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COMMUNICATION AND ADOPTION BEHAVOUR OF INFORMATION TECHNOLOGY BY RURAL FARMERS IN EBONYI STATE

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Abstract

The study assess the communication method of disseminating agricultural information to rural farmers in Ebonyi State. A multi-stage random sampling technique was used to select respondents. Data analyzed by statistics such as percentage, frequency distribution table and mean score derived from 4-point likert scale. Result show that only 39 percent of the respondents were aware of ADP extension programme while 61 percent were not aware of their existence. The dominant problem to disseminating 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, ADP should put move 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 the extension agents to enable them provide adequate information to the rural farmers.

Keywords: Communication method, agricultural information, indigenous and culture

1. 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 receiver 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 receiver's knowledge of some idea, a change in his overt behaviours. It is also a process whereby information is encoded and imparted by the sender to a receiver via a channel/medium. The receiver then decodes the message and gives the sender a feedback. Communication requires that all parties have an area of communicative commodity. There are auditory means such as speaking, singing and sometimes tone of voice and non-verbal physical means such as body language, touch, eye contact and by using writing. Communication is a process by which we assign and convey meaning in an attempt to create shared understanding. This process requires a vast repertoire of skills in interpersonal and intrapersonal processing, listening, observing, speaking, questioning, analyzing and evaluating. If you use these processes, it is development and transfers to all areas of life, home, school, community, work and beyond. It is through communication that collaboration and cooperation occur. Communication is the articulation of sending a message through different media, whether verbal and non-verbal, so long as a being transmits a though provoking idea,

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gesture, action long as a being, the physical ability to make sound but must learn to speak and communicate effectively. Speaking, listening and our ability to understand verbal and non-verbal meanings are skills we develop in various ways. We learn basic communication skills directly through educating and by practicing those skills and hearing they evaluated (Huesca, 2012).

Communication as a common essential learning focuses on the language demands of each school subject. The role of the teacher is contract to improve students understanding through the development of communication abilities in all subjects.

Communication recognizes first, that the language requirement of all school subject must be clarified and second, that teachers must be supported as they assume responsibility for these. The over-riding purpose of such clarification and support is to assist students in coming to a better understanding of all their schools' subjects, thus, a concern with communication implies an interest in change. There is no way to understand the process without considering communication since research and development are efforts directed towards socio-economic change (Hannah, 2001). Communication includes the transfer of technical information large. Technical knowledge is of no use unless it is accepted as authentic, adopted to the need of the village and is put to use (Humble-Odume and Kassami, 2002). When the information is relayed to the village, he 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 answer. Therefore, an exchange of an idea back and front between teachers (extension worker) and learner (farmer) is essential, communication is a continued process, it continues throughout times, never ending and never beginning (Nwachukwu and Osagu, 2005). 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 (Ozowa, 2008).

1.1. Conceptual and theoretical review

The important contribution made to agricultural extension in promoting agricultural development and food production have caused rapid growth in the last few years. Extension involves the conscious use of communication information to help farmer form sound opinion and make good decisions (Brin *et al.*, 2001). 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. An extension massage is useless to a farmer if he does not receive it. It is when the individual farmers action coincide with the intention of the extension worker that they observe change in farming pattern (innovation) of the rural community. For adoption of innovation to take place, it has to undergo some processes which include: Awareness, Interest, Evaluation, Trail, Adoption or Rejection, Discontinue.

1.2. 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, lack of interest (Umeh, 2014) etc.

1.2.1. Feed-forward

Feed forward refers to information about the receiver 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 and receives pain is different in attributes. Communication in such situation is less effective. It can lead to delayed transmission, message distortion etc.

1.2.2. Noise

Noise refer 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, distraction of a passing object etc.

1.2.3. 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.

1.2.4. 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 agent farmer relationship where extension agents are posted to other states where language become a barrier to communication.

1.2.5. 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 prices more effective.

1.3. Communication methods of disseminating agricultural information to rural farmers

Communication includes the transfer of technical information from its sources to the farmer or villager. Therefore, the generating and assigning meaning by a communicator and a receives which is done often by the use of words, actions or dressing could be referred to as communication.

Comparing the definition of communication with that of extension; extension is an educational process which brings about desired changes in human behavior, changes in attitude, values, belief and action. Both extension and communication are processes which bring about changes in a desired direction.

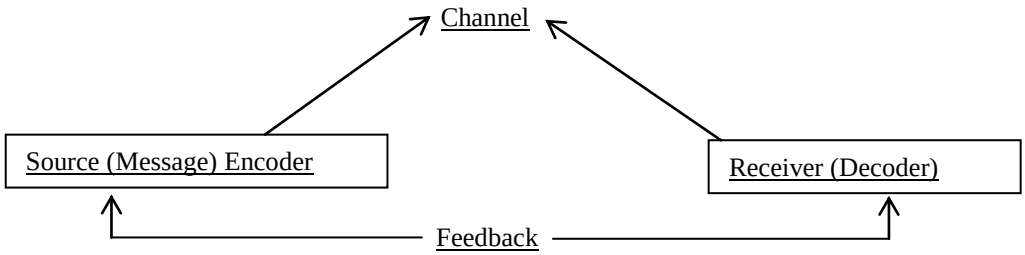
Extension involves the conscious use of communication of information to help people such as the rural farmers form sound opinion and make good decision.

Communication become effective when extension workers as those having the 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.

1.4. Communication channels

The communication process consists of four essential elements. 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 those channels of communication.



2. METHODOLOGY

Likert scale was used to assign nominal values as follows: Strongly agreed 4, Agreed 3, Disagreed 2, Strongly disagreed 1. The cut-off point was determined by finding the mean of nominal values assigned to the options using the formula:

2.1. Model specification

X_s = $\sum fn/nr$
$\sum$ = Summation
F = Frequency of each response made
N = likert value
Nr = Number of respondent

3. RESULTS AND DISCUSSION

3.1. Indigenous communication channels

Table 1: Degree of agreement and disagreement of respondents 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

3.1.1. Decision rule

Mean score that is less than 2.5 is un-agreeable to the acceptance of the channel. The table 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 (3.0), friends (3.0), neighbours (3.5), work/labour group (3.3), rural market places (3.3), Traditional Religious meetings (3.1), 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.

3.2. Extension method communication channel

Table 2: 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

3.2.1. Decision rule

Mean score 2.5 means very effective while <2.5 means ineffective.

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

Table 3: Mean distribution of respondent based on adoption behavior of famers towards the available communication method

Adoption Behavior of Famers	Mean Score(x)	Decision
Towards the available communication method		
Mass Media		
Radio	3.0	Accepted
Television	2.0	Rejected
Print and poster	1.7	Rejected
Computer	1.2	Rejected
Group Content		
Seminar and workshop	1.5	Rejected
Meeting and conference	2.0	Rejected
Group discussion	2.7	Accepted
Demonstration	2.8	Accepted
Individual Content		
Extension work	2.7	
Farmers home visit	2.5	Accepted
Personal letter	1.5	Rejected
Telephone	1.9	Rejected

Source: Field survey,2014

3.3. Barrier instituting common inefficiency

Factors limiting Communication Efficiency among Farmers

Table 4: 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, 2010

3.3.1. Decision rule

Mean score $\leq$ 2.5 shows agreement to the statement while mean score below 2.5 means disagreement. The result of the finding indicates that factors show in the table are barriers to communication efficiency among farmers. Farers admitted 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, lack of infrastructure (2.9). Differences in local leadership and political affairs was not a limiting factor to communication efficiency in the study area.

4. CONCLUSION

120 farmers were used for this study. Appropriate data collected and analyzed. From the result, majority of the farmers were between the ages of 20-60 years. Greater percentage of the farmers were female and most of the farmer were married. ADP extension agents mainly communicated with the farmers. The most available source of information used by the farmers as communication channel in the area were 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 decision especially when it comes to adoption of new technology. Farmers would chose to adopt a new technology of 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 make provision 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.

References

Brin, A. C., Van D. B., & Hawkins, P. (2001). *New ways of developing agricultural technologies*. Wagening University CAT P.16.

Hannah, N. (2001). *The information technology reolution and economic development*. World Bank Discussion Paper 13717. South Asia. Department of Aricultural Operations Division, Washinton D.C.

Humble-Odame, H., & Kassami, A. (2002). *Listening to stake holders: Agricultural research and royal radio linkages.*Briefing paper No. 48; The Hague International Service for National Agricultural Research pp 1-6.

Huesca, R. (2012). *Participation Approach to communication for Development in Lindy Kunot* W.B. (ed). *Handbook of international and internal communication*, 2nd Edition, Thousand Oaks, Saga Publications; Pp 499-517.

Mgbada, J. U. (2002). Effectiveness of information sourcesved farming practices to women farmers in Enugu State, Nigeria. *Global Approaches to Extension Practice*, 2(1), 67-78.

Nwachukwu, V. O., & Osagu, C. N. (2005). Agricultural extension and rural sociology a case study of alimosho local government of Lagos state. *Journal of Business and Organizational Development*, 4, 55- 63.

Ozowa, V. N. (2008). *Information needs of small scale farmers in Africa*. The NigerianExample. Paper Presented at the orientation course for Extension Agents. Enugu State Agricultural Development Programme, April, 2013, Pp 10 – 13.

Rogers, F. N. (1973). *Communication innovation.* Free Press, New York CTA PP. 161.

Umeh, G. N. (2014). A mimeograph on introduction to agricultural extension and rural sociology. An elevation of poverty of alleviation programmes in Imo state. Organized by Imo State University. *African Journal of Social Sciences*, 2(4), 1-10.