



Perceived effects of manpower training on post-training attitudes and action-plan use among agricultural extension staff in North-East Nigeria

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ABSTRACT

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. A structured questionnaire was used to obtain data, which were analysed using descriptive and inferential statistics. Results revealed that 73.1% of the respondents were male, married (91.4%), with a mean age and work experience of 44 and 18 years, respectively. Most (92.9%) of the respondents had tertiary education, 26.9% were Village Extension Agents, and 78.7% had attended between 1-3 trainings in the last 5 years. Chi-square result showed that there was a significant association between educational level ($\chi^2 = 2.84$, $p < 0.05$) and post-training activities. PPMC 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. It was concluded that adequate use of an action plan improves job performance, and attitudes of respondents towards training are improved positively after training. It was recommended that management of agricultural organizations should ensure placing emphasis on the use of an action plan with efficient follow-up activity of trainees for the effectiveness of training programmes.

HIGHLIGHTS

- Education level ($\chi^2=12.84$, $df=6$) significantly relates to post-training.
- Training improves attitudes to performance and organisational commitment.
- Age and experience ($r=0.16$; $p<0.05$) relate to post-training implementation.
- End-of-programme action plans help trainees apply learning.

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1. Introduction

The impact of training on employees in relation to the success of any organization cannot be overemphasized. This is because if employees are satisfied with the training policies of the organization, this might have a positive impact on the organization's productivity. The perception or attitude of employees is transformed into positive or negative behaviour. Training is a systematic acquisition and development of the knowledge, skills, and attitudes required by employees to adequately perform a task or job or to improve performance in the job environment. Trainings are activities which are designed to improve human performance on the job the employee is presently doing or is being hired to do (Ajayi, 2018).

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 a positive impact (Ajayi, 2018). It is a detailed plan for trainers about what they will do. The reasoning behind the task and the most effective approach to achieving the training objectives. Training in Nigeria

could be traced back to 1960 when it was discovered that most of the top government and business positions were occupied by expatriates (Dim, et al. 2019). The departure of the colonial masters after independence gave rise to a big vacuum of capable indigenous human capital. This prompted the Federal Government of Nigeria to set up a Manpower Board in 1962 following the Ashby Commission's Recommendations (Dim, et al. 2019). Consequently, the Federal Government of Nigeria established complimentary institutions like the Centre for Management Development (CMD), Administrative Staff College of Nigeria, Industrial Training Fund (ITF), Agricultural and Rural Management Training Institute (ARMTI) Ilorin and Federal Training Centre to train and retrain employees as well as give orientation to fresh graduates of formal academic institutions (Dim, et al. 2019).

Today, we are witnessing an overwhelming number of research studies from both descriptive and prescriptive traditions, focusing on several characteristics of training programs as well as their costs and benefits for business organizations (Enyioko & Ikoro, 2017). At the same time, organizations have come to better understand the significance of training for their survival in knowledge-intensive and volatile markets of this era, and thus have increasingly acknowledged the profitability of developing their human resources through various forms of training, human

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resource capital of any organization plays an important role, thus training and retraining helps in fortifying employees. Despite the obvious significance of training, the enormous expansion in the content of training programs over time has largely been taken for granted. Some Human Resources Departments rarely question the necessity and appropriateness of training a particular employee at a particular time. Oftentimes, there are ulterior motives because employees are sent for training. (Enyioko & Ikoro 2017) found out that some of those organizations that neglect employee training do so because of the huge cost of training and the fear of losing those employees after training them.

Trainings are those activities which are designed to improve human performance on the job the employee is presently doing or is being hired to do (Ajayi, 2013)

Performance assessment encompasses activities undertaken to measure or observe the behavior of trainees in work settings following instruction. Numerous studies have identified follow-up assessment and evaluation as important aids to promoting transfer of learning (Martin, 2010). Some advocate a strong emphasis on outcome measurement to guide the design and conduct of training programs. Not only does this approach improve the program and the ability of managers to see meaningful results, learner motivation is often increased through greater understanding of expectations for change and feedback on performance. While an expressed objective of training assessment is to help managers justify the cost of programs, an important outcome of assessment activities is often greater motivation to apply skills and increased transfer.

After 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. Action plan is a series of activities developed by trainees with the support of a superior indicating how he/she intends to use the skills and knowledge acquired during training. It represents a commitment by the trainee and his/her institution to ensure that the training is put to good use. It is "written documents completed by trainees... that specify how the trainee expects to implement learned skills. Action plans are a good way to involve trainees in this process of turning a training into measurable results.

Action plans are written documents completed by trainees during or immediately following training that specify how the trainee expects to implement learned skills on-the-job. These plans may be quite detailed and specific or brief and general. They frequently encompass both cognitive and behavioral components of the learning. They promote cognitive learning because they involve the learner more deeply in concepts and relationships and, thereby, promote greater insight and collateral learning. Behavioral components are involved since the learner must describe the actions to be taken, consider their impact on individuals and processes, and specify how improvement will be assessed (Martin, 2010)

Benefits associated with training includes: High morale – employees who receive training have increased confidence and motivations; Lower cost of production – training eliminates risks because trained personnel are able to make better and economic use of material and equipment thereby reducing and avoiding waste; Lower turnover – training brings a sense of security at the workplace which in turn reduces labor turnover and absenteeism is avoided; Change management – training helps to manage change by increasing the understanding and involvement of employees in the change process and also provides the skills and abilities needed to adjust to new situations; Provide recognition, enhanced responsibility and the possibility of increased pay and promotion; Help to improve the availability and quality of staff.

The benefits of training can be summed up as: Improves morale of employees, Training helps the employee to get job security and job satisfaction. The more satisfied the employee is and the greater is his morale, the more he will contribute to organizational success and the lesser will be employee absenteeism and turnover. Less supervision, a well-trained employee will be well acquainted with the job and will need less of supervision. Thus, there will be less wastage of time and effort. Fewer accidents, errors are likely to occur if the employees lack the knowledge and skills required for doing a particular job. The more trained an employee is, the less are the chances of committing accidents in job and the more proficient the employee becomes. Chances of promotion, employees acquire skills and efficiency during training. They become more eligible for promotion. They become an asset for the organization. Increased productivity, Training improves efficiency and productivity of employees. Well trained employees show both quantity and quality performance. There is less wastage of time, money and resources if employees are properly trained.

Training and development may show the hidden skills and make maximum use of it to assist in a greater effectiveness in the organization (Gardi *et al.*, 2020), Training is one of the great tools to establish organization conditions which lead to striving for better personnel performance. Despite the fact that training and development are embraced in Nigeria's agricultural sector in recent times, especially in the use of advanced technology. It still has issues of employees still not performing up to standard operating procedure in the work environment, some employees have not enhanced their skills and abilities to enable them to be effective and efficient on their job duties (Ogunjimi & Oduwale, 2019; Afolabi, 2018 & Igbokwe, 2021). Over time, there have been complaints from the agricultural institutions that offer training and development programmes about some employees' performance and attitude towards the job. It has, however, been an issue to ponder on that despite several trainings undergone in the organization there are still some employees whose performance has not improved (Gardi, 2021). It is against this background that this study provided answers to the following research questions: What are the socioeconomic characteristics of the respondents? What are the focuses of the training attended in the last 5 years in the study area? What are the types and frequency of trainings attended? What are the focuses of the trainings attended?

The main objective of this study was to investigate the perceived effect of manpower training on after training activities of extension staff, agricultural development programmes in north-east, Nigeria. The specific objectives are to:

- i. describe the socio-economic characteristics of the respondents;
- ii. identify types and frequency of trainings attended; and
- iii. identify the focuses of the trainings attended.

2. Research Methodology

2.1. Description of study area

The area of the study was Northeastern Nigeria. Northeastern Nigeria is one of the six geo-political zones of the Federal Republic of Nigeria, is one of the administrative divisions in Nigeria known as the North Eastern State, Northeastern Nigeria, was described in the context of agricultural development. Studies by Adedeji & Osunade (2021) and Nwajiuba (2001) have explored agricultural extension and rural development in Nigeria, particularly in the Northeastern zone, which adds relevance to our study's geographical focus. Furthermore, the agricultural development programs in Nigeria, including the Agricultural

Development Programme (ADP), are outlined in the annual reports by the Federal Ministry of Agriculture and Rural Development (FMARD, 2020), offering valuable insights into the sector's structure and priorities. The ADP's role in improving agricultural practices and its impact on extension services in the region has been discussed in various studies (Olayemi & Akinwumi, 1999).

2.2. Population of the study

Survey research design was adopted for this study survey, which is well-documented in Creswell (2014) as a common method for gathering and analyzing data in social science research. The study population comprised the entire agricultural extension staff of the Agricultural Development Programme (ADP) of the northeast geopolitical zone of Nigeria, whom has attended training programmes in the last five (5) years.

2.3. Sampling Procedure and Sample Size

A multi-stage sampling procedure was used to randomly select three states, 95% out of the total (208) population were selected which gives a sample of 197 employees, Cochran's (1977) principles of random sampling and has been applied in several studies within Nigerian contexts (Arikpo & Ocheni, 2020). Instrument for data collection was structured questionnaire of five-point rating scale, Kumar (2019) highlights the utility of structured questionnaires, which is consistent with our data collection method.

2.4. Instrument for data collection

The Instrument includes section A for personal data, and sections B, C, and D with 11, 12, and 22 questions respectively, each addressing the research questions.

2.5. Validity and Reliability of the Instrument

The instrument was validated by experts, the instrument's validation by experts and the administration of questionnaires are explained with references to the work of Babbie (2010) and Burns (2000), who discuss the importance of expert validation in ensuring the reliability and validity of research instruments. The researcher with the help of trained research assistant administered and retrieved the filled questionnaires from the respondents.

2.6. Method of Data Analysis

The data collected was analyzed using Descriptive statistics such as frequency counts, percentages, means, standard deviation, Chi-Square, Pearson Product Moment Correlation and Analysis of Variance (ANOVA), The use of Chi-Square, Pearson Product Moment Correlation, and Analysis of Variance (ANOVA) for data analysis is supported by statistical methods detailed in Field (2018), who outlines the application of these techniques for data evaluation in survey research.

3. Results and Discussion

3.1. Personal characteristics of respondents

The results on socio-economics characteristics of respondents is presented in Table 1: The mean age of the respondents was 44.3 years. It could be inferred from the findings

that majority of the respondents in the study area are still young and vibrant which means they are in their productive age. This study is quite in line with that of Ibeun (2012) who described that more than half of the employees in agricultural organizations in South West Nigeria are within the age range of 31 – 40years. 73.1% of the respondents were male while 26.9% of the respondents were female. This implies that majority of the respondents were male, this could be as a result of the emphasis placed on men by the society as being responsible for their household (wives and children) thereby making women dependent. This result is in agreement with the findings of Banmeke & Ajayi (2010) who revealed that the number of male in agricultural institutes of Southwest Nigeria were more than the female. Majority (50.8%) of the respondents were Christians and 49.2% were Muslims, this reveals that respondents have some form of spirituality. Majority (91.4%) are married while 8.1% were single. This reveals that the respondents' level of responsibilities will increase due to dual responsibilities posed by being a working father or mother. This sense of responsibility may increase their level of commitment to their jobs. This assertion is in line with the

Table 1. Frequency Distribution of Socio-Economic Characteristics of Respondents

Variables	Frequency	Percentage	Mean	S.D
Gender				
Male	144	73.1		
Female	53	26.9		
Age			44.25	7.33
≤35	27	13.7		
36-45	87	44.2		
46-55	71	36		
56-65	12	6.1		
Educational level				
Secondary	6	3		
OND	34	17.3		
NCE	8	4.1		
BSC	64	32.5		
HND	77	39.1		
MSC	6	3		
PHD	2	1		
Marital status				
Single	16	8.1		
Married	180	91.4		
Widowed	1	0.5		
Work experience			17.77	7.57
≤10	47	23.9		
11-20	86	43.7		
Above 20	64	32.5		
Rank				
VEA	53	26.9		
BEA	47	23.9		
ZEO	38	19.3		
SMS	36	18.3		
BWIA	23	11.7		
No. of trainings attended in 5yrs			2.78	2.68
1-3	155	78.7		
4-6	26	13.2		
Above 6	16	8.1		

position of Oladejo *et al.* (2008) who opined that marriage confers some level of responsibilities and commitment on people. Furthermore, Majority (92.9%) of the extension agents in northeastern Nigeria have tertiary education qualification. This implies that employees in the northeastern Nigeria were well equipped to carry out their roles effectively since they were educationally qualified enough. This education status no doubt will enhance respondents' appreciation of training in agricultural extension delivery, this could lead to higher level of job performance at work. This is in congruence with Amangala (2013) who reported that higher educational qualification means higher rank and more responsibilities which subsequently increase job commitment. The mean years of work experience was 17.8years.

This result showed that the respondents have established themselves and have been in the organization long enough to know the effects of employees' training on after training activities. The findings further showed that most (26.9%) of the respondents are village Extension Agents (VEA) while 23.9 per cent were Block-Extension Agents (BEA) and have attended between 1-3 different trainings. This result corroborates that of Alabi & 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.

3.2. Types and Frequency of Access to In-Service Training Programme

Table 2 shows the results of the types and access to in-service training programmes enjoyed by the extension agents. The result shows that respondents rated regular in-service training very low ($\bar{x} = 1.95$), which implies that extension agents in the study area were not attending in-service training frequently during study leave. Unfortunately, regular in-service training should have been given priority for updating their knowledge on new ideas of farming and other things that concerns extension services. This implies that there are opportunities for training and development for employees' in ADP's. As regular training is the basic component to effectively communicate the new technology to the farmers, therefore, proper attention must be given to the trainings of extension agents regularly. Without proper training, Agriculture Officers cannot perform up to the expectation in the field. This finding corroborates the finding of Solomon (2010) who reported that majority of the extension personnel attend training programmes frequently but they can still improve as new developmental programmes are springing up yearly. To be effective as facilitators in such programmes, requires more training on the new skills and knowledge demanded to help the different categories of clientele in the rural community. According to Erbaugh *et al.* (2007), developing effective in-service educational and training programs is an important method for addressing a problem. The usefulness of the extension programs

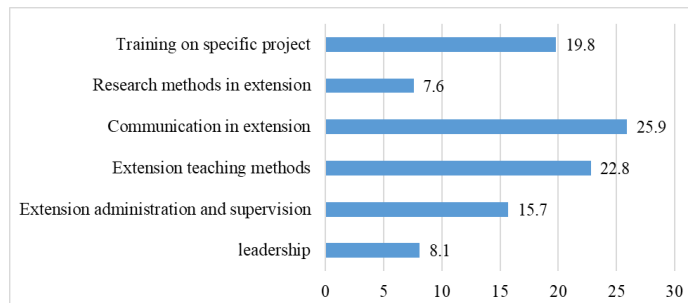


Figure 1. Focus of the training attended

depends largely on the delivery approach and competencies and credibility of the Public Extension Agents (PEAs) (Erbaugh *et al.*, 2007).

3.3. Focus of the training attended in the last 5 years

Results in Figure 1 reveal the various focuses of the trainings attended by agents in the last 5 years. The result shows that majority (25.9) percent of the extension agents in northeastern Nigeria attended in-service training on communication in extension in the last 5 years, communication is the most essential aspect in extension activity for effective transfer of knowledge or technical know-how of an innovation from research centers to farmers. The influence of these trainings on the performance of the extension agents in northeastern Nigeria could be enormous if one considers the importance attached to stakeholders training by many of the donor agencies. The result is in accordance with work (Murphy and Carson-Warner, 2013) who said Communication skills acquisition was rated high by the respondents as the title of the training. The success of an extension worker is determined by his ability to communicate good ideas to farmers. To have a meaningful technology transfer and adoption with positive result from extension agent to farmers there must be effective communication. All actions, activities and interactions that take place involve communication.

3.4. Perceived Attitude of Respondents after Training

The results on the perceived attitudes of respondents after training show that respondents had positive attitudes after training. The respondents rated high some of the variables as shown in Table 3, such as Training boost their efficiency on the job and stimulates them to perform better ($\bar{x} = 4.49$), There is increase in their knowledge and skills after training ($\bar{x} = 4.36$), Wastage was drastically reduced and Productivity was increased after training ($\bar{x} = 4.28$) and Helps to improve performance in their present position ($\bar{x} = 4.23$). Favorable attitudes influence behavior and decision making and indicate awareness of the extension agents' and farmer's needs and their willingness to provide more effective demand-driven extension services. The intention to perform a behavior is strong when its performance is the

Table 2: Types and Frequency of Access to In-Service Training Programme

Items	Quarterly	Semeterly	Yearly	Bi-annually	No specific schedule	Mean	S.D
In-service training during study leave	42(21.3)	17(8.6)	16(8.1)	6(3)	116(58.9)	2.30	1.69
Extension education in-service training	25(12.7)	41(20.8)	13(6.6)	5(2.5)	113(57.4)	2.29	1.59
Special in-service training	43(21.8)	14(7.1)	6(3)	10(5.1)	124(62.9)	2.20	1.70
Regular in-service training	19(9.6)	18(9.1)	9(4.6)	40(20.3)	111(56.3)	1.95	1.36
Grand or effective mean						2.19	

Table 3: Respondents perception on post training activities (Attitudes of Respondents after Training)

Statements	SA	A	U	D	SD	Mean	S.D
Attitudes of Respondents after Training							
Training boost efficiency on the job and stimulates staff to perform better	103(52.3)	90(45.7)	2(1)	2(1)	-	4.49	0.58
There is increase in the knowledge and skills of the employee after training	75(38.1)	118(59.9)	3(1.5)	1(0.5)	-	4.36	0.54
Wastage is drastically reduced and Productivity is increased after training	69(35)	117(59.4)	8(4.1)	3(1.5)	-	4.28	0.61
Helps to improve performance in their present position	51(25.9)	141(71.6)	5(2.5)	-	-	4.23	0.48
Training motivates proficiency in my area of specialization	35(17.8)	159(80.7)	2(1)	1(0.5)	-	4.16	0.43
Training encourages worker to experiment new methods and try out creative ideas	32(16.2)	160(81.2)	5(2.5)	-	-	4.14	0.41
Training improves punctuality and improves abilities on assigned duties	35(17.8)	156(79.2)	5(2.5)	1(0.5)	-	4.14	0.45
Helps Employee to improve when new technologies is introduced	28(14.2)	164(83.2)	4(2)	1(0.5)	-	4.11	0.41
Helps organization to be more successful at attracting and retaining employees	27(13.7)	165(83.8)	4(2)	1(0.5)	-	4.11	0.41
Training courses are evaluated in terms of improved work performance	26(13.2)	165(83.8)	6(3)	-	-	4.10	0.39
Employee are encouraged to take initiatives and do things on their own with less supervision	34(17.3)	153(77.7)	6(3)	4(2)	-	4.10	0.52
Training prepares employee For Higher position	24(12.2)	163(82.7)	6(3)	4(2)	-	4.05	0.48

SA = strongly agree; A = agree; U = undecided; D = disagree; SD = strongly disagree; S.D = standard deviation

product of a favorable attitude from the individual, a surrounding social environment conducive to the behavior, and confidence on the part of the individual of his ability to perform the behavior. This result reflects the finding of Aromolaran *et al.* (2017) who reported that the attitude of farmers towards training is one of the salient factors that could be responsible for a low level of adoption despite adequate training. Attitudes of cassava farmers toward extension training on agricultural technologies. Rehman *et al.* (2007) noted that attitudes of dairy farmers toward production technologies played an important role in their behaviour intent, which was reflected in their actual adoption behaviour. The mean attitude response score on whether the training was time consuming was $M = 3.58$, implying a disincentive attitude.

United Nations Educational Scientific and Cultural Organization UNESCO (2004) opined that during a long session of training, boredom may set in, and hence, an unfavourable attitude. A similar negative conclusion (an unfavourable attitude) was drawn by the farmers (trainees) based on how conducive was the venue of the training and its environment, as well as the farmers' willingness to attend similar trainings in the future. Nevertheless, trainees expressed favourable attitudes regarding their preparedness to invite others to attend a similar training in the future (mean attitude response score = 3.73). show that the coefficient associated with farmers' attitudes was positive, indicating a direct relationship between an attitude and adoption of improved technology. The implication is that those farmers with a favourable attitude to the extension training were more likely to adopt an innovation compared with those with an unfavourable attitude. This corroborates the findings of Ogunsumi (2011), who found that farmers with a favourable attitude had a higher level of adoption of improved technologies. The statistical insignificance of the coefficient of an attitude suggests that having a favourable

attitude is unlikely to substantially raise the level of technology adoption.

3.5. Use of Action Plan by Respondents after Training

Research has shown that 40 percent of the skills acquired during the training process are immediately transferred at work, 25 percent remain for a time period of six months and only 15 percent for a year (Cromwell and Kolb, 2004). Training transfer can be implemented or utilized, so that the benefits from it can be reaped at its best for the successful training program. The dominant literature suggests that when trainees perceive that their supervisors support the application of newly developed knowledge and skills, they are motivated to transfer newly developed knowledge and skills back to the job (Nijman, *et al.* 2006). Figure 2 shows the result of whether the respondents used action plan after attending the training programme, the finding shows that majority (55%) of the respondents said they did not use action plan after training. This implies that only (44.2%) used action plan after attending the training programme. Action plans are a good way to involve trainees in this process of turning a training into measurable results. Action plan is a "written documents completed by trainees that specify how the trainees expect to implement learned skills. Before you even begin a training program, you should know what results you want to see. Try to avoid making abstract goals like, "new employees will become integrated in the office." Yes, that's certainly something that all employers hope will happen, but it's hard to quantify. Instead, set goals like "new employees demonstrate proficiency in office technologies," or, "by implementing the selling techniques in this training, trainees will increase their sales." Because these objectives are more specific, it's easier to say whether or not your

Table 4: Respondents' perception on the effects of the use of action plan after training

Statements	SA	A	U	D	SD	Mean	S.D
Action plan made me know specific materials required for each task to be carried out	45(22.8)	38(19.3)	4(2)	-	-	4.47	0.59
I used action plan after training to guide me on what aspect of the training attended to be practiced	35(17.8)	48(24.4)	4(2)	-	-	4.36	0.57
Action plan made me more organized in executing my duties.	27(13.7)	56(28.4)	4(2)	-	-	4.26	0.54
Action plan showed me the direction of the expert/superior to report to for proper guidance on my job	26(13.2)	56(28.4)	5(2.5)	-	-	4.24	0.55
Action plan encouraged me to be more determined and committed to my job.	24(12.2)	56(28.4)	7(3.6)	-	-	4.20	0.57
Use of action plan motivated me to know the technique behind time and duration schedule for every job	19(9.6)	64(32.5)	4(2)	-	-	4.17	0.49

SA = strongly agree; A = agree; U = undecided; D = disagree; SD = strongly disagree; S.D = standard deviation

Table 5. Test of association between respondents' socio-economic characteristics and post-training activities using Chi-square (n = 197)

Variables	Post-training activities			Attitude			Use of action plan		
	χ^2	Df	p-Value	χ^2	Df	p-Value	χ^2	Df	p-Value
Gender	1.50	1	0.22	0.88	1	0.35	1.20	1	0.27
Educational Level	12.84	6	0.05*	35.90	6	0.00*	11.18	6	0.08
Marital Status	1.57	2	0.46	0.25	2	0.88	2.55	2	0.28
Religion	1.08	1	0.30	0.59	1	0.44	0.15	1	0.70
Rank	3.55	4	0.47	3.66	4	0.45	6.61	4	0.16

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

trainings have been successful. When designing and giving a training, keep these objectives at the forefront of your mind. Be sure to communicate to your trainees exactly what you hope they will be able to do more successfully after completing the training. Table 4 and Figure 2 show the result of the respondents' response on the use of action plan for this study which indicated some of them carry out effective action plan development. The result reveals that some respondents contributed to improving the organization's reputation due to the outcome of the training by implementing action plans developed which made them to know specific materials required for each task to be carried out ($\bar{x}$ = 4.47) and they used action plan after training to guide them on what aspect of the training attended to be practiced ($\bar{x}$ = 4.36). This implies that the training received by employees were implemented/transferred to their job. Any relationship between training inputs and transfer of training could lead to performance improvements and maximize the benefits gained and enable organizations to remain competitive in the face of global competition, a constantly changing environment and unstable economic conditions (Baharim, 2008).

3.6. Hypotheses testing

Based on the objectives of the study, the following two hypotheses were tested.

H₀: *There is no significant relationship between respondents' socio-economic characteristics and employees after training activities.*

This hypothesis was tested using chi-square (χ^2) test for variables measured at nominal and ordinal levels while Pearson Product Moment Correlation (PPMC) was used for variables measured at interval levels. Table 5 reveals that educational level (χ^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. However, Gender (χ^2 = 1.50, df = 1), Marital status (χ^2 = 1.57, df = 2), Religion (χ^2 = 1.08, df = 1) and Rank/position (χ^2 = 3.55, df = 4) were not significantly associated with implementation of post training activities. This implies that the implementation of post training activities was not influenced by the Gender, Marital Status, Religion or the Rank of the employee. This finding is in line with that Nwosu, *et al.* (2015) who reported that Gender had a positive and significant effect on the role performance of extension agents in the area.

Furthermore, Table 6 reveals that 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. 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 5 years (r = -0.06, p > 0.05) on the other hand was not significantly related with implementation of post training

Table 6: Test of relationship between respondents' socio-economic characteristics and post-training activities using PPMC (n=197)

Variables	Post-training activities		Attitude		Use of action plan	
	r	p-Value	r	p-Value	R	p-Value
Age	0.16	0.02*	-0.15	0.03*	0.07	0.30
Work experience	0.16	0.02*	-0.10	0.17	0.11	0.13
Number of trainings in 5 years	-0.06	0.39	0.16	0.03*	0.11	0.13

p-Value is significant at 0.05 level

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.

H₁: *There is a significant relationship between the types of training attended by respondents and their post-training activities.*

Table 7 depicts the types of training attended by the extension agents has a significant effect on the implementation of post-training activities (r = -0.19, p < 0.05). Furthermore, the table indicates a negative correlation coefficient (r = -0.19, p < 0.05). This suggests that an increase in different types of trainings attended results in decrease in implementation of post training activities, while a decrease in types of training attended by extension agents led to an increase in implementation of post training activities. This implies that a strategic means of managing post training in the study area is to reduce different types of trainings extension agents attends within a shortest period of time and as long as this decreases, there is a likelihood that it would positively affect the

Table 7: Test of relationship between types of training attended by respondents and their post-training activities (n=197)

Variable	Post training activities		Attitude		Use of an action plan	
	r	p-Value	r	p-Value	R	p-Value
Types of training attended by respondents	-0.19	0.01*	-0.10	0.16	-0.17	0.02*

implementation of post-training activities in the study area. In all, it can be summed up that the types of training attended by extension agents in the northeastern Nigeria have a significant negative effect on the implementation of post-training activities. By implication, this suggests that the more management proffers solutions to different types of training to be attended by extension agents in the study area, the more employees will deem it fit to implement proper post-training activities. Therefore, for there to be prompt implementation of post-training activities, it is essential for management to integrate the types of training extension agents attend into their overall strategy and make provision for retraining rather than attending different types of training.

4. Conclusion

The study has demonstrated that training significantly influences employees' attitudes toward job performance and organizational commitment. It further highlights the need for implementing follow-up actions post-training to ensure optimal use of organizational resources and time. Notably, the research identified that action plans from previous training sessions have not received adequate attention. Additionally, the findings emphasize the value of developing action plans for trainees at the conclusion of training programmes. It is in the light of above findings that this research study strongly recommends the following for implementation.

- i. The management of agricultural organisations should ensure a well-planned and implementable training programme is put in place and the training is done and implemented effectively. Not only that but also the company management should make sure that training programme is exposed to all employees.
- ii. The management of agricultural organisations should place great emphasis on the use of action plan after training to show the effectiveness of training, to assist trainees demonstrate the direct output of the training received, whether the training has been used effectively in terms of improved performance, skills and attitudes towards their job.

CRedit authorship contribution statement

Conceptualization: J.Y., M.T.A., S.O.A., T.O.A.B. and Y.M.J. Data Curation: M.T.A. Formal Analysis: S.O.A. and J.Y. Investigation: T.O.A.B. and Y.M.J. Methodology: J.Y., M.T.A., S.O.A., T.O.A.B., and Y.M.J. Software: S.O.A. and T.O.A.B. Supervision: M.T.A., S.O.A. and T.O.A.B. Validation: M.T.A., S.O.A. and T.O.A.B. Visualization: J.Y. and Y.M.J. Writing—Original Draft Preparation: J.Y. Writing—Review and Editing: J.Y., M.T.A., S.O.A., T.O.A.B. and Y.M.J. All authors have read and agreed to the published version of this manuscript.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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