COMMUNICATION AND ADOPTION BEHAVOUR OF RURAL FARMERS IN EBONYI STATE, NIGERIA

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ABSTRACT
The study analysed the communication method of disseminating agricultural information to rural farmers in Ebonyi State. A multi-stage randomised sampling technique was used to select respondents. Data was analyzed by inferential statistics such as percentages, frequency distribution and mean score derived from a 4-point likert scale. Results show that majority of the respondents were females whom are still strong and agile. The dominant constraint militating against the dissemination of agricultural information to rural farmers in the study area are: inadequate formal education, lack of infrastructural facilities, lack of interest and aspiration among farmers, introphilly, unaffordable cost of indigenous communication and culture. Based on the research findings, the government should put more effort in disseminating effective information to enable farmers adopt the new farming technologies that would be profitable and less expensive. Government of Ebonyi State should provide adequate infrastructural materials to the rural areas and encourage more extension agents to enable them provide adequate information to the rural farmers.

Keywords: Communication method, Agricultural information and Dissemination

INTRODUCTION
Communication as an academic discipline relates to all the way we communicate; it enables a large body of study and knowledge. It can be defined as a two way process in which there is an exchange and progression of thoughts, feelings or ideas towards a mutually accepted good or direction. It is also defined as a process by which an idea is transferred from a source to a recipient with the intent to change his behaviour (Rogers, 1973). The purpose of communication is to bring about certain desired effect on the part of the receiver. These effects may consist of an alteration in the receivers' knowledge of some idea, a change in his overt behaviour. We lean basic communication skills directly by educating and practicing those skills and hearing (Hueka, 2012). Communication as a common essential learning focuses on the language demands of each school subject. Communication includes the transfer of technical information. Technical knowledge is of no use unless it is accepted as authentic, adopted to the need of the individual and is put to use. When the information is relayed to the individual, he/she may not understand the information and may need to ask questions, he may also have some special problems for which the extension worker must find an answer. The ability to communicate determines to a very large extent, the success or failure of an extension worker. He has the technical information from research and other sources; it is his responsibility to establish effective communication with the people he serves so that they can use this information to continually improve their agriculture and rural life. Communication involves a teaching situation and this exists whenever the extension worker comes to see the rural farmers. It can be a village meeting where the extension worker shows a film, then gives his own talk and awareness questions and be able to communicate well.

The important contribution made to agricultural extension in promoting agricultural development and food production has caused rapid growth in the last decade. Extension involves the conscious use of communication information to help farmer form sound opinion and make good decisions. The success of an extension agent is determined by his ability to communicate good ideas to farmers. The SENDER, MESSAGE, CHANNEL, RECEIVER (SMCR). SMCR communication and diffusion model is useful for examining a special communication event. That is, can isolate one event out of the on-going communication process and illustrate the action which takes place. It is basic in agricultural extension that new ideas must be efficiently communicated by extension officer or worker. The extension agents are to transmit ideas which will stimulate, persuade and help the individual farmers with whom they are in regular contact; Extension task is to change farmers who subsequently may decide to change their farming technique. For adoption of innovation to take place, it has to undergo some processes which include: Awareness, Interest, Evaluation, Trail, Adoption or Rejection, or Discontinue.

Awareness: This is the first time an individual has an idea of new technology. At this stage, he lacked necessary details about the innovation in terms of actual content, the way it works, cost of innovation and benefits. Most farmers become aware of innovation through the market media, conversation with friends and neighbours but may not bother to ask for details of such innovations. Eventually, if the farmer builds enough mental impression that the innovation might be beneficial to his farming enterprise, he will develop interest in the innovation.

Interest: At this stage, the individual is motivated to seek detailed information or facts on the innovation. He wants to know about the innovation in terms of content, functions, and merits. Interest is the period the farmer develops desire to cost innovation in terms of financial and time resources as well as time frame within which he can recover whatever investment he made in the adoption.

Evaluation: It is the stage of determining the acquired information concerning the new ideas/ innovation/technology. It is a mental stage where farmers examine all the evidence gathered in stage one and two. He subjects himself into a mental arrangement in terms of determining survivability of the new ideas or innovation against the alternative. This mental investigation will enable the farmer decide whether he can take the risk involved.

Trial: This is the period of application of the new technology. Many farmers carryout the trail process on small scale base to minimize possible losses in case of failure. The farmer at this stage needs the assistance of the extension agent.

Adoption: This is the period of full scale integration of new practice or innovation into the ongoing farm enterprise. At this stage, the farmer desires to employ the new practice or innovation to a full scale basis. Adoption is characterized by large scale and sustained use of the new idea as not only useful but with full impression of satisfaction on part of the farmers. However, adoption does not imply indefinite use of innovation but the farmer use the practice until he becomes dissatisfied with the innovation.

Rejection: A farmer may refuse outright to accept a new practice, idea or product. This rejection may occur at any stage in the adoption process. In many cases, rejection of innovation may be by indictment of the extension worker.

Discontinue: This is giving up of new idea or practice after a initial acceptance. A farmer who adopted the use of fertilizer as an innovation may automatically discontinue its use due to certain reasons (Umeh, 2014).

Barriers to Effective Extension Communication

Human communication is beset by numerous problems. The major problems include: feed-forward, homophily/heterophily principle, noise, language, information over load and lack of interest etc.

Feed-forward: Feed forward refers to information about the receiver when his communication has failed before he starts. This assumption that are most times wrong become barrier to communication with/among farmers.

Homophily/Heterophily Principles: homophily is defined as the degree to which a source-receiver pain are similar in certain attributes such as belief, education, social status etc. communication between homophilous individuals is generally effective. (Mgbada, 2002). Heterophily on the other hand refers to the degree to which a source-receiver pain is different in attributes. Communication in such situation is less effective. It can lead to delayed transmission and message distortions etc.

Noise: Noise refers to any disturbance which interferes with the effectiveness of communication process. It could be in form of extraneous sound, wrong spelling in a written passages and distraction of a passing object etc.

Information Overload: This is an excess of information inputs beyond what the receiver is able to process and utilize. This leads to information fatigue, poor performance or rejection of the entire information.

Language: language is man's best communication tool because we use language to express and elicit meaning. Language is a problem in Nigeria because the nation is a multidialectal nation and as such communication becomes more difficult. For effective communication to take place, the massage from the source must be understood by the receiver. When farmers communicate with fellow farmers in the same community using the same language, adoption of agricultural information become easier than when they are from different origin or in the case of extension agent farmer relationship where extension agents are posted to other states where language become a barrier to communication.

Lack of Interest: Poor presentation of subject matter reduces interest of the audience. In planning the presentation of your subject matter, draw form a variety of instructional materials. The use of motion pictures, models, tape recorders can make communication process more effective.

Communication Methods of Disseminating Agricultural Information to Rural Farmers

Both extension and communication are processes which bring about changes in a desired direction. Extension involves the conscious use of communication of information to help people such as the rural farmers form sound opinion and make good decision. Communication becomes effective when extension workers who have technical information from research and other sources are able to establish effective communication with the people they serve so as to improve their agricultural and rural life. Therefore, success of agricultural transformation is dependent on the fact that: Extension must have something to extend such as a new technology or practice; the innovation offered must be technically possible and reliable, economically attractive and socially acceptable, and the innovation must be effectively communicated to farmers.

Communication Channels

The communication process consists of four essential elements (Fig. 1). These include: the sender, the message, the channel and the receiver. The sender or communicator of ideas

depends on who starts the conversation. If the extension worker starts, he becomes the sender. The message is what the communicator says, the spoken word is the channel and the listener is the receiver. The listener's response is called feedback. For better understanding, the linear left-to-right model of communication with five elements namely; source, message, channel, receiver and feedback shows the relationship between these channels of communication.

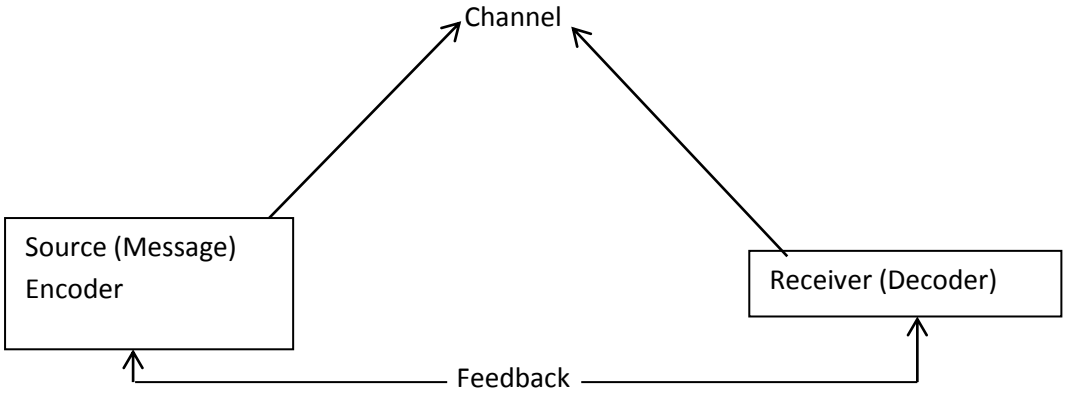

Fig. 1: Communication Channel

METHODOLOGY

The study area is Ebonyi North agricultural Zone. The Zone comprise of Abakaliki, Izzi, Ebonyi and Ohaukwu Local Government Areas. It has a population of approximately 709, 005 people. The area lies between Latitude $5^{0}57^{1}$N and $6^{0}48^{1}$N and longitude $7^{0}41^{1}$E and $8^{0}30^{1}$E. It is bounded by Benue State in the North, Ishielu LGA in the West, Cross River State in the East and Ikwo Local Government Area in the South. Rainfall in the area is about 2500-3000mm and the temperature about 27^{0}C (Isotherm). The vegetation is predominantly forest (derived Savana). The major occupation of the inhabitants is farming whose major agricultural produce are rice, yam and cassava.

Model Specification

A 4 point likert rating scale was used to measure the level of agreement in communication channels used thus; strongly agree (4), agree (3), disagree (2) and strongly disagree (1). Respondents with mean score of 2.50 and above imply they are in agreement while respondents with mean score of less than 2.50 do not. To determine the mean likert level = Xs = ΣX. Xs of each item was computed by multiplying the frequency of each response pattern with its appropriate nominal value and dividing the sum with the number of respondent to the items. This can be summarized with equation below.

$$Xs = \Sigma fn/N$$

Where Xs =mean score

Σ = summation

f= frequency

n = likert nominal value

N= number of the respondents

Xs=1+2+3+4/4= 10/4 =2.50

RESULTS AND DISCUSSION

The socio-economic characteristics of the respondents investigated in the study include age, gender and marital status, communication strategies used by farmers in adoption of

innovation and sources of the various information techniques and problems militating against effective utilization of agriculture information to farmers. The results in Table 1 show that 8% and 20% of the respondents were above 60 years and less than 20years respectively, while majority (72%) were within the age range of 20-60 years. This implies that the farmers were still young and in their most productive age, indicating good prospect for agricultural information dissemination because the farmers have more years to improve on their production since more young people engage in disseminating communication method of agricultural information.

Older farmers, perhaps because of investing several years in a particular practice, may not want to jeopardize it by trying out a completely new method. In addition, farmers' perception that technology development and the subsequent benefits, require a lot of time to realize, can reduce their interest in the new technology because of farmers' advanced age, and the possibility of not living long enough to enjoy it (Caswell et al., 2001; Khanna, 2001). Furthermore, elderly farmers often have different goals other than income maximization, in which case, they will not be expected to adopt an income –enhancing technology. As a matter of fact, it is expected that the old that do adopt a technology do so at a slow pace because of their tendency to adapt less swiftly to a new phenomenon (Tjornhom, 1995).

Table 1: Distribution of Respondents According to Age

Age (Years)	Frequency	Percentage
Less than 20	24	20
20-60	86	72
Above 60	10	8
Total	120	100

Source: Field Survey, 2014

The results in Table 2 show that 57% of the respondents were females, and 51% males. It can be deduced from the table that the majority of the respondents were female, which implies that women took active part in communication and dissemination of agricultural information. The implication is that women seem more credible in communication and dissemination of agricultural information in Ebonyi State. Gender issues in agricultural production and technology adoption have been investigated for a long time. Most show mixed evidence regarding the different roles men and women play in technology adoption. In the most recent studies, Doss and Morris (2001) in their study on factors influencing improved maize technology adoption in Ghana, and Overfield and Fleming (2001) studying coffee production in Papua New Guinea show insignificant effects of gender on adoption. The latter study notes "effort in improving women's working skills does not appear warranted as their technical efficiency is estimated to be equivalent to that of males". Since adoption of a practice is guided by the utility expected from it, the effort put into adopting it is reflective of this anticipated utility. It might then be expected that the relative roles women and men play in both 'effort' and 'adoption' are similar, hence suggesting that males and females adopt practices equally.

Table 2: Distribution of Respondent According to Gender

Gender	Frequency	Percentage
Male	51	20
Female	69	72
Total	120	100

Source: Field Survey, 2014

The results in Table 3 show that only 20% of the respondents were separated, 24% single while the many (56%) of the respondents were married. The implication is that they are responsible and this will entail more focus and commitment to agricultural information and production.

Table 3: Distribution of Respondents According to Marital Status

Marital status	Frequency	Percentage
Married	67	56
Single	29	24
Separated	24	20
Total	120	100

Source: Field Survey, 2014

Indigenous Communication Channels

The result in Table 4 shows clearly that the most acceptable and common channel of communication to the farmer is the Town crier (3.8) while the less common one is the moonlight meeting (1.4). Most other indigenous communication channels used contributed significantly such as age grade and friends (3.0 each), neighbours (3.5), work/labour group (3.3), rural market places (3.3), Traditional Religious meetings (3.1) and family kindred meetings (3.4). This implies that most of the indigenous communication channels were actively used except for those that are no longer in vogue.

Table 4: Degree of Agreement of Respondents response to Indigenous Channels of Communication used

Indigenous Communication	Means score
Town crier	3.8
Age grade	3.0
Informal	1.9
Friends	3.0
Neighbours	3.5
Moonlight meeting	1.4
Work/labour group	3.3
Dance group	3.9
Rural market place	3.4
Traditional Religious meeting	3.1
Family kindred meeting	3.4

Source: Field Survey, 2014

Extension of Communication Channel

The results in Table 5 show that the farmer's perceived demonstration (2.8), face to face contact (2.9), home visit (3.5) and Radio/TV broadcast (2.5) were effective. The result also shows that extension farmer training (3.0) was also effective. However, other communication methods were ineffective as shown with their mean scores. This implies that the methods as perceived effective implies their aspiration and interest while others were ineffective. This could be due to lack of finance since some cost is to be expended in excursion/field trips, internet assessment, and others.

Table 5: Degree of Effective and Ineffective of Respondents to Extension Method Communication Channel

Communication Channel/Method	Means score
Demonstration	2.8
Face to face contact	2.9
Home visit	3.5
Radio/TV Broadcast	2.5
Excursion/field trips	1.2
Internet Information Technology	2.4
Extension Farmers Training	3.0
Agricultural Farm School	2.2
Agricultural Farm days	2.0

Source: Field Survey, 2014

Factors limiting Communication Efficiency among Farmers

The results in Table 6 show the factors militating against communication efficiency among farmers. Farmers noted that the major barriers to communication efficiency are: channels on procedure/physical discomfort (3.4), unaffordable cost of indigenous communication (3.3), Diversity among farming system and interest among farmers and heterophilly (2.7 each) and lack of infrastructure (2.9). Differences in local leadership and political affairs were not a limiting factor to communication efficiency in the study area.

Table 6: Degree of Agreement and Disagreement to Farmers that Institute Inefficiency of Communication among Farmers

Factors limiting communication efficiency	Means score
Inadequate formal education	2.2
Large of interest and aspiration among farmers	2.0
Heterophilly	2.7
Lack of infrastructure	2.9
Noise	3.0
Unaffordable cost of indigenous communication	3.3
Channels procedures/physical discomfort	3.3
Gender segregation	1.9
Stick adherence to culture	1.9
Inadequate knowledge of farmers	2.7
Unfavourable Attitude among farmers	3.0
Diversity, Firming system and interest among farmers	3.1
Differences in Local leadership and political affairs	1.5

Source: Field Survey, 2014

CONCLUSION

The most available source of information used by the farmers as communication channel in the area was the indigenous communication channel. Major barriers of the indigenous communication channel were channels procedure/physical discomfort, noise and unfavourable attitude among farmers. Farmers routinely make complex decisions especially when it comes to adoption of new technology. Farmers would chose to adopt a new technology if the expected profit from such technology is likely to exceed the expected profit without the technology. If farmers do not adopt a new technology, it is not compatible with existing practices, or because they have perceived the technology to be too complicated or too risky and not because they are ignorant. Government should therefore make provisions

for credit at low or no interest rate for rural farmers and there is need to develop technologies that are simple, comparatively advantageous and compatible with existing farming practices. This is very relevant because farmers have limited resources and they may not put their resources or energy in technologies that are very complex or not obviously profitable.

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