Research Article

Evaluation of Training and Visit Extension System in improving Extension Agents Skills and Farmers Productivity in Imo State, Nigeria

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ABSTRACT

The study focused on evaluation of training and visit extension system in improving extension agents' skill and farmers' productivity. Specifically, the study determined the skills acquired by extension agents during fortnight training; ascertained the quality of training impacted to farmers by extension agents; examined extension agents perception about fortnight training and farmers perception about usefulness of extension training; assessed level of farmers productivity resulting from extension agents training. A multi-stage random sampling technique was employed to select sixty (60) arable crop farmers and twelve (12) extension agents. Primary and Secondary data were collected using two sets of structured questionnaire administered on the respondents. Analysis was carried out using descriptive statistics and Likert scale rating system which produced discriminatory index. Results shows that quality of training received was high (61.6%). About 55% and 45% of the respondents adjudged the training received to be useful and very useful. The respondents were excellent in skill development after the fortnight training following the overall mean of 3.31. Result further showed increases in farmers' productivities. It was recommended that skilled subject matter specialist be employed to improve the fortnight training for sustainability in farmers productivity.

Key words: Extension Agents, Extension system, Farmers productivity, Training and Visit

INTRODUCTION

One of the most effective means of transforming Nigeria's potential agricultural resources into sustained agricultural development is through an effective extension system. Improved agricultural extension management system is recognised as a central mechanism to achieving increased food production through technology transfer (Auta and Dafwang, 2010; Chukwu, 2013). Over decade, the Nigerian government and international aid agencies have promoted and supported new extension approaches to help small-scale farmers increase their production (Agwu et al, 2008). The training and visit (T&V) system has been one of the numerous extension methods to be promoted.

It was introduced to Nigeria in 1986 by the World Bank and practiced by ADPs as a replacement for the earlier conventional approach to extension which has become weak and inefficient (Agbamu, 2005, Ejembi *et al*., 2006). The purpose was to remedy the weakness inherent in the previous approaches (Gustafson, 2009;

Musa *et al*., 2013). The T&V differs from the general approach by its emphasis on frequent in-service training for extension personnel, regular visitation to farmers' farms, promotion of extension/research linkage and improved extension management (Benor *et al*., 1984; Adeola, 2005). According to Fadiji and Adeniji (2011), the T&V system was initially used for crops and later was adopted for other sub-sectors like livestock, fisheries and forestry.

The performance of agricultural sector does not only threaten the livelihood but also affects the production capacity of natural resource base, accelerates environmental degradation and fails to address poverty, malnutrition and food security (Ashley and Maxwell, 2011; Nxumalo and Oladele, 2013). This situation raises questions as to the effectiveness of the T&V extension system practiced by the Agricultural Development Programmes (ADP). In Imo state, few studies has made a somewhat more quantitative evaluation of T&V extension contacts (Dejene, 1989), and in some cases increases in technology adoption and yields (Due *et al.*, 1987).

Table 1a: Distribution of the respondent on fortnight training performance

Performance rating	Frequency	Percentage
Excellent performance	8	66.67
Very good performance	4	33.33
Fair performance	-	-
Poor performance	-	-
Total	12	100

Source: Field survey, 2014

Table 1b: Distribution of respondents on suggested improvement measure of fortnight training

Measure	Frequency	Percentage
Making the training qualitative	9	75.00
Skilled subject matter specialist to be used	10	83.33
Both trainers and trainees to be conscious of time	12	100.00
Trainers must attend fortnight training regularly	11	91.67
Current information could be used	11	91.67
Feedback from field to be address urgently	9	75.00
Penalty be attached to absentee extension agent	12	100.00

Source: Field survey, 2014

Table 3: Distribution of the farmers on quality rating of received trainings

Quality rating	Frequency	Percentage
Excellent rating	21	35.00
High	37	61.67
Moderate	0	00.00
Fair	1	1.67
Poor	1	1.66
Total	60	100

Source: Field survey, 2014

However, no study has attempted to model T&V extension system along with extension agents skills and farmers productivity. Empirical evidence remains largely scanty, isolated and devoid of in-depth analysis of T&V extension system along with extension skills and farmers productivity.

It is against this background that this study broadly evaluates the T&V extension system in improving extension agents' skills and farmers' productivity in Imo State, Nigeria. Specifically, it:
(i) ascertained fortnight training (FNT) performance and measure for improvement;
(ii) determined the skills acquired by extension agents (EAs) during the FNT;
(iii) ascertained the quality of training impacted to farmers by EAs;
(iv) examined EAs perception about FNT;
(v) examined farmers perception about usefulness of extension training;
(vi) assessed level of farmers productivity resulting from EAs training;
(vii) Identified problems associated with farmers training by EAs; and problems associated with FNT of extension agents.

MATERIALS AND METHODS

The study was carried out in Imo state, Nigeria which is located in the eastern zone of Nigeria, and covers an area of about 5,067.20km^2, with a population of 3,934,899 (NPC, 2006 and NBS, 2007). The state has three agricultural zones of Orlu, Owerri and Okigwe with an average annual temperature of 28%, average annual relative humidity of 80%, average annual rainfall of 1800-2500mm and an altitude of about 100m above sea level (Imo ADP, 2004; Microsoft cooperation, 2009).

A multistage random sampling technique was adopted for the study. First was the selection of the three agricultural zones. Two Local Government Areas (LGAs) were randomly selected in each of the zones. Next was the random selection of six communities (one from each LGA), followed by random selection of ten (10) arable crop farmers and two (2) EAs in each of the communities. This produced a sample size of sixty (60) arable crop farmers and twelve (12) EAs for the study.

Data collection was through primary and secondary sources. Primary data were collected through the use of

Table 2: Rating of various fortnight training skills in a four point likert scale manner

	Excellent (4)	Good (3)	Fair (2)	Poor (1)	Total	Mean (2.5)	Remark
Control	1	6	5	0	12	2.67	Accepted
Disease control	0	8	4	0	12	2.67	Accepted
Result demonstration	8	3	1	0	12	3.58	Accepted
Method demonstration	7	5	0	0	12	3.58	Accepted
Audience analysis	5	7	0	0	12	3.42	Accepted
Human Relation	5	7	0	0	12	3.42	Accepted
Teaching/communication skills	6	4	1	1	12	3.25	Accepted
Indigenous technology development	5	5	1	1	12	3.16	Accepted
Participatory/Rural appraisal	8	4	0	0	12	3.67	Accepted
Programme planning	4	7	1	0	12	3.16	Accepted
Keeping record and monitoring	4	8	0	0	12	3.33	Accepted
Planning demonstration	4	8	0	0	12	3.33	Accepted
Evaluation of trials	5	7	0	0	12	3.41	Accepted
Farmers training	5	7	0	0	12	3.41	Accepted
Selection of contact famers	6	5	0	1	12	3.25	Accepted
Establishment of small plot adoption	6	4	1	1	12	3.25	Accepted
Formation of women group	7	4	1	0	12	3.33	Accepted
Forming cooperatives	5	7	0	0	12	3.42	Accepted
Total	91	106	15	4	216	3.31	Accepted

Source: Field survey, 2014

Table 4: Distribution of the respondents on their opinion rating of fortnight training

Attributes of training	Excellent	Good	Fair	Poor	Total	Mean (2.5)	Remark
Training on human relations	0	10	2	0	12	2.83	Accepted
Training on Communication	2	8	2	0	12	3.00	Accepted
Training on response of client questions	6	6	0	0	12	3.5	Accepted
Training on how to address client problems	6	5	0	1	12	3.33	Accepted
Training of distributors of inputs	7	3	1	1	12	3.33	Accepted
Training on result demonstration	6	5	1	0	12	3.42	Accepted
Training on method demonstration	7	3	1	1	12	3.25	Accepted
Training on selection of opinion leader	7	5	0	0	12	3.58	Accepted
Training on formation of cooperative	5	6	1	0	12	3.53	Accepted
Training improvement of skills	3	9	0	0	12	3.00	Accepted
	49	60	8	3	120	3.29	Accepted

two sets of validated structured questionnaire, and analysed using percentages and mean statistic.

RESULTS AND DISCUSSION

The FNT of the Agricultural Development programme was rated to be excellent, very good, fair or poor. Result in Table 1a shows that majority (66.6%) of the respondent rated it as being excellent in their various activities which is an indication that the ADP are doing excellently well in organizing the FNT for the EAs. Despite the excellent performance, there was need for improvement. This was suggested in Table 1b. Findings indicate that almost all the suggested measures for improvement received acceptance by the respondents. Making both trainers and trainee become conscious of time, and punishing any EA who fails to attend the training session received 100% acceptance. Table 2 reveals the skills acquired during FNT session. The skills were rated as excellent, good, fair and poor in a four point Likert scale rating. These produced a discriminating index of 2.5. This implies that any value less than 2.5 is rejected, and any one equal to or greater than 2.5 is accepted being good. The overall mean (3.31) was accepted as excellent, and this means that the respondents were excellent in skill development in those areas after the FNT. In Table 3, farmers were made to rate the quality of training received from EAs. This was rated along the line of excellent, high, moderate, fair and poor. Majority (61.6%) of the farmers opined that the quality of training received was high while 35% said that the quality was excellent. This is an indication that extension services to farmers were adequate and suitable. This confirms the efficiency of EAs in delivering technology information to farmers.

Extension Agents opinions about the FNT was ascertained in Table 4. Various attributes of the training as contained in the table were rated as excellent, good, fair and poor in a four point Likert scale rating. This produced a discriminating index of 2.5 as central mean. Based on this, two attributes, training on human relation (2.83) and training for improvement of skills (3.00) were accepted as being good while the rest were rated to be excellent. The overall mean (3.29) was accepted as being excellent. This therefore implies that the respondents perceived the FNT to be excellent. How useful the extension training was to the farmers and their activities was determined in Table 5. The rating or scoring was based on individual farmers' perception or opinion. The assessment was either very useful, useful or not useful. Majority (55%) of them scored the training to be useful, while about 45% said that

Table 5: Distribution of the farmers on assessment of usefulness of extension training

Usefulness status	Frequency	Percentage
Very useful	27	55
Useful	33	45
Not useful	0	0
Total	60	100

Source: Field survey, 2014

Table 6: Distribution of the farmers on rating of increased productivity

Rating status	Frequency	Percentage
High	31	51.67
Moderate	28	46.67
Low	1	1.67
Total	60	100

Source: Field survey, 2014

Table 7: Distribution of the respondents based on problems of fortnight training

Problems	Frequency	Percentage
Poor funding	20	100
Poor organization of training	1	1.67
Low interest of extension agents	1	1.67
Poor organization of training	10	50
Inadequate information on innovation	1	1.67
Poor attendance of extension agent	3	5.00
Inadequate demonstration farm	6	10
Unconducive training ground	20	100

Source: Field survey, 2014

Table 7: Distribution of the respondents on their opinion about problems of farmer training by extension agents

Problems	Frequency	Percentage
Poor government support	12	100
Traditional and culture of people	12	100
Poor feeder roads	11	91.67
Inadequate technologies	7	58.33
Illiteracy of the farmers	12	100
Inadequate communication	9	75.00
Lack of mobility	12	100
Ill-equipped subject matter/specialist	10	83.33
Farmer's conservativeness	12	100

Source: Field survey, 2014

it was very useful. This shows that the famers understood the usefulness of extension training to their farming businesses.

Table 6 contains information about farmers rating of increase productivity resulting from the extension training. Majority (51.6%) of the farmers agreed that productivity increased with high experience, while 46.6%

believed that the increase was moderate. This is an indication that the training given to farmers has led to high increase in productivity of farmers. Result in Table 7 shows various problems associated with training of farmers by the EAs. All the possible problems enumerated received acceptance as problems by the respondents. For example, poor government support, tradition and culture, literacy of farmers, lack of mobility and farmers conservativeness received 100% acceptance as problems, while inadequate technologies received the least (58.3%) acceptance among them.

As shown in Table 8, many problems associated with fortnight training of the EAs. Poor funding of the exercise and unconducive training ground were rated 100% among the problems. Poor facilitators for demonstration (50%) ranked second among the problems. This is an indication that the FNT has some problems which supposed to be addressed to make it more effective. Various suggestions for its improvement and effectiveness were suggested in Table 1b.

Conclusion

The study on training and visit extension management system using FNT in improving EAs skill and famers' productivity shows that EAs were alike to their duties; hence their performances were rated as excellent. The agents were skilful in handling all the sectors of training hence the quality of training given was rated as excellent. This therefore made the farmers rate the training received in all the sectors or areas as excellent. The skilfulness of the agents, the quality of training received by farmers, and usefulness of the training led to an appreciable increase in farm productivity.

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