



Imperativeness of Training and Re-Trainig of Extension Workers for Efficiency in Agricultural Technology Transfer

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ABSTRACT

The job of Extension teachers is a complex and challenging one. It demands that he plays three vital roles, he is expected to be a “scientist”, “trainer” and “friend” to clientele. It also involves disseminating of relevant technology to Farmers in meaningful ways. To be effective, the Extension teachers need to be acquainted with the knowledge of not only what is contained in the new technology, but also the various and effective methods, principles and strategies to communicate the various innovations in a meaningful and functional ways. The task of in-depth training for agricultural extension workers therefore becomes imperative in other to achieve the goals of extension education at the grassroots. Benefit of training, criteria for training and appropriate training methods in extension were thoroughly discussed. To be successful in Agricultural technology transfer, Extension workers must understand farmers learning needs, problems, priorities, more importantly obstacles to adoption. These can only be achieved through training and re-training of extension workers for efficiency in technology transfer. Training is crucial to the performance of the duties of extension workers as knowledge gained through training keeps the extension workers abreast of new development in their profession. Knowledge sharing is also the main tool used to achieve success in modern economies. It is only when extension workers are given the opportunities to upgrade their current level of knowledge that they can be competent to train farmers.

Key words: Technology transfer, Extension teachers, Training and Re-training.

INTRODUCTION

Agriculture is the cultivation of land to produce food and other important life-support commodities. To alleviate rural poverty by ensuring food security and sustainable improvement in people's well-being, research-based technologies must reach and be widely

adopted by farmers. Extension workers may know the solution to problems confronting farmers, yet be unable to communicate these solutions if they lack effective communication skills, and do not apply sound extension education principles and methods.

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Training and re-training is an effective instrument to equip the Extension workers in acquiring communication skills. One of the effective means of transforming agricultural potentials into reality is efficient agricultural extension system. Adequate and qualitative work force is a pre-requisite for effective extension service¹². The quality and effectiveness of extension service also depend on the knowledge and skill of the frontline extension workers, namely, the Field Extension Workers (FESs), and the Block Extension Supervisor (BESs) who have mandate to train farmers. This is premised on the fact that knowledge is the motor of growth in all sectors of any economy, including agriculture. The capacity to create, share, apply and exploit knowledge among farmers is the primary duty of extension workers.

Governments at various level have come up with different programs aimed at delivering improved agricultural technologies to farmers⁹. So also many Non-Governmental Organizations and input agencies are involved in extension service delivery, all with the aim of transferring improved agricultural production technologies to farmers. For extension workers to be effective in technologies dissemination, they must have the necessary knowledge and skills themselves. Such knowledge and skills should also be updated and upgraded from time to time, in order to keep pace with dynamic realities of agricultural knowledge. According to Singh¹⁸ regular training of extension workers is one of the major features of the Training and Visit (T&V) extension system which is widely adopted by the Agricultural Development Programmes (ADPs) in Nigeria. Training and re-training help in educating extension workers about new technologies as knowledge is always dynamic. Trained and knowledgeable extension workers also command confidence in terms of addressing farmers' problems⁸.

Communication is very important in human interaction, without it there cannot be any meaningful human interaction. Therefore, to have a meaningful technology transfer and

adoption with positive result among farmers there must be effective communication. All actions, activities and interactions that take place involve communication. Communication therefore is the basis for all our actions, reactions and interaction.

Today, communication is greatly seen as a very vital resources input in all business, organizational activities, and interactions. In recognition of this important active role, Soola¹⁹ reported that communication scholars, organizational and business executive have variously describe communication as “lifeblood” of an organization, the “harmonizer” of its seemingly disparate components, the “lubricant” of its intricate machinery, the “live-wire and nerve-center” of its activities.

The success of an extension worker is determined by his ability to communicate good ideas to farmers. Good communication consist of giving timely, accurate and clear information, create understanding, impart knowledge and help farmers gain a clear meaning of the knowledge of the subject matter under discussion. Communication techniques in extension can be referred to as means and methods that extension workers use to influence the thinking actions and feelings of farmers.

From the above explanation Communication can now be seen as a conscious attempt to share vital information and ideas with others. It can be said to be process by which people exchange ideas, facts, feelings or impression so that each gains a common understanding of the meaning intent and use of message.

The effective development of the human resources of an organization is one of the most vital contributions to the future and long-term growth and survival of such organization. Through management of an organization, have been aware of the power of “training” to motivate, modify, educate and improve the quality of their human resources, yet until very recently and perhaps because of government intervention, it was one of the most ill-managed areas of modern organization.

Regrettably, the concept of staff training seemed to be vaguely understood. Some even state that Employees have been adequately trained and that was why they acquired their certificates which the employers were paying highly for.

Such school of thought believed that to interrupt the work and send employees on training would amount the employers the services of highly paid employees. Peter Drucker⁶ however emphasized that has to provide today, the men who can run it tomorrow, it has to renew and upgrade its human capital and resources.

Education Training and Development in Extension

Extension teaching deals with the conveyance or passing across of new skills, technology, techniques or new methods of production in agriculture that will ultimately improve the living standard of the target audience. Farmers are referred to as adult learners and extension workers as a teacher.

Agricultural extension is based on the philosophy that rural people (farmers) are intelligent, capable and desirous of acquiring new information and making use of it for their family and community improvement. This assumes that direct approach to the people is required, and that friendly relationship and mutual trust between the extension worker and the people is assured. It also means that the extension worker must have a thorough knowledge of the people's problem.

Extension education is, also, based on the belief that the aims and objectives of extension are not static. These must be modified on the basis of individual and societal needs. It is the duty of practitioners of extension to determine people's needs and to help them to acquire knowledge and subsequently to inspire them to action. The acquisition of knowledge as a basis for action is essential since it is the basic philosophy of extension to teach people how to think and not what to think.

Through the acquisition of ability to think and to take positive action on the basis of mature deliberation, the individual can accept

new ideas and practices which will help him to attain a fuller and more satisfying life.

A sound extension philosophy always looks ahead. We live in changing times and our extension philosophy must accommodate such changes. This means that extension must have a definite goal. In addition, each extension worker must have his personal philosophy consisting of what he believes about people and his work. If his philosophy is a sound one, it can weather whatever storm he may encounter whenever he finds himself.

Education has been defined as the production of changes in human behavior. Also education is systematic and continuous way of instructing a person with a view to imparting knowledge into such person so as to develop him mentally, physically and spiritually.

Extension workers are continuously striving to bring about changes in the behavior of farmers and their families. They want farmers to discard the unproductive old method of farming and stick to new techniques. They try to show farmers merit of better improved seed/seedlings, of chemicals, fertilizers of effective insecticides and with the profits that will follow their uses to provide more and better food for their families, better clothing, housing and happier living.

Training in the other hand is a form of specialized education aimed at giving the trainee a particular or specialized knowledge, skills, and attitude which he must possess to effectively perform in a given position that is on a job. For instance extension workers required proper training and re-training on handling ICT in disseminating relevant information to the farmers. Adeniran³ posited that the major constraints to the use of ICT tools include inadequate training in ICT usage in research and poor ICT infrastructural. Jucious Defined training as the process of acquiring specific skills to perform a job. It helps people to become qualified and proficient in doing some jobs. Usually an organization facilitates the employees' learning through training so that their modified behavior contributes to the attainment of the organization's goals and objectives. Training

is the process of teaching, informing or educating people so that They may become as well qualified as possible to do their job and They become qualified to perform in positions of greater difficulty and responsibility. Development is concerned with specific programs of actions designed to prepare and groom employees' with particular education and training for higher responsibilities. Development therefore is involved with education, training in special skills knowledge and practical experience especially designed for individuals to enable them grow after having successfully performed in a given position at a given level.

Complimentary roles of Education, Training and Development in Extension

From the above definitions, it will be seen that without education, there can be training and without the two, there can be no development, Education teaches the basic knowledge needed to interact within the community. The individual needs that education for the training that sets him up by giving him the specialized knowledge and skills he requires to earn decent living, while development allows him unfettered growth by further application of his skills, knowledge, experience and other hidden talents possessed by him.

Flippo, differentiated between education and training, locating these at the two ends of a continuum of personnel development ranging from a general education to specific training. While training is concerned with those activities which are designed to improve human performance on the job that employees are at present doing or are being hired to do, education is concerned with increasing general knowledge and understanding of the total environment. Education is the development of the human mind, and it increases the powers of observation, analysis, integration, understanding, decision making, and adjustment to new situation.

Identification of Training Needs for Extension Workers

Extension training is not something to embark upon as fad. The need for a training program should be carefully determined in term of

specific problems requiring specific solutions. The problems may be present or anticipated we need to determine the need for any training program in order shift our thinking about educational need from the realm of assumption and wishful thinking to a more accurate understanding of the group and educational experiences as well as their relationship to each other. Before one can successfully determine training needs, certain fundamental questions require answers. Is it an individual or group of workers? Why do they need the training? What type of training is required? Answers to this questions will ease the problem of determining the train need envisaged. Whatever one does in promoting training preventive training is better than curative training.

Methods of identifying Training Needs of Agricultural Extension Workers

- a. **Job Description;** The job description would help to identify the specific training the extension worker's needs. In extension system it appears to be reluctance to prepare job descriptions, the reason is that extension activities are complex, and differ from season to season another reason is that extension responsibilities shift so often that a job description is very difficult to state. But notwithstanding, if we are to have effective training system in extension services, job descriptions for all categories of positions are indispensable.
- b. **Organization, Operations, and Man Analysis;** This is another method, that studies the entire organization or agency, including its objectives, its resources and their allocation. Operations analysis deals with what an employee must do to perform a job effectively; it focuses on the task, not the man. Man analysis emphasize the individual employee, determining the skills, knowledge and attitude he will need to develop. The three are closely related, and cannot be used separately.
- c. **Critical Incident Technique;** It is a set of procedures for collecting direct observations of behavior in order to solve practical problems and develop

psychological principles. The incident to be noted reveals the subject's behavior at work, rather than his general traits.

Types of Extension Training

Training may be broadly be categorized into two types. Pre-service training and in-service training.

- ❖ **Pre-service training** is more academic in nature and is formal institutions of following definite curricula and syllabuses for a certain duration to offer a formal degree or diploma.
- ❖ **In-service training**, on the other hand, is offered by the organization from time to time for the development of skills and knowledge of the incumbents.

Pre-service Training

Pre-service is a process through which individuals are made ready to enter a certain kind of professional job such as agriculture, medicine or engineering. They have to attend regular classes in a formal institution and need to complete a definite curriculum and courses successfully to receive a formal degree or diploma. They are not entitled to get a professional job unless they earn certificate, diploma, or degree from the appropriate institution.

There are two types of pre-service training for agricultural staff.

- ❖ Degree level (Bachelor's degree in agriculture or related field), which is usually offered for four years by a university or agricultural college, and
- ❖ Diploma level, which is mostly offered by the schools of agriculture for a period of two or three years.

In-service Training and Staff Development

In-service training is a process of staff development for the purpose of improving the performance of an incumbent holding a position with assigned job responsibilities. It promotes the professional growth of individuals. "It is a program designed to strengthen the competencies of extension workers while they are on the job". It is a problem-oriented and time-bound series of activities which develop a sense of purpose, broaden perception, increase capacity to gain

knowledge and mastery of techniques. Five categories of in-service training in extension are Foundation training, Induction or orientation training, On-the-job training, Refresher or maintenance training and Career development training. All the types of training mentioned above are very essential for the proper development of extension workers throughout their life

Extension Training Methods

Agricultural extension involves a great deal, more than simply walking onto a farm and telling the farmers about a new technology. Extension is a highly sophisticated technique which demands a considerable range of skills. The importance of training methods and strategies cannot be overemphasized. This is because it promotes and facilitates learning when used appropriately and hinders learning when used otherwise¹³. Since teaching is deliberate and planned activities, the trainer is expected to spend a considerable amount of time thinking about what to teach, what method to employ? These are clear indications that the trainers must give training method or strategies sufficient thought and attention. A training method is a strategy or tactic that a trainer uses to deliver the content so that trainees achieve the objective.

Oyetunde and Famwang¹⁴. Defined methods as overall plan for the orderly presentation of content or learning materials. Oyetunde and Piwuna¹⁵ see it as the means by which learners are kept interested in activities which result in learning. However, teaching/training is a way or an act of imparting knowledge it could also be referred to as process of guiding and directing an individual to acquire new skills.

Classification of Extension Training Methods

Extension training methods guide the learning process so that the trainees learn more and better. A good Extension trainer must not only have in his command a varieties of training methods, but must know also where to use them, when to use them and how to use them to achieve best results.

There are many training methods, but not all of these are equally suitable for all topics and in all situations. To achieve the training objective, a trainer should select the most appropriate training method for the content to involve the trainees in the learning process

In making a choice of what methods to be employed, the following criteria's should be put into consideration;

- The objectives of the course
- The type of training
- The course content
- The level of the trainees
- The number of trainees
- Total time available
- The capabilities of the instructors
- Training equipment and facilities available.

According to Bass and Vaughan, training methods should be selected on the basis of the degree to which they do the followings;

- I. Allow active participation of the learners
- II. Help the learners transfer learning experiences from training to the job situation.
- III. Provide the learners with knowledge of results about their attempt to improve.
- IV. Provide some means for the learners to be reinforced for the appropriate behavior.
- V. Provide the learners with an opportunity to practice and to request when needed
- VI. Motivate the learners to improve their own performance.
- VII. Help learners increase their willingness to change

These criteria indicate that a single training method will not satisfy the objectives of a training program, a combination of any of the following methods may be adopted.

- Group discussions'; The trainer leads the group of trainees in discussing a topic
- Lecture method;
- Individual; Trainees are attended to individually
- Role play; Trainees act out a real-life situation in an instructional setting.

- Field visit and study tour; Trainees are given the opportunity to observe and interact with the problem being solved or skill being learned
- Role model
- Demonstration; The trainer shows the concept steps for completing a task or shows an example of a correctly completed task.
- Assigned reading; The trainer gives the trainees reading assignment that provide new information.
- Exercise; the trainer assigns problem to be solved either on paper or in real situations related the topic of the training activity.
- Case study; the trainer gives the trainees information about a situation and directs them to come to a decision or solve a problem concerning the situation.
- Field visit and study tour; the trainees are given the opportunity to observe and interact with the problem being solved or skill being learned.
- Mass method; the trainees are instructed by the use of Visual and Audio visual Aids
- Instructor presentation; the trainer orally present new information to the trainees, usually through lecture. Instructor presentation may include classroom lecture, seminar, workshop, and the like

Experience has shown that no single method is adequate and a combination of methods has been able to achieve the desired objectives depending upon the type of training being undertaken. Many researchers also back it up that no one method is effective under all situations. The combination of appropriate methods is often recommended^{1,16}.

The use of one or two methods in extension training repeatedly may result to boredom thereby making training uninteresting and dull. Therefore to make training effective, the extension trainers needs to use different approach or varieties of methods. In some cases some extension trainers may have favorite methods, in which they feel more confident and effective, the teaching=learning process will be more attractive and helps dispel any possible boredom. To further

stimulate trainees interest, the trainers should use varieties of teaching aids in the course of training.

EVALUATION OF TRAINING EFFECTIVENESS

There is need to find out, at the end of each course, if our objectives are achieved and if any benefit has actually accrued to both individual and the organization from the training program venter undertaking.

CONCEPT OF EXTENSION EVALUATION

Evaluation can be defined as the process of determining the value or amount of success in achieving a predetermined objective. This includes the following steps;

1. Formulation of the objectives
2. Identification of proper criteria to use in measuring success and
3. Determination and explanation of the degree of success.

Benefits of Extension Evaluation

- ✓ The evaluation process makes it necessary to state the objectives of the program and to plan carefully.
- ✓ Program effectiveness-Evaluation of program progress reveals strengths and weaknesses and accordingly helps to improve the program.
- ✓ Eye opener to the teacher (extension workers)- Makes the extension worker aware of any needs for improvement.
- ✓ Public relation- Evaluation provides objective evidence and reliable information to be given to the public on progress and justify financial support.
- ✓ Extension personnel- Through program evaluation, extension personnel gain satisfaction by knowing the extent of achievement.

Advantages of Training to Organization

There are a number of advantages to be gained by organization from training employees some are tangible and can be measured directly in term of naira and kobo while others are intangible. The first question to ask is what does it cost? The cost is offset by the gains “It costs money to train, but it costs more not to train”.

A few of the tangible results of training are as follows;

- I. Increase learning rates
- II. Increased quality of performance
- III. Reduced no of accidents
- IV. Increase production
- V. Increased extension workers and farmers satisfaction

Advantages of Training to Employees

The trained employee is not only more valuable to the organization, but he worth more to himself. What are some of the incentives which can he used to motivate the trainee to learn?

- I. Increase learning power
- II. Prepares extension workers advancement
- III. Enhances extension self- respect
- IV. Increases felling of security
- V. Economic independence

CONCLUSION

There can be no shortcut to effective training, nor can it be bought at cut-rate bargain basement price. Training programs must be sufficiently financed. Where they have been, they have yielded high returns in increased productivity, high morale, and organizational pride.

- ❖ Agricultural extension deals with people and trainees must be taught how to approach farmers with sympathetic understanding.
- ❖ Planners must be made to realize that highly trained extension workers are capable of developing unexpected resources for the benefit of the whole country. Because of their training, they will also be able to assist in preserving natural resources which may otherwise be plundered by selfish individuals.
- ❖ Extension workers must be professionals, and have a professional approach to their work. This entails through training, adherence to high ethical standards and regular refresher courses to keep them abreast of new development.
- ❖ Training of Agricultural Extension workers should not be confined to lecture hall only, it should include session of

practical demonstration for maximum comprehension.

- ❖ If we wish agriculture to expand, and farmers to become more prosperous and be living fuller and happier lives, it will be necessary to completely recast the training programs of most of our universities and training centers.
- ❖ Universities and Training centers should produce extension workers who are professional officers, technically equipped to give farmers accurate advice on matters of plant and animal production, and mentally equipped to understand their farmers and their families so that they can motivate them wisely and sympathetically.
- ❖ Planners and politicians must be made to recognize the importance of well-trained extension officers and of the work they do, and pay them accordingly
- ❖ There is need to evaluate, at the end of each training course, if the objectives are achieved and if any benefit has actually accrued to extension workers and the organization from the training programs
- ❖ Extension workers should be encouraged to go for training using both the regular programme training and short courses/refresher courses.
- ❖ The training of extension workers should cover all subsectors of agriculture, such as animal husbandry, engineering, crops, soil, breeding, fisheries, home economics e.t.c.

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