

## **EFFECTS OF TRAINING ON THE ACTIVITIES OF EXTENSION STAFF OF AGRICULTURAL DEVELOP- MENT PROGRAMMES IN NORTH-EAST, NIGERIA**

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### **ABSTRACT**

The history of training in business organizations is as long old as the entire history of business organizations. This study assessed the effects of training design and implementation on post-training activities of extension staff of Agricultural Development Programmes (ADPs) in North-east Nigeria. Multi-stage sampling procedure was used to select 197 respondents from Gombe, Taraba and Yobe States ADPs. A structured questionnaire was used to obtain data on respondents' personal characteristics of respondents, methods used for selecting staff for training and perceived constraints to post-training activities. Data were analysed using descriptive and inferential statistics. 73.1% of the respondents were male, 91.4% married with mean age of 44 years and work experience of 18 years. Most of the respondents 92.9% had tertiary education and majority (26.9%) were Village Extension Agents. Furthermore, 53.8% reported there was follow-up after training. There was a significant association between educational level ( $\chi^2 = 2.84$ ,  $p < 0.05$ ) and post training activities. Pearson Product Moment Correlation showed that there were positive and significant relationships ( $p < 0.05$ ) between age ( $r = 0.16$ ), work experience ( $r = 0.16$ ) and post training activities. There were significant differences in post-training activities ( $F = 29.18$ ,  $p > 0.05$ ) across the three selected States. It was concluded that very weak follow-up after training decreases job performance. It was recommended that management of agricultural organizations should ensure placing emphasis on efficient follow-up of trainees for effectiveness of training.

**Keywords:** Follow up; Training Need; Post-Training Activities; Job Performance.

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### **INTRODUCTION**

The history of training in business organizations is as long as the history of organizations themselves, as training has always been an integral part of organizational development (Noe, 2023; Dessler, 2022). This is because the knowledge base or skills of the normal employees in the labour market

is not sufficient for the specialized tasks within the organizations. Trainings are those activities which are designed to improve human performance on the present job duties of an employee or jobs being hired to do (Ajayi, 2018). It is "a systematic acquisition and development of the knowledge, skills, and attitudes required by employees to ade-

quately perform a task or job or to improve performance in the job environment. Training can help in building national capabilities for agricultural research and food production in Africa by increasing the corps of competent research workers and extension personnel. Training design is a blueprint for a training event or experience; it is the process of creating a blueprint for the development of instruction for a training for positive impact (Ajayi, 2018). It is a detailed plan for trainers about what they will do. Why it is to be done; and the best way to attain the objectives of training. According to Abiona *et al.* (2017), it was reported that improved performance is achieved through the employees in the organization. Performance can be put as an output which is the combination of ability of an employee, other available resources and motivation which become the key components of most management work. Training programs should be based upon abilities to meet the required standards. A good training programme has seven steps which in a sequence form a constructive training design and implementation process (Ajayi, 2018). The seven steps are:

- i) Identification of training need and analysis,
- ii) Setting up of training and development objectives,
- iii) Selection and designing of programmes,
- iv) Selection and developing training methods and techniques,
- v) Implementation of training and development programmes,
- vi) Evaluation of training and development programmes and
- vii) Feedback leading to further identification of training needs. These steps provide a holistic approach to training.

They are interlined with one another, providing a wider scope for the improve-

ment of the training process. Each step is analyzed to evaluate how it can be improved for the total effectiveness of the programme. Designing and implementing training programs is referred to as one of the most pervasive and the most understood activities found in the field of human resource development.

Proper design and delivery of a training programme are major contributors to the transfer of learning. If training is to have a sustainable impact on participant behaviour, it must be designed to meet the needs of the learner and the organization (Martin, 2010; Noe, 2023; Salas *et al.*, 2022). Important questions include: Are the objectives of the training understood and clearly communicated to the participants? Are the skills to be acquired similar to skills currently in use? Is the training perceived as relevant to the job currently being performed or objectives to be achieved? Have participants been involved in determining the content and design of the training program? Do participants believe they will have an opportunity to practice the skills or apply the knowledge gained? Will participants receive feedback on their performance or application and have the opportunity to make appropriate adjustments? Is the training location conducive to effective learning? Is the timing of the training appropriate and are job demands adjusted to allow for training? In short, program design should include a needs assessment, clear program goals that align the training with the strategic direction of the organization, the involvement of key stakeholder groups, and dissemination of information that establishes the credibility of the program before it starts (Martin, 2010). Proper conduct of the program builds on good training design. It is essential in maintaining the learner's interest in the training and motivation to put forth the energy required to ac-

quire new skills (Martin, 2010). Research shows that engaging trainees through exercises that apply the information and feedback during instruction allows learners to make adjustments in their behavior and gain insight into changes required. In particular, learning transfer for complex decision-making tasks is enhanced by the active involvement of the learner during training. A major reason properly designed training programs have greater success transferring to the workplace is that they improve the learner's cognitive understanding and retention of the content and build the learner's self-confidence and motivation to apply the training (Martin, 2010).

A variety of learner characteristics have been studied in relation to transfer of learning. Two related characteristics that figure prominently in the literature are self-efficacy and employee motivation. Self-efficacy is concerned with the learner's self-confidence and belief in his or her ability to successfully acquire and transfer the target skill (Martin, 2010). Related to self-efficacy is the motivation or desire of the learner to change his or her behavior. Employers could improve effectiveness by training only those learners with a high level of self-efficacy and motivation but this is often not practical. Therefore, researchers have looked for ways to improve the confidence and motivation of trainees through activities before, during, and after the training. Trainees with a high degree of self-efficacy tend to be more motivated learners and accomplish more (Martin, 2010). A direct link has been established between efforts to build the self-confidence of learners and the likelihood of their using skills on the job. This is one of the reasons for investing in good training design and preparing learners for training. Understanding the objectives of the training, its relevance to individual and organiza-

tional performance, and expectations for application can greatly enhance learner motivation (Martin, 2010). Assessing individual performance and providing feedback prior to training can also have a positive impact on motivation. This is because a more realistic appraisal of skill is achieved through feedback than through self-evaluation alone. If properly presented, such feedback can stimulate confidence in the learner's ability to improve his or her performance through training. The attitude and behavior of an employee's supervisor is a particularly important element in skill application and transfer of learning. Managers can show support for training in a variety of ways ranging from simply allowing employees to attend the training to participating in the training itself as an instructor (Martin, 2010). Supervisors signal whether the training is to be used and how quickly changes are expected. A supervisor who does not view the training as useful or relevant can easily undermine application in a variety of direct and covert ways. A supportive organizational climate is also communicated by how the work is designed and skill application rewarded.

Program design, trainee characteristics, and the workplace environment provide a context for transfer but the application of specific activities to follow-up training is also critical to success (Martin, 2010). It has been recognized that constraints and obstacles in the post-training environment can interfere with and limit the transfer of training. Research has also found that the transfer climate and support provided to trainees are particularly important for transfer. In spite of this, Saks and Belcourt (2006) reported that organizations rarely incorporate follow-up activities into their training programs. They recommend that organizations ensure a strong support network for trainees both before and after training. However, many organizations

are unsure how to accomplish this. Several follow-up activities have been found to be particularly useful in supporting transfer.

They are action plans, performance assessment, peer meetings, supervisory consultations, and technical support. Substantial research confirms the importance of post-training activities to training transfer. However, many employers remain uncertain about how to effectively implement training and development initiatives, and practices continue to vary widely across organizations (Salas *et al.*, 2022; Noe, 2023). Post Training Activities are the expected improved job performance, improved attitude, use of action plan and follow-up after trainees might have received necessary training from the experts. The importance of employee performance for the success of organizations cannot be overstated. Employees are the human capital of organizations and their performance is a key indicator for organization to achieve its goals, as a result, equipping this unique asset through effective training becomes imperative in order to maximize the job performance. Job performance is the work-related activities expected of an employee and how well those activities were executed. Job performance reaches a goal or set of goals within a job, role or organization but not the actual consequences of the acts performed within a job. Employees sometimes go for training for personal reasons which include enriching themselves; preparing themselves for other positions in other organizations; power play/politics; because he/she knows the person in-charge of training and not necessarily because there is an identified skill gap which needs to be filled through training.

Often times, the Human Resource Department does not conduct training needs assessment. Employees' training selection cri-

teria ought to be systematic and free from bias. It must follow a lay down procedure to ensure that the right candidates are sent for training for positive effect on organizational performance. Abiona *et al.* (2017) stated that improved performance is achieved through the employees in the organization and performance can be simply put as an output which is the combination of ability of an employee, available resources and motivation which become the key components of most management work. However, despite the obvious significance of training, the enormous expansion in the content of impact of training design and implementation on post training activities especially trainees' follow-up after receiving training over time has largely been neglected. Therefore, in order to fill this gap, this study aimed to assess the effects of training design and implementation on post training activities of extension staff of Northeastern Nigeria ADPs, with focus on processes and procedures of training design, implementation, post training activities as such job performance and follow-up of the extension staff towards their job in the study area. It is also pertinent to categorize their identified needs in respect of the opportunity available to them to practice the competence(s) within the work environment.

Therefore, this study found empirical and scientifically deduce answers to the following research questions.

- i) What are the socio-economic characteristics of the respondents?
- ii) What are the methods used for selecting staff for training in the study area?
- iii) What is the perception of respondents on training design and implementation of the training programmes attended?
- iv) What are the constrains militating against post training activities?

**Objectives of the study**

The main objective of this study was to determine the effects of training design and implementation on post training activities of extension staff of northeast Nigeria.

The specific objectives were to:

- 1) Describe the socio-economic characteristics of the respondents;
- 2) Identify methods used for selecting staff for training in the study area;
- 3) Ascertain the perception of respondents on training design and implementation of the training programmes attended.
- 4) Identify the perceived major constraints to assessment of post training activities.

**Research Hypotheses**

**H<sub>01</sub>:** There is no significant relationship between respondents' socio-economic characteristics and employees' post training activities.

**H<sub>02</sub>:** There is no significant difference between employees post training activities across the three selected states in northeast Nigeria.

**RESEARCH METHODOLOGY**

Survey research design was adopted for this study; the area of the study was Northeastern Nigeria. Northeastern Nigeria is one of the six geo-political zones of the Federal Republic of Nigeria. The study population comprised the entire agricultural extension staff of the Agricultural Development Programme (ADP) of the northeast geopolitical zone of Nigeria, who has attended training programmes in the last five (5) years. A multi-stage sampling procedure was used to randomly select three states where 95% out of the total (208) population were selected which gave a sample of 197 employees. Instrument for data collection was structured questionnaire of five-point rating scale of

Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree. The Instrument consisted of section A of personal data while sections B, C and D contained 11, 12 and 22 item Likert type rating scale questions respectively related to the research questions. The instrument was validated by experts. The researcher, with the help of trained Research Assistants administered and retrieved the completed questionnaires from the respondents. Data collected were analyzed using frequency counts, percentages, means, and standard deviation, Chi-Square, Pearson Product Moment Correlation and Analysis of Variance (ANOVA).

**Sampling Procedure and Sample size**

A multi-stage sampling procedure was used to select the respondents for the study. The breakdown of the sampling procedure is as follows:

**Stage 1:** First stage was a pre-survey of the region. Based on the population, three states were randomly selected.

**Stage 2:** Grouping of the extension agents into two groups of those that attended training and those that didn't attend training in the last five years in the ADPs of the three selected states.

**Stage 3:** Purposive sampling technique was used to select respondents who have attended training programmes in the last five (5) years from the three selected ADPs.

**Stage 4:** Proportionate stratified sampling approach was used to select equal proportion (95%) of respondents who have attended training programmes in the last five (5) years, from the ADPs of the three selected states of northeast geopolitical zone of Nigeria.

**Stage 5:** A random sampling procedure was used in selecting the respondents.

## RESULTS AND DISCUSSION

### *Personal characteristics of respondents*

The average age of the respondents was 44.3% years (Table 1). This finding is in line with Ibitunde (2011) and Ajayi and Alabi (2013) who had earlier reported that average age of extension agents in Osun State ADP was  $40.17 \pm 7.61$  and  $38.72 \pm 6.07$  respectively. Majority (57.9%) of the respondents fell between age 45 years and below; Recent evidence in Edo State ADP also shows that extension personnel are largely within their active working age, with emphasis on motivating younger staff (Omoregbee & Koyenikan, 2022). This means that skills acquired through re-training and training programmes can still be utilized in the organization for at least 16 years. These age categories represent young people who are still expected to be physically and mentally fit to carry out organization's work and it can be inferred from this result that many of the extension agents are still within the active and productive working age. 73.1% were males and 26.9% of the extension agents in Northeast Nigeria were females (Table 1). This implies that the ratio of male to female extension agents in the services of Agricultural Development Programme in northeast Nigeria was around 7:3. The implication of this is that males still dominate the field work in ADPs in Northeast Nigeria. This finding aligns with earlier studies (Banmeke & Ajayi, 2010; Salau & Saingbe, 2006; Ibitunde, 2011; Ajayi & Alabi, 2013) and is supported by recent evidence indicating that males still dominate agricultural institutions in Nigeria (Adebayo *et al.*, 2022; Olagunju *et al.*, 2023), it also agrees with the findings of Julie (2013) who reported that male employees have higher opportunities than female employees in terms of employment, most especially in Agricultural Institutes. The finding shows

that any future recruitment of extension staff should emphasize gender sensitivity as gender based and related programmes were built into contemporary extension. This finding also draws attention to the past, when extension work was largely reserved for men, based on the belief that farming was a male activity (Airemen, 2005), a position supported by recent studies highlighting the historical gender bias in extension service delivery (FAO, 2023; Ragasa, 2022). The low representation of female farmers in the extension services is to the disadvantage of female farmers from accessing extension advice particularly in the upper northeast region of Nigeria, where cultural norms make it difficult for a female farmer to talk to a male extension officer (Lamontagne-Godwin *et al.*, 2017). Most of the extension agents in Northeastern Nigeria (91.4%) were married, while only a few were single or widowed. This finding is consistent with earlier studies (Ibitunde, 2011; Oladejo *et al.*, 2008) and is supported by recent evidence showing that the majority of extension personnel in Nigeria are married, reflecting increased responsibility and job stability (Olatunji *et al.*, 2022; Yusuf *et al.*, 2023). This also indicated that married men and women are culturally considered responsible in this part of the world than the unmarried ones as supported by the findings of Fapojuwo (2010) that a great importance is still attached to marriage institution. This revealed the importance attached to marriage and family life in Northeastern Nigeria. Most (92.9%) of the extension agents in Northeastern Nigeria possess tertiary educational qualifications, implying that they are well equipped to perform their roles effectively. This finding agrees with earlier reports (Ajayi, 2001) and is supported by recent studies indicating that the majority of extension personnel in Nigeria hold higher educational qualifications, which enhance

their competence and job performance (Olatunji *et al.*, 2022; Yusuf *et al.*, 2023; FAO, 2023). This indicates that employment in Agricultural Development Programmes (ADPs) requires the attainment of higher educational qualifications. Although extension work has sometimes been perceived as a low-status occupation requiring minimal academic training (Ejembi *et al.*, 2006), recent studies emphasize that extension service delivery demands a high level of technical, scientific, and managerial competence. This aligns with the view that technology transfer should involve not only the dissemination of innovations but also the development of scientific and managerial skills (Oladoja, 2004; Agbamu & Nwaobi-ala, 2022; FAO, 2023). Few (26.9%) of the field officers sampled in Northeastern Nigeria were Village Extension Agents (VEA) while 23.9% were Block-Extension Agents (BEA). This result corroborates that of Alabi and Ajayi (2018) who reported that majority (70.4%) of the Agricultural Extension Agents in Southwest geopolitical zone of Nigeria are Village Extension Agent while others were Block Extension Agents, Subject Matter Specialist, Block Women in Agriculture and Zonal Extension Officer. These agents (BEA) coordinate the activities of other agents within their block which usually is a Local Government Area. Furthermore, Zonal Extension Officers (19.3%), Subject Matter Specialists (18.3%), and Block Women in Agriculture (11.7%) were sampled, indicating that respondents were drawn from different cadres within the extension system in Northeastern Nigeria. These categories reflect the multi-tiered structure of agricultural extension services, comprising supervisory, specialist, and field-level roles (FAO, 2023). The inclusion of different cadres suggests varying levels of job commitment, with lower-level staff

more likely to experience challenges in balancing work and personal life due to career advancement pressures (Dessler, 2022; Noe, 2023). This finding also supports earlier assertions that training and retraining are essential for equipping extension workers with necessary communication and professional skills (Ogunbameru *et al.*, 2006), a view reinforced by recent studies emphasizing continuous capacity development (Salas *et al.*, 2022).

The distribution of years of service—where most respondents had between 11 and 20 years of experience—suggests a relatively experienced workforce, which has implications for job commitment and organizational performance (Noe, 2023). The average length of service for extension agents in northeastern Nigeria was 17.8 years. This implies that, some respondents are still young on the job and still have the opportunity of serving the organization for more years if the organization cares for their wellbeing and put measures in place to keep them from feeling insecure. The length of service is probably an indicator of a person's commitment to the chosen career (Ejembi *et al.* 2006). Frequent training and re-training programmes are needed to be put in place by an organization to strengthen this commitment. Majority (78.7%) of the extension agents in Northeastern Nigeria attended between 1 – 3 trainings in the last five years while 13.2% attended 4–6 trainings in the last five years. Also 8.1% of the extension agents in northeastern Nigeria attended more than 6 trainings in the last five years. The average number of trainings attended by extension agents in the last five years was  $2.78 \pm 2.68$  (Table 1). Regular training is a fundamental component for effectively communicating new technologies to farmers; therefore, adequate attention must be given

to the training of extension staff. Without proper training, extension personnel may be unable to meet field expectations. Earlier assertions by Muhammad *et al.* (2011) on the importance of in-service training are supported by recent studies emphasizing that continuous and well-designed training programmes enhance knowledge transfer, communication skills, and overall job performance (Noe, 2023; Salas *et al.*, 2022; FAO, 2023). Consequently, extension agents should be regularly trained across various disciplines to meet the demands of a globalized agricultural system.

**Table 1: Frequency Distribution of Socio-Economic Characteristics of Respondents (n=197)**

Variables	Percentage	Mean	Std. d.
Gender			
Male	73.1		
Female	26.9		
Age		44.25	7.33
≤35	13.7		
36-45	44.2		
46-55	36		
56-65	6.1		
Educational level			
Secondary	3		
OND	17.3		
NCE	4.1		
BSC	32.5		
HND	39.1		
MSC	3		
PHD	1		
Marital status			
Single	8.1		
Married	91.4		
Widowed	0.5		
Work experience		17.77	7.57
≤10	23.9		
11-20	43.7		
Above 20	32.5		
Rank			
VEA	26.9		
BEA	23.9		
ZEO	19.3		
SMS	18.3		
BWIA	11.7		
No. of trainings attended in 5yrs		2.78	2.68
1-3	78.7		
4-6	13.2		
Above 6	8.1		

Source: Field survey, 2023

**Methods of Staff Selection for Training**

Multiple approaches were used in selecting staff for training, with varying levels of adoption among respondents (n = 197). Overall, the findings suggest that training selection in the organization is moderately structured but still allows for some managerial discretion, while employee-driven participation is relatively low (Table 2).

Training Needs Assessment (70.6% Yes, 29.4% No): This is the most commonly used method, indicating that the organization largely adopts a systematic and objective approach to identifying skill gaps before selecting staff for training.

Implication (Yes): Training is aligned with organizational needs, improving relevance and effectiveness.

Implication (No): A notable proportion of staff may still be selected without formal needs analysis, which could lead to mismatch between training and actual job requirements.

On Joining the Organization (52.3% Yes, 47.7% No): Slightly more than half of the respondents indicated that training is provided at entry.

Implication (Yes): There is some emphasis on induction and onboarding training, which supports early employee adaptation.

Implication (No): Nearly half of new employees may not receive structured initial training, potentially affecting early job performance.

Supervisors' Recommendation (61.9% Yes, 38.1% No): Supervisory input is a major factor in training selection.

Implication (Yes): Managers play a key role in identifying staff development needs based on direct observation.

Implication (No): Some employees may be overlooked if supervisors do not actively recommend them, introducing potential bias or favoritism.

Compulsory for All Employees (53.3% Yes, 46.7% No): Training is sometimes mandatory across the organization.

Implication (Yes): Ensures uniform skill development and compliance with organizational standards.

Implication (No): Inconsistency in compulsory training may lead to uneven skill distribution among employees.

Upon Employee Request (24.4% Yes, 75.6% No): This is the least utilized method.

Implication (Yes): A small proportion of employees can initiate their own development, promoting self-driven learning.

Implication (No): Limited opportunity for employee-initiated training suggests a top-down approach, which may reduce motivation and personal career growth.

Performance Appraisal by Superior (58.4% Yes, 41.6% No): Performance evaluations are moderately used to guide training decisions (Table 2).

Implication (Yes): Training is linked to performance gaps, which enhances employee productivity and accountability.

Implication (No): Weak integration between appraisal and training for some staff may reduce the effectiveness of performance management systems. The organization primarily relies on formal mechanisms such as training needs assessment, supervisory recommendations, and performance appraisal. However, the relatively low use of employee requests indicates limited employee participation in training decisions. Oyeyinka *et al.* (2010) emphasized that, in the face of global changes, regular training needs assessment is essential in agricultural organizations to identify performance gaps and provide appropriate training interventions. This is consistent with the view that training should begin with a systematic identification of needs, as not all performance-related problems can be solved through training alone (Noe, 2023). Earlier

studies (Allo, 2001; Ajayi, 2000a; Ajayi, 2000b) highlighted challenges such as inadequate information on training needs, inappropriate participant selection, and lack of awareness of training objectives among trainees. These issues are still relevant today, as recent studies indicate that poorly targeted training programmes and misalignment between participants and training objectives significantly reduce training effectiveness (Salas *et al.*, 2022; FAO, 2023). Consequently, when employees are selected for training without proper needs assessment, the outcomes may be ineffective, leading to wasted organizational resources and reduced productivity (Dessler, 2022).

**Table 2: Method used in selecting staff for training (n=197)**

S/N		YES	NO
1	Training needs assessment	139(70.6)	58(29.4)
2	On joining the organization	103(52.3)	94(47.7)
3	Supervisors recommendation	122(61.9)	75(38.1)
4	Compulsory for all employees	105(53.3)	92(46.7)
5	upon employee request	48(24.4)	149(75.6)
6	Performance appraisal by the superior	115(58.4)	82(41.6)

Source: Field survey, 2023

**Major constraints to carrying out post training activities**

Respondents highly rated some constraints to post training activities such as, Inadequate incentives to boost their morale ( $\bar{x}$ = 3.22), Lack of facilities ( $\bar{x}$ = 3.21), Inadequate Funding by the organization ( $\bar{x}$ =

3.17), Lack of motivational factors ( $\bar{x}$ = 3.10)- Table 3. Lack of follow up after the training exercise ( $\bar{x}$ = 3.10), Poor planning of post training activities ( $\bar{x}$ = 3.05), Lack of commitment ( $\bar{x}$ = 3.05) and High cost of materials ( $\bar{x}$ = 3.04). This implies that the inadequate funding was a major constraint because of

**Table 3: Major constraints to carrying out post training activities**

STATEMENT	VS	S	SS	NS	$\bar{x}$	s.d
1 Inadequate incentives to boost morale of employees	93(47.2)	58(29.4)	43(21.8)	3(1.5)	3.22	0.84
2 Lack of facilities	90(45.7)	77(39.1)	12(6.1)	18(9.1)	3.21	0.92
3 Inadequate Funding by the organization	100(50.8)	58(29.4)	11(5.6)	28(14.2)	3.17	1.05
4 Lack of motivational factors	74(37.6)	76(38.6)	39(19.8)	8(4.1)	3.10	0.85
5 Lack of follow up after the training exercise	77(39.1)	73(37.1)	36(18.3)	11(5.6)	3.10	0.89
6 Poor planning of post training activities	80(40.6)	73(37.1)	17(8.6)	27(13.7)	3.05	1.02
7 Lack of commitment	75(38.1)	65(33)	48(24.4)	9(4.6)	3.05	0.90
8 High cost of materials	49(24.9)	116(58.9)	22(11.2)	10(5.1)	3.04	0.75
9 Inadequate training needs assessment	76(38.6)	68(34.5)	27(13.7)	26(13.2)	2.98	1.03
10 Poor Leadership Management	86(43.7)	60(30.5)	13(6.6)	38(19.3)	2.98	1.13
11 Inadequate available time for practicing what was learned	60(30.5)	85(43.1)	19(9.6)	33(16.8)	2.87	1.03
12 Venue/environment not comfortable	23(11.7)	114(57.9)	48(24.4)	12(6.1)	2.75	0.74
Grand or effective mean					<b>3.04</b>	

Source: Field survey, 2023. VS= Very Severe S= Severe SS= Slightly Severe NS= Not severe

the cost attached to the implementation after training activities coupled with unavailability of facilities.

### ***Perceived Respondents' Job performance after Training***

The respondents indicated that they now know very well what skills are to be used to perform their job tasks ( $\bar{x}$ =4.49), their knowledge and skills have improved after attending the training programme ( $\bar{x}$ = 4.48), the job knowledge gained during training has increased their performance at work ( $\bar{x}$ = 4.40), by attending the training program, has given them a better understand-

ing of their job responsibilities ( $\bar{x}$ = 4.37) and Training has improved the skills of extension agents in working effectively with others ( $\bar{x}$ = 4.37) – Table 4. This finding is consistent with earlier studies (Nnadi *et al.*, 2012) and is supported by recent literature indicating that training enhances interpersonal, communication, and teamwork skills among employees (Noe, 2023; Salas *et al.*, 2022). Extension personnel—including village extension workers, subject matter specialists, and supervisory officers—perform critical roles such as making regular and systematic visits to farms and providing advisory services to farmers (FAO, 2023).

**Table 4: Perceived Respondents' Job performance after Training**

Statements	SA	A	U	D	SD	$\bar{x}$	s.d
Now, I know very well that what skills are to be used to perform my job tasks.	98(49.7)	98(49.7)	1(0.5)	-	-	4.49	0.51
My knowledge and skill have improved after attending the training programme	119(60.4)	58(29.4)	15(7.6)	5(2.5)	-	4.48	0.75
The job knowledge gained during training has increased my performance at work.	112(56.9)	52(26.4)	33(16.8)	-	-	4.40	0.76
Attending the training program has given me a better understanding of my job responsibilities.	105(53.3)	59(29.9)	33(16.8)	-	-	4.37	0.75
Training has improved my skills to work with others at work.	76(38.6)	118(59.9)	3(1.5)	-	-	4.37	0.51
After attending the training program, my speed of achieving targets has increased.	61(31)	131(66.5)	3(1.5)	2(1)	-	4.27	0.54
After attending the training program, my contribution towards achieving the organizational goals has increased.	55(27.9)	139(70.6)	3(1.5)	-	-	4.26	0.48
There is many opportunities for carrier development after completing the training programme	80(40.6)	84(42.6)	33(16.8)	-	-	4.24	0.72
Training session has played a significant role in improving the quality of my work.	51(25.9)	127(64.5)	19(9.6)	-	-	4.16	0.58
After training, I meet the target quotas and goals more easily than before.	55(27.9)	135(68.5)	5(2.5)	2(1)	-	4.23	0.54

Source: Field Survey, 2023

**Respondents' perception on the effects of follow up after Training**

The Respondents indicated reduced wastage of resources and increased productivity ( $\bar{x}$  = 4.44), better alignment between personal career goals and organizational objectives ( $\bar{x}$  = 4.43), and improved job interest and meaningfulness ( $\bar{x}$  = 4.27) - Table 5. This finding is consistent with recent studies which emphasize that post-training follow-

up and reinforcement mechanisms are critical for enhancing the transfer of learning, improving performance, and ensuring alignment between employee development and organizational goals (Noe, 2023; Salas *et al.*, 2022). In the context of extension services, continuous support after training is essential for sustaining capacity development and maximizing the impact of training programmes (FAO, 2023).

**Table 5: Respondents perception on the effects of follow up after Training**

Statements	Always	Rarely	Some times	I Don't know	Not at all	$\bar{x}$	Std.d
After the follow up wastage of resources was drastically reduced and Productivity is increased.	66(33.5)	8(4.1)	12(6.1)	1(0.5)	4(2)	4.44	1.06
After follow up, i realized my career goals coincide with organizational goals and my training opportunities have been determined accordingly	67(34)	6(3)	12(6.1)	2(1)	4(2)	4.43	1.09
Follow up makes me find my job quite interesting and meaningful	49(24.9)	28(14.2)	8(4.1)	2(1)	4(2)	4.27	1.02
My organization scheduled for a follow up exercise after	53(26.9)	10(5.1)	23(11.7)	0	5(2.5)	4.16	1.15
Both the management and staff were part of the follow up planning	52(26.4)	11(5.6)	17(8.6)	4(2)	7(3.6)	4.07	1.28
The follow up exercise serve as an opportunity of meeting professionals about my job	39(19.8)	24(12.2)	20(10.2)	4(2)	4(2)	3.99	1.11
The follow up materials were available and affordable	31(15.7)	39(19.8)	12(6.1)	3(1.5)	6(3)	3.95	1.10
The follow up was properly organized in such a way that others that didn't attend the training gained knowledge and skills	32(16.2)	34(17.3)	16(8.1)	1(0.5)	8(4.1)	3.89	1.17
Grand mean						<b>4.15</b>	<b>1.12</b>

Source: Field survey, 2023

SA=Strongly Agree, A=Agree, U=Undecided, D=Disagree, SD=Strongly Disagree

***Test of Hypotheses*****Hypothesis 1: Test of association between respondents' socio-economic characteristics and post training activities.**

The hypothesis was tested using chi-square ( $\chi^2$ ) test for variables measured at nominal and ordinal levels while Pearson Product Moment Correlation (PPMC) was used for variables measured at interval levels.

Educational level ( $\chi^2= 12.84$ ,  $df= 6$ ) was significantly associated with post training activities. This implies that implementation of post training activities is a function of educational level (Table 6). However, Gender ( $\chi^2= 1.50$ ,  $df= 1$ ), Marital status ( $\chi^2= 1.57$ ,  $df= 2$ ), Religion ( $\chi^2= 1.08$ ,  $df=1$ ) and Rank/position ( $\chi^2= 3.55$ ,  $df= 4$ ) were not significantly associated with implementation of post training activities, but significantly associated with follow up (Table 6). This implies that the implementation of post-training activities was not significantly influenced by socio-demographic characteristics such as gender, marital status, religion, or rank of the employees. Rather, these findings suggest that other factors, particularly organizational support and training design,

may play a more critical role in determining the effectiveness of follow-up activities after training programmes. This finding contradicts earlier reports by Nwosu *et al.* (2015), who found that gender had a significant influence on role performance. However, recent studies indicate that training outcomes are more strongly influenced by organizational and contextual factors than by individual demographic characteristics (Noe, 2023; Salas *et al.*, 2022; FAO, 2023).

Age ( $r= 0.16$ ,  $p<0.05$ ) and work experience ( $r=0.16$ ,  $p<0.05$ ) were significantly related with implementation of post training activities (Table 7). The implication of this findings is that age and level of experience influence employee implementation of post training activities. Age and work experience spent on a job could make one understand the rudiments of the job and be well enlightened on what drive what in the cause of working and as such since it is practiced over time, experience and adult employees will be experienced on the role of implementation of post training activities. However, number of trainings attended in 5years ( $r= -0.06$ ,  $p>0.05$ ) on the other hand was not significantly related with implementation of post

**Table 6: Test of association between respondents' socio-economic characteristics and post training activities using Chi-square (n=197)**

Variables	post training activities			job performance			Follow up		
	$\chi^2$	Df	p-Value	$\chi^2$	df	p-Value	$\chi^2$	Df	p-Value
<b>Gender</b>	1.50	1	0.22	1.12	1	0.29	0.01	1	0.99
<b>Educational Level</b>	12.84	6	0.05*	11.07	6	0.04*	17.06	6	0.15
<b>Marital Status</b>	1.57	2	0.46	0.29	2	0.87	9.83	2	0.04*
<b>Religion</b>	1.08	1	0.30	0.31	1	0.58	15.66	1	0.00*
<b>Rank</b>	3.55	4	0.47	3.84	4	0.43	16.00	4	0.04*

Source: Field survey, 2023.

p-Value is significant at 0.05 level (2 tailed)

training activities. This implies that male extension agents performed better than their female counterparts in their various extension roles. The level of job performance is also directly related to the level of

education of the extension workers, thus the higher the level of education, the higher the level of job performance and satisfaction of the extension workers.

**Table 7: Test of relationship between respondents' socio-economic characteristics and post training activities using PPMC (n=197)**

Variables	post training activities		job performance		Follow up	
	r	p-Value	R	p-Value	r	p-Value
Age	0.16	0.02*	-0.07	0.31	0.30	0.00*
Work experience	0.16	0.02*	0.06	0.38	0.20	0.01*
Number of trainings in 5years	-0.06	0.39	0.17	0.02*	-0.27	0.00*

Source: Field survey, 2023

p-Value is significant at 0.05 level (2 tailed)

***Test of significant difference in post training activities across the selected States***

There were significant differences in post training activities across the selected states in northeast Nigeria ( $F = 29.18$ ,  $p=0.05$ ). The null hypothesis is therefore rejected and an alternate hypothesis accepted (Table 8). This finding indicates that there is variation in extension agents' post training activities across the selected states of northeastern Nigeria. This implies that the difference in extension agents' post training activities across the selected states of northeastern Nigeria is not due to chance but real.

A post-hoc multiple comparison was carried out to indicate the level of difference among the selected states in the study area with respect to their post training activities across the selected States of northeastern (using the Least Significant Difference (LSD) method). There was significant difference between extension agents' post

training activities across the three selected states of northeastern Nigeria in Yobe ( $p = 0.00$ ) and Taraba, Taraba ( $p= 0.00$ ) and Gombe (Table 9), likewise there was significant difference between the extension agents' post training activities in Gombe ( $p= 0.00$ ) and Yobe which could be as a result of reduced funding for staff training and development in government institutions as indicated by Adebayo (2000), Lack of facilities, environment not comfortable, High cost of materials, Poor planning of post training activities, Lack of commitment and Poor Leadership Management. Gombe had the highest mean of extension agents' post training activities in northeastern Nigeria ( $\bar{x} = 157.31$ ), followed by Taraba ( $\bar{x} = 152.96$ ), and Yobe ( $\bar{x} = 147.20$ ) with the least mean value (Table 10). This indicates that Gombe has the highest extension agents' post training activities in northeastern Nigeria followed by Taraba and Yobe. This may be due to the fact that Gombe experienced follow up and performance appraisal exercise than any other state

in the northeast of Nigeria. Also, the case of Taraba being the second with highest mean may be attributed to the fact that every extension agent wants to see he/she has put into practice what they have learned from the training programme.

**Table 8: Test of significant difference in post training activities across the selected States**

Variables		Sum of Squares	Df	Mean Square	F-value	p-Value	Decision
post training activities	Between Groups	3225.44	2.00	1612.72	29.18	0.00	S
	Within Groups	10723.52	194.00	55.28			
	Total	13948.95	196.00				

Source: Field survey, 2023, DF= Degree of Freedom, F-Value <0.05 significant, F-Value 0.05 not significant

#### POST HOC TEST

**Table 9: Difference in post training activities across the selected States (LSD)**

(I) STATE	(J) STATE	Mean Difference (I-J)	Std. Error	Sig.
Yobe	Taraba	-5.76*	1.35	0.00
	Gombe	-10.11*	1.32	0.00
Taraba	Yobe	5.76*	1.35	0.00
	Gombe	-4.35*	1.25	0.00
Gombe	Yobe	10.11*	1.32	0.00
	Taraba	4.35*	1.25	0.00

Source: Field survey, 2023

**Table 10: Difference in post training activities in terms of rank**

		N	Mean	Std. Deviation	Std. Error
post training	Yobe	55	147.20	11.37	1.53
	Taraba	68	152.96	7.30	0.89
	Gombe	74	157.31	1.53	0.18
	Total	197	152.98	8.44	0.60

Source: Field survey, 2023

#### CONCLUSION

This study concluded that most respondents were selected wrongly, wrong participants were sent for the training course. This

means that many of those being sent for training courses most times are just sent to go and enjoy as they may not need the training thereby leaving behind the right people

that need such training. Inadequate Funding by the organization was one of the constraints to post training activities, it was a major constraint because of the cost attached to the implementation after training activities coupled with unavailability of facilities. It is very vital after the training there should be follow up, because respondents' wastage of resources can be drastically reduced and productivity increased.

### RECOMMENDATIONS

This research study recommends the following for implementation.

- i. The management of agricultural organizations should ensure a well-planned and implementable training programme is put in place.
- ii. Training is done and implemented effectively.
- iii. Training is exposed to all employees.
- iv. The management of agricultural organizations should place great emphasis on post-training follow-up and the use of action plan to show the effectiveness of training.

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