

ASSESSMENT OF EXTENSION AGENTS' USE OF COMMUNICATION METHODS AND ITS IMPACT ON AQUACULTURE LINKAGE ACTIVITIES IN LAGOS STATE, NIGERIA

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ABSTRACT

The need to improve aquaculture production through enhanced technology transfer necessitated this study to assess extension agents' use of communication methods and its impact on linkage. A structured questionnaire was administered to 44 extension agents who were randomly selected from Lagos State Agricultural Development Authority. Descriptive and correlation analysis were used for data analysis. The results showed that extension agents are involved in various communication methods between institutes, within institutes and researchers; also, prominent linkage activities, such as joint priority setting and planning (95.5%), research-extension training (81.8%), evaluation reports (72%) and joint programming (65.9%) exist among the extension agents. Findings from correlation analysis revealed that there was significant relationship between linkage and communication methods between institute ($r = -0.377$), linkage and communication methods among extension agents ($r = 0.379$). However, the relationship between communication within and between institute was highly significant ($r = 0.693$), within institute and extension agents ($r = 0.458$) and within institute and interaction with other scientists ($r = 0.577$) at 0.05 level. The study recommended that extension agents should be provided with all necessary materials that would facilitate effective communication for improvement in service delivery to the fish farmers that are the end users.

Keywords: Assessment; communication methods; extension agents; linkage activities; impact

INTRODUCTION

Communication channels are pathways through which information or message transmitted to an audience or receiver. Traditionally, it is assumed that good innovations sell themselves, but experience has shown that they do not (Olowu, *et al* 2001). Therefore, existing technologies or recommendations need to be disseminated to the farming audience. Extension agents carefully adapt communication strategies and channels to each local situation (Lionberger and Gwin 1982,). Effective communication between change agents and researchers is essential for increasing agricultural production through the use of improved technologies.

The linear definition of communication conceptualized it as a process by which an idea is transferred from a source to one or more receivers with the intent of bringing about desirable changes in their behavior. (Oyedun, 2001) Rogers and Kin card (1981). Communication involves exchange of ideas between two or more individuals in an attempt to arrive at a convergence in meaning. Communication therefore in this study, is seen as the joint exchange of ideas, opinions and information through symbols commonly understood by the individuals involved in the communication act. Homophily is the degree to which pairs of individuals who interact are similar in certain attributes such as beliefs, values, education, social statues and the like. Heterophily in the other hand is the degree to which pairs of individuals, who interact, are different in certain attributes (Oladele, 1999). Human communication, therefore, requires a balance between homophily and heterophily. The

implication of Homophily- heterophily on interaction patterns of Extension agents as an Institute is very obvious since organizations are composed of different social groups, technicians and Scientists. One would expect more frequent interaction among extension agents. Organizations strive to achieve set objectives and goals through inter dependent relationship obtained through effective communication. Communication is explained as a system that emphasized the synergistic inter dependence of the elements in the communication process (Oladokun, 2000). Organizational communication is the flow of information through the networks of interrelated human relationships (Oladele, 1999). Networks are structured fabrics of the organization made up of lines, channels that are interconnected and used to pass information serially from one person to another. Agricultural extension by its nature has an important role in promoting the adoption of new technologies and innovations (Jamilah *et al.*, 2010). Agricultural extension brings about changes through education and communication in farmers attitude, knowledge and skills. The role of agricultural extension involves dissemination of information; building capacity of farmers through the use of a variety of communication methods and help farmers make informed decisions (Sinkaiye, 2005). If extension agents fail to communicate the desired information the undesired information may be communicated to fish farmers or colleagues. The success or failure of a communication attempts depends on the encoding- decoding process. Blumberg (1987) pointed out that formal, official structure of an organization defines status that are related to each other and between which communications are expected to take place. He further stated that communication lines consist of down ward, horizontal or lateral patterns that can be both formal and informal.

The purpose of communication is to facilitate the achievement of organizational goals. The operational procedures for achieving organizational goals involve utilization of functional communication methods (Ogunremi, 2010). The study evaluated the assessment of extension agents' use of communication methods and its impact on linkage in Lagos State, Nigeria. The specific objectives were to ascertain various linkage activities of extension agents and identify various communication methods of extension agents.

METHODOLOGY

The study was carried out in the zonal headquarters of Lagos State Agricultural Development Programme (LASDP), which are Western, Eastern and far Eastern. A list of seventy three extension agents was obtained from the Zonal office out of which forty four was randomly selected for the study. A structured questionnaire was administered on the sampled extension agents; a four point rating scale of 'very frequently', 'frequently', 'rarely' and 'not used' was used to measure the frequency of use of communication methods to get data on various communication methods between institutes, within institutes and among extension agents. The extension agents were asked to respond to the frequency of use of various communication methods. Data were analyzed by the use of percentages and correlation analysis.

RESULTS AND DISCUSSION

Table 1 shows linkage activities of Extension Agents, majority (95.5%) of the Extension agents were involved in Joint priority setting and planning 81.8% in Research-Extension training, 72.7% in evaluation report while joint financial resources was the least linkage activities (34.1%). Joint priority setting and planning a common activities carried out by extension agents was ranked the highest with a mean value of 2.82 followed by joint programming (2.52), contact for services and Research-Extension training had 1.55. Doamekpor (2005) in a similar study reported a mean value of 3.88 for Joint priority setting. However, evaluation meeting was ranked the least linkage activities (1.18)

Table 1: Linkage activities of Extension Agents

Linkage activities	Yes	No	Mean	Standard Deviation
1 Joint problem identification	20(43.5)	23(5.0)	1.34	0.48
2 Joint technology publications	1(2.2)	43(93.5)	2.82	1.39
3 Collaborative professional activities	18(39.1)	26(56.5)	2.52	1.34
4 Joint research activities	25(54.3)	15(32.6)	1.52	0.51
5 Dissemination of knowledge and information	33(71.7)	11(23.9)	1.39	0.49
6 Joint reports	9(19.6)	35(76.0)	1.55	0.50
7 Joint demonstration trials	24(52.2)	19(41.3)	1.55	0.50
8 Joint field days	14(30.4)	26(56.5)	1.52	0.51
9 Joint audio – visual materials	26(56.5)	18(39.1)	1.18	0.39
10 Joint seminar and workshop training	29(63.0)	11(23.9)	1.30	0.46

Figures in parenthesis are in percentages

Communication methods used by Extension Agents within Institute are shown in Table 2. Workshop 38.6%, seminars 36.4% are very frequently used methods. About 39% of the Extension Agents frequently used seminar and Departmental circulars, 36.4% used workshop. Only 15.9% used group meeting schedule, memoranda 40.9% were rarely used. The resulting mean values also confirm the very frequently use of seminar (0.95), followed by group meeting schedule 0.89 and memoranda 0.75; Official bulletins 0.45 had the least mean. The reason could be that Extension Agents preferred communicating directly instead of using printed materials. Extension agents receive regular training to enhance their technical skills, which they then hope will pass to all farmers through regular communication (Ali, *et al.* 2012).

Table 2: Communication methods used by Extension Agents within Institute

Communication Methods	Very frequently	Frequently	Rarely	Used	Mean
Hand book/ practical booklet	13(29.5)	15(34.1)	14(31.8)	2(4.5)	0.45
Subject matter specialist	9(20.5)	14(31.4)	18(40.9)	3(8)	0.75
Personal contact	16(36.4)	12(27.3)	9(20.5)	7(15.9)	0.89
Aquaculture model	16(36.4)	17(38.6)	5(11.4)	6(13.6)	0.95
Demonstration	17(38.6)	16(36.4)	6(13.6)	5(11.4)	0.47
Training Centres	13(29.5)	17(38.6)	10(22.8)	4(9.1)	0.62

Figures in parenthesis are in percentages

The results, as shown in Table 3, indicate that 36.4% of the Extension Agents very frequently used publication in Journals as communication methods between Institutes. Scientific periodicals 34.1% while conferences and Radio/Television was 31.8%. Frequently used methods are Technical reports 63.6%, workshop 56.8%, training centre 50.0% and scientific periodicals 50.0%. Percentages of Extension Agents that rarely used Publication in Journals and workshop were 2.3, while the least used methods were technical reports (9.1%) and training centre (9.1%). A ranking of the mean values indicated scientific periodicals 1.02 and seminars 1.02 as the highest, radio/television 1.01 and workshop was the lowest (0.80). It could be inferred that communications of Extension Agents between Institutes were more of prints (scientific periodicals, technical reports and publication in Journals). This is so because

printed materials can easily spread between Institutes and does not involve much movement of Extension Agents before it gets across to targeted ushers of the information.

Table 3: Extension Agents uses of communication methods between Institutes

Communication Methods	Very frequently	Frequently	Rarely	Used	Mean
Scientific Periodical	15(34.1)	22(50.0)	2(4.5)	5(11.4)	1.02
Technical Reports	12(27.3)	28(63.6)	-	4(9.1)	1.00
Publication in Journals	16(36.4)	20(45.5)	1(2.3)	7(15.9)	1.00
Conferences	20(45.5)	17(38.6)	8(18.2)	5(11.4)	0.93
Workshop	13(29.5)	25(56.8)	1(2.3)	5(11.4)	0.80
Seminars	14(31.8)	18(40.9)	6(13.6)	6(13.6)	1.02
Training Centres	10(22.7)	22(50.0)	8(18.2)	4(9.1)	0.98
Official calls Bulletin	9(20.5)	13(29.5)	15(34.1)	7(15.9)	0.89
Radio and Television	14(31.8)	20(45.5)	15(34.1)	7(15.9)	1.01

Figures in parenthesis are in percentages

Table 4 shows channels of communication as used by Extension Agents. Subject matter specialist 61.4% was very frequently used by Extension agents, hand book 43.2% and personal contact 36.4%. The frequently used channels are training centre 65.9%, demonstration 61.4% and extension guides 54.5%. Only 2.3% rarely used subject matter specialist and demonstration and official calls was used by 25.0% of the Extension agents. A critical look at the means shows that subject matter specialist was highest (1.05), personal contact 1.02 and package of practical booklet/hand book 1.00. This is expected, since subject matter specialists are expected to train the Extension agents in various components of agriculture so as to train farmers for maximum yield. In a similar study, (Akinbile and Otitoloye, 2008) reported a high mean value for farm visit.

Table: 4 Shows channels of communication as used by Extension Agents to fish farmers

Communication Methods	Very frequently	Frequently	Rarely	Used	Mean
Hand book/ practical booklet	15(34.1)	15(50.0)	4(4.5)	6(11.4)	1.02
Subject matter specialist	12(27.3)	14(63.6)	1(2.3)	2(9.1)	1.00
Personal contact	16(36.4)	20(45.5)	6(2.3)	2(15.9)	1.00
Aquaculture model	14(31.8)	14(38.6)	13(18.2)	3(11.4)	0.93
Demonstration	13(29.5)	27(56.8)	1(2.3)	3(11.4)	0.80
Extension guides	14(31.8)	24(40.9)	2(13.6)	6(13.6)	1.02
Training Centres	10(22.7)	29(50.0)	2(18.2)	3(9.1)	0.98
Official calls	14(31.8)	18(45.5)	4(34.1)	11(15.9)	1.01

Figures in parenthesis are in percentages

The correlation analysis of linkage and various methods of communication within, between institutes and extension agents are presented in Table 5. Linkage correlation between institutes ($r = 0.693$), Extension agents ($r = 0.458$) and within institute and between institute ($r = 0.693$), within institute and Extension agents ($r = 0.458$) and between institute and Extension agents ($r = 0.571$) were found to be highly significant and positive ($P < 0.05$). Linkage between institute ($r = -0.377$), linkage and between Extension agents ($r = -0.379$) were significant negative correlation ($P < 0.01$). The implication is that communication methods within institutes and between, within institute and extension agents; between institute and Extension agents determine the extent of linkage of extension agents.

Table 5: Correction analysis of linkage and various channels of communication within, between constitutes and Extension agents

	Linkage	within Institute	between Institute	Extension Agents
Linkage	1.000	-0.143	-0.377*	0.379*
Within Institute		-1.000	0.693**	0.458**
Between Institute			1.000	0.571**
Extension Agents				1.000

*Correction is significant at the 0.05 level; ** Correction is significant at the 0.01 level

CONCLUSION AND RECOMMENDATION

Joint priority setting and planning as well as joint programming were mostly used as linkage activities of Extension agents. These two are fundamental to any meaningful activity of Extension agents because it gives direction or focus to the agents so as to meet the demand or desire of the fish farmers. Seminars and group meeting schedule were highly ranked as communication methods within institute, scientific periodicals, seminars and radio/television between institutes. Subject matter specialist, aquaculture model and personal contact were high as channels of communication among Extension agents. It is recommended that the extension administrators create conducive environment and as well make fund available for the extension agents so that there can be effective linkage activities through joint priority setting, planning and programming.

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Journal of Agriculture and Social Research, Vol. 13, No.1, 2013

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