

TEACHING AND LEARNING METHODS IN AGRICULTURAL EXTENSION FOR DEVELOPMENT

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Abstract

Extension is a social intervention that involves the conscious use of information dissemination methods to help a people, community /nation form sound opinions and make good decisions. Agricultural extension service is the appointment of itinerant lecturers/teachers to travel around to inform and show small farmers how to improve their production and how to get the best from their production. During the 20th century the focus was on national food security and the impact of extension was on transfer of technology. Then the concept changed as a result of the declining trend of the world food prices to developing the farmers' skill. To address farmers' problems and needs, a lot of approaches have been developed of which all teaching should (usually) be carried out according to the needs and resources of the local community or group. Agric extension services are established for the purpose of changing the knowledge, skills, practices and attitude of masses of rural people, schools, health services in order to empower them, and bring about a positive improvement in their live style and economic activity which will yield a developmental change for their immediate family, community, state and the nation.

Introduction

“Study” or studying involves devoting time to observe something to an extent that you are able to achieve a tangible gain or meaning or result from such devoted observation. It could also be applying the mind to learning and understanding a subject (especially by reading).

“Learning” is the process by which an individual through his own activity attains a change in his behaviour. It is an active process on the part of the learner. The essential role of extension workers is to create effective “learning situations”

“Teaching” means leading people to learn. It is a process of arraying situations in which the things to be learnt are brought to the notice of the learners. Their interest is developed and desire aroused such that they are stimulated to action which brings desired change in their behaviour (Williams *et al*, 1984; Adereti, 2008). For example, farmers can be taught the use and advantage of chemical fertilizers and use of smoking kiln by conducting a kind of demonstration on their field showing them fertilizer application and use of smoking kiln, and later comparing the yield of the fertilized crop with that of the unfertilized crop and product of introduced kiln compared to the local way. After seeing the beneficial effect of the techniques, the farmer is convinced and motivated to action by adopting them.

“Extension” is the act or process of extending. Extension is an educational process of bringing about the maximum number of desirable changes among the people, which involves both learning and teaching and needs some tools or methods commonly known as extension teaching methods.

Study in extension could be of two broad types namely: (a) Adoption Study i.e. to estimate the level to which various farmers or fisherfolk have adopted the technology introduced to them, (b) Impact Study i.e. to estimate the positive gain or contribution this new technology has added to the livelihood, economic life, social life, etc. of the farmers or fisherfolk the technology was transferred to.

Extension could also be in form of study supports, like what obtains on the internet for various groups of study, e.g. seminary extension, where seminary courses are available for study through extension centres (both live classrooms and live cyber classes on the

internet) and independent study (via correspondence, CDROM, etc.). It is also in form of satellite campuses in some parts of the world, all in the bid to extend opportunities in time and place to facilitate the learning of the young and old alike.

It is, therefore, necessary here to understand what is meant by learning, teaching and extension teaching methods. The essential role or main aim of an extension worker is to create effective learning situation in such a way that it brings about a change in the behaviour of the people with the help of a judicious combination and use of different elements. All teaching should (usually) be carried out according to the needs and resources of the local community or group.

Agricultural Extension

Extension is basically an educational function. Its job may vary considerably from country to country, but without exception it will be expected to inform, advice and educate in a practical manner. Agricultural extension is an out-of-school system of education for teaching farmers on how to raise or improve their standard of living by their own efforts using their own resources through provision of scientific knowledge to solve their problems (Williams, 1989; Adedoyin, 2000).

It is a two-way process of taking proven improved technologies from research to farmers and bringing farmers problems back to research for solution. The solution developed by research is in turn passed back to farmers. The crucial role of agricultural extension is, therefore, to create and sustain the research-extension farmers' linkage.

Agric extension services are established for the purpose of changing the knowledge, skills, practices and attitude of the masses of rural people, schools, health services, regulatory agencies, churches, buyers of agricultural products, suppliers of production requisites and many other institutions and services are often involved in activities affecting rural people. Although, extension is one of the components supporting development, it is also supported and affected by the quality of agricultural research (Swanson, 1984). Agricultural extension focus does not end with the principles and process of extension, but its effectiveness for achieving the goal of rural and

urban development (Olawoye, 1999). This goal can be achieved through extension delivery methodologies.

Extension Teaching Methods

The extension teaching methods are the tools and techniques used to create situations in which communication can take place between the rural people and the extension workers. They are the methods of extending new knowledge and skills to the rural people by drawing their attention towards them, arousing their interest and helping them to have a successful experience of the new practice.

An effective learning situation requires the following essential elements.

1. An instructor (an extension worker e.g. an extension officer or village level worker)
2. Learners(the farmers, the farmwomen and youths)
3. Subject matter (the recommended improved practices such as the seeds of high yielding varieties, fertilizers, balanced diet, etc)
4. Teaching material-Flannel board, charts, chalkboard, models, samples, slides,
5. Physical facilities-sitting accommodation, good visuals, etc.

Classification of Extension Teaching Methods

A. According to Use

One way of classifying the extension methods is according to their use and nature of contact. In other words, whether they are used for contacting people individually, in groups or in masses. Based upon the nature of contact, they are divided into *individual*, *group* and *mass-contact* methods.

Individual Contact Methods-extension Methods: Provide opportunities for face-to-face or person-to-person contact between the rural people and the extension workers. These methods are very

effective in teaching new skills and creating goodwill between farmers and the extension workers.

Group-Contact Methods: The rural farmers or people are contacted in a group which usually consists of 20 to 25 persons. These groups are usually formed around a common interest. These methods also involve a face-to-face contact with the people and provide an opportunity for the exchange of ideas, for discussions on problems and technical recommendations and finally for deciding the future course of action.

Mass/Community Contact Methods: An extension worker has to approach a large number of people for disseminating new information and helping them use it. These methods are more useful for making people aware of the new agricultural technology quickly.

Important extension-teaching methods under these 3 categories are listed in Table 3.1.

Table 3.1: Classification of Extension Teaching Methods According to Their Uses.

Individual Contact	Group Contact	Mass Contact
Farm & home visit	Method demonstration & result demonstration	Bulletins
Office calls	National demonstration, Leader training meetings	Leaflets
Telephone calls	Conferences & discussion meetings workshops	Circular letters & Radio
Personal letters	Field Trip	Television, exhibition, Fairs, posters.

A. According to form

Extension-teaching methods are also classified according to their forms, such as written, spoken and audio-visual. Some of the important methods under each of these 3 categories are given in Table 3.2.

Table 3.2: Classification of Extension-teaching Methods According to Forms.

Written	Spoken	Objective or visual
Bulletins	General & special meeting	Result demonstration
Leaflets, folders, news articles	Farm & home visits	Demonstration posters
Personal letters	Official calls	Motion pictures or movies, Charts
Circular letters	Telephone calls, radio	slides & filmstrips, models, exhibits

Educational Methods for Extension Programme


In Extension we deliver education to our target audiences using a non-formal structure that allows more flexibility and options in the way that we teach. Another benefit of the non-formal structure is that creativity and innovative education methods are encouraged. There are a host of educational methods available to use in teaching Extension educational programmes. One way of determining which method to use for a given programme is to examine the purpose of your educational session. For example, there are certain methods that are better suited for teaching new information to your target audience, while other methods are better for reinforcing or expanding their current knowledge of the topic.

Types of Methods

Experiential: These methods allow the audience to gain experience with the information being taught. It involves hands-on activities that utilize the senses. These methods are excellent for teaching new

information. Research suggests that the more the audience can interact with the information being taught, the better they will learn and retain the information. Some experiential methods are given in Table 3.3.

Table 3.3: Some Experiential Methods

Case study	On-farm test
Field day	Practicum
Games, role play	Play
Interactive CD	Demo skits
Interactive video/audio	
Interactive workshop	

Reinforcement: These methods reinforce learning and provide motivation for continued learning. They also reinforce information that you have already taught or that learners already know. Some reinforcement methods that are well suited for Extension are given in Table 3.4:

Table 3.4: Some Reinforcement Methods that are well Suited for Extension.

Articles (EDIS/journal/etc.)	Newsletters
Newspaper articles	Fact sheets
Fax or e-mail messages	Notebooks
Home study kits	Posters
Leaflets or flyers	

Integrative: These methods allow the learner to clarify, discuss, and gain a greater understanding of the information, and integrate new information with existing information. The learners gain increased in-depth knowledge of a topic. Some integrative methods are given in Table 3.5.

Table 3.5: Some Integrative Methods.

Brainstorming	Seminar
Buzz group	Symposium
Conference	Teleconference
Convention	Telephone TA
Forum	Personal visit
Institute	Office visit
Meeting	
Panel	

Extension in Development

True development, according to Okonjo (1990), must mean the development of human being, the unfolding and realization of everyone's creative potential, no matter their gender, as this will enable them to improve their material conditions of living through the use of resources available to them through teaching. It is clear that development does not start with goods and things; it starts with people, both male and female - their reorientation (via training, learning and teaching methods), organization (as a people or group) and discipline (individual/communal).

Summary and Conclusion

A large variety of methods can be used to deliver Extension education programs. Primarily, the type of method used will be based upon the special needs and interests of the target audience. A secondary, but nonetheless important, consideration is the purpose of the education. This paper highlighted the best methods for teaching new information (experiential), reinforcing and motivating learning, as well as expanding existing information. Regardless of the method chosen, proper planning and creative implementation are key to successful

programming and development of the individual or group and country at large.

Rural development is, therefore, a complex process in which various response options to rural problem situations need to be carefully studied. It requires thorough analysis of the situation at hand and should always involve all major stakeholder groups concerned. Rural development can only be promoted not only in terms of economic growth but also in terms of environmental sustainability, administrative efficiency, participation and empowerment of the people and/or community and eventually the nation as a whole.

According to Food and Agricultural Organisation, FAO (1996), a reshape of food security with greater focus on household and individual food security will improve the incomes of small-scale farmers. As a result, more countries, like Nigeria, are refocusing their attention and resources on improving rural livelihoods to achieve food security and improve the quality of life of rural families at the household level. Increasing farm income and rural employment can have immediate and direct impact on increasing food security at the household level.

References

- Adedoyin S. F. (2000). "The Role of Extension in Agricultural Development," in "Issues in Agricultural and Rural Development," Proceedings of the Training Workshop on Agricultural and Rural Development held at Gateway Hotel, Ijebu Ode, Ogun State, Nigeria.
- Adereti, F.O. (2008). "Teaching and Learning Process in Extension," in Akinyemiju O.A. and Torimiro, D.O. (eds.) *Agricultural Extension, a Comprehensive treatise*.
- Boone, E.J. (1985). *Developing programs in adult education*. IL: Waverly Press Inc.
- Okonjo, K. (1990). "Rural Development in Nigeria: How Do Women Count?" in *Women in Nigerian Economy*, Enugu: Acena publishers.
- Olawoye, J.E (1999). *The Role of Fisheries Extension in Technology Transfer in Achieving Sustainable Fishery System*.

Richardson, J. G., Jenkins, D.M. (1999). *Extension education: Process and Practice*. NC Cooperative Extension System Publication, NC State University.

Swanson, B.E. and Clear, J.B (1984). *Agricultural Extension: Reference Manual*, Rome: FAO of the United Nations.

Williams, S.K.T., Fenley, J.M. and Williams, C.E. (1984). *A Manual for Agricultural Extension Workers in Nigeria*, Ibadan: Les Shyraden.

Williams, S.K.T. (1989). "Extension Services within the Strategy of agricultural Development in Nigerian in the 1990s," Sixth Annual Lecture Series, Ilorin: Agricultural and Rural Management Training Institute (ARMTI).

www.insinet.net/jas/2007/282-286.pdf

www.krishiworld.com

www.seminaryextension.org/study.asp.

www.elearningcentre.co.uk