other hand, age of respondents was not significantly ($p \leq 0.05$) related to the training needs of respondents. This follows the findings of Ejembi *et al* (2006) when they concluded that age is a determinant factor for need for training that as one grows older, experience on-the-job creates more avenue for specialization.

Table6. Correlation analysis of selected respondents' personal characteristics and their training needs.

Training Needs	Age	Education	Job Exp.
Training of farmers	0.046	0.035	0.090
Rodents and Pest Control	-0.117	0.236*	-0.090
Planning demonstrations	-0.107	0.190*	0.190*
Recording and Reporting	-0.139	0.260*	0.040
Selection of contact farmers	0.111	-0.011	0.025
Formation of Women Groups	0.050	0.066	0.080
Establishment of SPAT	0.019	0.110	0.018
Farmers identification	-0.16	-0.190*	0.034
Communication skill	0.139	0.190*	0.074
Evaluation of trials	0.031	0.190*	0.123
Nutrition and food utilization demonstration	-0.148	0.339*	0.053

Significant at $p \leq 0.05$

Source: Field survey data, 2014

5. CONCLUSION AND RECOMMENDATIONS

This study established that there were more males' extension agents in LSADA than females. The study also established that majority of the LSADA's extension agents were either graduates or post-graduates, with majority having 6-10 years of working experience. It was also established that many extension agents were efficient in the important subject matter areas that are necessary for extension agents to perform effectively such as communication skills, planning demonstration, evaluation of trials, farmers training and selection of contact farmers. The implication of these findings is that most of these subject areas are likely to be lacking in the pre-service training curriculum of the agricultural graduates recruited as extension agents in ADAs.

Based on the findings this study the following recommendations are made:

- Training needs analysis should be carried out for newly recruited graduates and also periodically to determine the training needs of extension agents.
- In-service training should be planned for extension agents in Social science skills that are mostly deficient in agricultural graduates such as communication skills, evaluation and research methods.
- There is a need for collaboration between ADAs and agricultural institutions in reviewing agricultural extension curriculum in agricultural institutions that will assist the agricultural extension graduates in facing new challenges so as to perform effectively and efficiently as extension agents.

REFERENCES

- Abamu, J.U (2006). Essentials of Agricultural Communication in Nigeria. Lagos: Malthouse Press Limited.
- Airemen, S.A. (2005). Training needs of extension staff in agriculture: A case study of Edo State agricultural development programme. Unpublished B.Sc thesis. Department of agricultural economics and extension, Faculty of Agriculture, University of Benin, Benin-City. Pp 10-18.
- Allo, A.V. (2001). Professional requirements of the extension worker in training the extension worker. FFTC extension bulletin No. 173.
- Carnevale, A. P., Gainer, L. J. and Villet, J. (1991). Training in America: The organization and strategic role of training. San Francisco: Jossey – Bass.
- Crowder, L. V. (1996). Assessment of preservice and in-service extension education. Agricultural extension and education service (SDRE). FAO Research, extension and training division. 3p. Also available at www.fao.org/sd/exdirect/exan001.htm.
- Dahama, O. P (1979). Extension and Rural Welfare. New Delhi Ram Parsad and Sons
- Ejembi, E.P; F.E.Omoregbee and S.A. Ejembi (2006). "Farmers' assessment of the training and visit extension system in central Nigeria: Evidence from Barkin Ladi, Plateau State". Journal of Social Sciences. 12 (3):207-212.
- Ekpere, J. A. (1980). Training Extension Agents to Work with Nigeria Small Farmers. Ibadan: The Caxton Press (West Africa) Limited.

- Flanagan, J. C. (1954). *Critical Incident Technique*. Washington, D.C: American Psychological Association
- Food and Agriculture Organization (FAO) (1990). *Global consultation on agricultural extension*.
- Igbokwe, E.W. and Enwere, N.J. (2001). *Participatory Rural Appraisal in Development Research* Enugu: New Generation Books
- Jibowo, A.A. (2005) *History of Agricultural Extension in Nigeria*. In: Adedoyin, S.F. (ed). *Agricultural Extension in Nigeria*. Ilorin: Agricultural Extension Society of Nigeria, pp.1-15
- McGee, W and T. Paul (1961). *Training in business and industry*. Wiley publishers. New York. USA. pp 30-36.
- McNamara C (2011), *Assessing Your Training Needs: Needs Assessment to Training Goals*, [Online]. February 2011. Available from: http://www.managementhelp.org/trng_dev/analyze/analyze.htm
- Obibuaku, L.O. (1983). *Agricultural Extension as a Strategy for Agricultural transformation* Nsukka : University of Nigeria Press.
- Oladoja, A.M. (2004). *Analysis of the training needs of extension agents in Lagos State ADP*. Unpublished B.Sc. Thesis. Department of Agricultural Extension and Rural Development. Faculty of Agriculture, University of Ibadan. pp 50-53.
- Olujide, M.G. (1999). *Activities of Selected Non-Governmental Organization in the South Western Nigeria*. Unpublished PhD. Thesis, University of Ibadan, Nigeria
- Ovwohio, B.O. and Ifie, P.A. (2009). *Principles of Youth Development in Africa..* Benin-City: Ethiope Publishing Corporation.
- Radhakrishna, R.B and J.S. Thomson (1996). "Extension agents' use of information sources. *Journal of Extension*. 34(1):12-17.
- Youdeowei, A and Kwarteng, J. (2006). *Tool Kit for the production of agricultural extension materials*. Guide book. CTA Wageningen, The Netherlands. 50pp.

AUTHOR'S BIOGRAPHY



Mr. T.A. Okeowo, is on the Faculty of the Department of Agricultural Extension & Management in the Lagos State Polytechnic, Ikorodu-Lagos, Nigeria. He is a Doctoral Research student of the Olabisi Onabanjo University, Ago-Iwoye, Nigeria in Agricultural Economics. His areas of research interests are Production/Resource Economics, Price and Policy Analysis and Gender Issues. He has twenty five papers in reputable journals, twenty three conference papers and twenty seminar/workshop papers. He belongs to several relevant professional cum academic bodies such as African Association of Agricultural Economists (AAAE), Nigerian Association of Agricultural Economists (NAAE) among others.