

Research article

Analysis of Agricultural Extension Teaching Methods of Bayelsa and Rivers State Agricultural Development Programmes

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ABSTRACT

The study analyzed the agricultural extension teaching methods used by the Extension Agents of Bayelsa and Rivers States Agricultural Development Programme (ADP) in Nigeria. Data for the study were obtained through random sampling from a total sample size of 167 respondents. This was made up of 75 and 92 respondents from Bayelsa and Rivers ADPs respectively. The questionnaire was the instrument used for data collection. Analyses of data were achieved with percentage, mean and the t-test statistics. Results indicates that the major extension teaching methods used by Bayelsa ADP were method demonstration with 78.34%, farm and home visit with 70.67% and workshop with 53.33%. Major extension methods of Rivers ADP were field trip (60.87%), farm and home visit (52.17%) and telephone call (52.17%). There was no significant difference between Bayelsa and Rivers in the use of extension teaching methods. Poor utilization of the internet as extension teaching method was identified in the two states. The study recommends an enhanced use of internet facilities as extension delivery method in the two states.

Keywords: Analysis; extension; teaching methods; communication; Agricultural Development Programme.

INTRODUCTION

Agriculture engages about 70% of Nigeria labour force (Umoru, 2013) and contributes over 40% of the Gross Domestic Product (GDP). It also provides food for the teeming population and raw materials for industries (Donye and Ani, 2014).

Extension had been conceptualized by various extension experts as a voluntary, out-of-school educational process and procedures directed at farmers with the aim of helping them to improve in their livelihood. Extension had traditionally been defined as the delivery of information and technologies to farmers. This leads to the technology transfer model of extension, which is seen by many as the main purpose of agricultural extension. Jibowo (1992) opines that, when viewed critically and philosophically, extension is basically an educational function, process, activity and arrangement which provide updated and reliable information as well as technical advice and guidance with emphasis on helping people through education to help themselves in achieving change. As a system, extension is about the development of knowledge and human resources and as such, facilitates access to knowledge by farmers, their organizations and other market actors. Extension also facilitates their interaction with partners in research, education, agribusiness and others and assists them to develop their technical, organizational and managerial skills and practices. Despite the plausible roles of extension, Gathu (1998) observed that, the effect of innovation has not visibly reflected on the farmers who happen to be the major targets. This is because the communication linkages between farmers and extension service is yet to function as expected.

The Agricultural Development Programme (ADP) is a government parastatal. Its functions include, formulating and implementing programmes relating to agriculture as well as providing extension services to farmers in their states of operation. ADP specifically played the role of increasing food production and income of small scale farmers in rural areas by making provision for improved seeds, fertilizers, pesticides, credit facilities and infrastructural facilities (Omonijo, et al, 2014).

For the purpose of increasing food production and food security, many well meaning policies and programmes have been set promoted by various administrations both at the federal, and state levels in Nigeria. The private sectors and Non-Governmental Organizations (NGO's) were not left out in this campaign. Most of these programmes and policies have failed in achieving increased food production and security. Some of the programmes are Green Revolution, Operation Feed the Nation (OFN), Structural Adjustment Programmes (SAP), Family Economic Advancement Programmes (FEAP), Poverty Alleviation Programme (PAP), etc.

Noticeable among these steps to reposition agriculture in the country, is the fact that apparently, insufficient credence has been given to the communication aspect of the agricultural extension, which would have been a booster to the success of the various programmes. Total investments in extension represent a significant expenditure especially in developing countries (Swanson, 1984). Studies by Margono and Sugimoto (2011) in Indonesia, Ssemakula and Mutimba (2011) in Uganda and Obiora (2013) in Nigeria have indicated weak communication linkages between farmers, extension services and research centres. This weak linkage has been the main constraint in research findings not applied by resource poor rural farmers. Communication strengthens this weak linkage and ensures that the knowledge and information, which are essential for development, are delivered to the rural farmers.

The problem therefore, of this study was to determine the extension teaching methods used in communication by the extension agents of the Bayelsa and Rivers States ADPs.

It is on the basis of communication as a function of extension teaching method that this study was conceptualized to answer the research question of, what were the extension teaching methods used by the extension agents in the study areas. In order to address the research question, the objective of the study therefore was to analyze the extension teaching methods used by respondents in the study areas. The study's hypothesis was that, there is no significant difference between the respondents of Bayelsa and Rivers in the use of extension teaching methods.

RESEARCH METHODOLOGY

Bayelsa State is geographically located within latitude 4.25 North, 5.38° South and longitude 5.37° West and 6.75° East, sharing boundaries with Delta State on the North, Rivers State on the east and the Atlantic Ocean on the West and South. Rivers State is situated on latitude 4.5° North and surrounded by Anambra, Imo and Abia States, on the East, Akwa-Ibom and West by Bayelsa and Delta States (Rivers and Bayelsa States ministry of land and housing). In both states, the ADP operates in zones, namely, zone I, II and III.

The population of the study consisted of all extension workers in Bayelsa and Rivers States Agricultural Development Programmes.

The random sampling method was used in selecting the sample size of 75 and 92 extension workers from Bayelsa and Rivers States ADPs respectively. From Bayelsa, 25 respondents were sampled from each of the three zones. In Rivers, 32 respondents were sampled from zone 1, while zones II and III had 30 respondents each. Data were elicited with the questionnaire.

The questionnaire was given a face and content validity colleagues in agricultural extension. Comments formed the basis for the modification of instrument. Reliability of the instrument was determined through a pretest study which was achieved through a test-retest administration of the instrument to ten (10) extension agents randomly selected from Abia State ADP during one of their Forthmightly Training Programme in Aba. Percentage and t-test were used for data analyses.

RESULTS AND DISCUSSION

Results in Table 1 showed that in Bayelsa State, method demonstration was used more as shown by 73.00% of the respondents. In Rivers State, field trip with 60.87% was the method widely used by the respondents.

Table 1: Extension Teaching Method Used in Bayelsa and Rivers State

Teaching methods used	Bayelsa (n=75) Percentage %	Rivers (n=92) Percentage %
Farm and home visit	70.67	52.17
Office call	17.33	17.39
Telephone call (G.S.M)	37.27	48.90
Personal letter	13.34	39.13
Field trip	24.00	60.87
Method demonstration	73.34	30.43
Result demonstration	30.64	17.48
Conference	14.66	03.26
Discussion	29.33	10.87
Meetings	26.67	12.04
Workshop	53.33	35.87
Bulletins	16.00	03.26
Leaflets	24.00	06.52
Radio	10.67	04.35
Television	04.00	08.70
Exhibition	38.66	17.39
Posters	37.33	36.95
Video tapes	04.00	-
Multimedia	-	05.43
Internet	-	04.35

Source: Field Survey 2008

In method demonstration, farmers are shown how to carry out a practice step by step. It is used in teaching them how to carry out farming activities rather than why such activities should be carried out as in result demonstration. Demonstration method has been shown as one of the most cost effective and with least constraint in the education of farmers in Kukamega District of Kenya (Ali-Olubandwa et al, 2011). The fact that method demonstration and field trip were the major teaching methods adopted in Bayelsa and Rivers States agreed with the study of Obuh, (2007).

The second most commonly used extension teaching method in the both Bayelsa and Rivers States was farm and home visit with 70.67% and 52.17% respectively. This result however indicates that Bayelsa made more use of this extension teaching method than Rivers. The results further shows that while the third widely used extension method in Bayelsa was workshops with 53.33%, telephone calls using the G.S.M phones with 48.90% was the third in Rivers. It does appear from this third finding that Bayelsa respondents seem to favour a face-to-face personal contact with farmers as in workshop than Rivers respondents who seem to favour the long distance contact with farmers through the use of telephone. The results nevertheless indicates that in Bayelsa, while video tape was the least (4.00) teaching method used, the multimedia and the internet were not utilized at all. In Rivers State, while the least utilized teaching aid was the internet with 4.35%, the use of video tape was not patronized at all as aid for extension teaching by extension workers.

The result of t-test at 0.05 level of significance (Table 2) shows that there is no significant difference in the application of extension teaching methods between Bayelsa State and Rivers State respondents.

Table 2: Summary of t-test Showing Difference in Extension Teaching Methods Used in Bayelsa and Rivers State.

Responses	N	Mean x (%)	SD	Df	t-cal	t-crit (0.05,16)	Sig.t (2-tailed)	Level of significance	Decision
Extension teaching methods used in Bayelsa State	17	29.328	20.79	16	0.927	1.667	0.368	0.05	Accepted
Extension teaching methods used in Rivers State	17	23.881	18.65						

Source: Field Survey 2008

Table 2 which is the summary of t-test result on the difference in the extension teaching methods used in Bayelsa and Rivers State shows that the mean responses on extension teaching methods used in Bayelsa State was 29.32% and 23.88% in Rivers State. These results show a poor utilization of extension teaching methods in the both states.

The t-calculated was 0.927 and the critical (table) value of 1.664. Since $t_{cal} (0.927) < t_{crit} (1.667)$ and moreover, as the sig. t (0.368) > 0.05 level of significance, the null hypothesis was accepted. The conclusion therefore was that there is no significant difference between the extension teaching methods used in Bayelsa and Rivers States.

CONCLUSION AND RECOMMENDATIONS

The study has shown that the major extension teaching methods used by Bayelsa State Agricultural Development Programme in their order of importance were method demonstrations, farm and home visits and workshops. For Rivers State Agricultural Development Programme, the major extension teaching methods used by extension workers in their order of priority were field trip, farm and home visits and telephone calls. The result of the test of hypothesis indicated that there was no significant difference between Bayelsa and Rivers in the use of extension teaching methods. The study however shows a poor use of the internet as teaching method in the two states. As the mean responses in the use of extension teaching methods were poor, a general improvement in the use of these teaching methods is recommended. It is also recommended that the use of the internet as a means of agricultural extension delivery to farmers be encouraged.

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