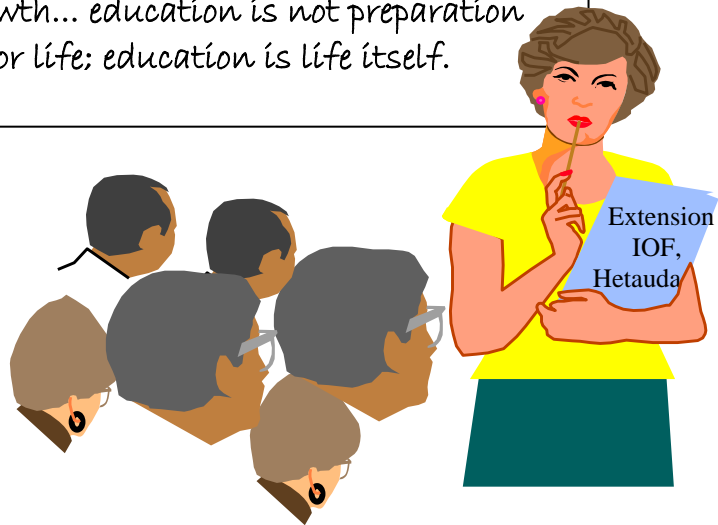# FORESTRY EXTENSION

B. Sc. Forestry

Extension Education

Education is a social process... Education is growth... education is not preparation for life; education is life itself.

Extension IOF, Hetauda

Institute of Forestry,
Hetauda Campus, Hetauda
2063

1.0   INTRODUCTION TO EXTENSION EDUCATION

EVOLUTION OF EXTENSION

The 'Extension Education' was derived from the practice of British University of having one educational program within the premises of the university and another away from the University buildings. The term *Extension Education* was first used in England, in about 1873, to teaching activities away from Universities and their regular campuses. The program conducted outside the University was described as 'Extension Education'. The expression connoted an extension of knowledge from the university to places far beyond. The term, "Extension Education", has since been popularized in the United States, and is rapidly developing in all parts of the world. In most countries the development of extension work started after World War II and was accelerated by the work of the United Nations under the program of Food & Agriculture Organization (FAO) of the United Nations, the Colombo Plan, the Unilateral Programs of Technical Co-operation of the United States and other countries, the help of many private organizations and finally, the pressure of necessity arising from the needs of newly independent and emerging nations. In every country, an extension program is in practice in one or other form. Its use in various aspects shows the value and necessity of adopting methods and structures depending on local conditions.

1.1   PHILOSOPHY OF EXTENSION EDUCATION

It is a set of general principles or laws of a field of knowledge or activity etc; such as a philosophy of life or a philosophy of extension work. The philosophy of extension stars with the concept of extension as an educational activity. The extension system is based on the philosophy that rural people are intelligent, capable and desirous of acquiring new information and using it for the improvement of family and community. It presumes that if farmers fully understand their relationship to the natural resources and other factors they deal with, it is possible for them to attain personal satisfaction in their way of life. Another philosophy is that Extension is to teach people to help themselves, rather than have something done for them. Extension Service is to teach people to determine their own needs and the solution of their own problems; to help them to acquire knowledge and to inspire them to action. The basic philosophy of extension education is to teach people "how" to think, not "what" to think.

1.2   PRINCIPLES OF EXTENSION EDUCATION

The principles are a set of guidelines essential to conduct the extension work.

☞ Extension education begins where the rural people are:
☞ Extension workers must win the confidence of people
☞ Programs should be prepared with the local people
☞ Programs must express the views of the people and address their immediate needs
☞ The subject matter should be purposive, relevant and meaningful to the people
☞ Sound extension programs use a variety of teaching methods
☞ Take advantages of other organizations by involving them in an extension program

1.2.1   OBJECTIVES OF EXTENSION EDUCATION

The objective is an end toward which efforts are directed or conditions to be attained. Every extension program should have clearly defined objectives. *"Extension is educating the villagers in changing their attitudes, knowledge and skill. Extension is the development of the individual, village leaders, and their society in their day-to-day living. It is a continuous educational process in which the villagers and the extension workers contribute to receive."*

"SUNDAR"

"*It is the function of the Extension Service to teach people to determine accurately their own problems, to help them to acquire knowledge and to inspire them to action, but it must be their own action out of their knowledge and convictions*." The objective of all extension work is to change people's outlook toward their difficulties and reach a permanent solution of the problems, which leads to the improvement of community development.

1.2.2   DEFINITIONS OF EXTENSION EDUCATION.

Extension functions as a two-way communication between client and source of information.

☞ *"the extension education as out-of-school system where people learn by doing work. Its fundamental objectives being the development of people, it can be taken as the process of extending useful and practical information through a broad range of methods to persons in out-of-school situations*."

☞ "*The process of extension education is one of working with people, not for them; of helping people become self-reliant, not dependent on others; of making people the central actors in the drama, not stage hands or spectators; in short, helping people by means of education to put useful knowledge to work for them*"

☞ It is "*an applied science consisting of contents derived from researches, accumulated field experiences and relevant principles drawn from the behavioral sciences synthesized with useful technology in a body of philosophy, principles, content and matters focused on the problems of client system*

☞ "*Forestry extension is concerned with Forestry Education assisting farmers to bringing about continuous improvement in their physical, economic and social well being through their individual and cooperative efforts. It makes available to the farming community the scientific and other factual information and training and guidance to the solution of the problems in forestry including management of forest, selection of suitable species, silvicutural operation, harvesting the crops, and protection against diseases and pests*".

Thus, extension tries to bring about changes in human behavior -

☞ *Changes in knowledge, or things know;*
☞ *Changes in skills, or things done;*
☞ *Changes in attitudes, or things felt;*

Distinguishing Features of Extension Education

There are very contrasting differences between the Extension (non-formal) education and class-room (formal) education.

➢ In formal education teacher is concerned with the educational growth of *children & youth preparing for life,* while the extension teacher works with *adults & youth* in actual *life situations.*
➢ Participation in extension activities is *voluntary,* while in schooling attendance is *compulsory.*
➢ In extension education, the *learners vary* (more than in formal education) in age, educational level, experience, interest, intensity of need, level of living etc. There may also be difference in their value *system* and *cultural background*.
➢ Adults generally have *preconceived ideas* and notions because of their previous experiences. The extension teacher has to wipe off these notions and convince the people about the new ideas.
➢ The plan of the extension teaching (unlike that of formal teaching) should be *flexible* to meet the different needs and demands of the learners. In the formal education, pupils adapt themselves to the curriculum offered.
➢ There is no fixed curriculum. Extension teaching helps people to discover, analyze and solve their problem, while in the formal type of education, students study prescribed subjects.
➢ Formal teaching is largely vertical, while extension teaching is largely horizontal.

1.3 Linkage of Extension Education with Community Development

Extension and community development can be defined as "process" – courses of action, procedures, or a series of steps – that lead to change in society.

"Community development is a democratic social process whereby citizens participate fully in improving their own environment. This implies that it is possible to follow an orderly progression from exploration and initiation through study and discussion to action and evaluation. It puts the emphasis, too, on the local group, and on local initiative, on local participation. Finally it puts the emphasis on full responsible participation and action by all the people affected.

Extension:
Extension is not only 'information dissemination' (to provide new information). It is a combined effort of:
☞ Information dissemination
☞ Policy administration, plans and strategies
☞ Technology Transfer and
☞ Education to make people aware, help people learn to improve their existing condition, working with people focusing on their current interests and needs.

Community Development:
Community: involving quality in human relationship; working with a common or shared set of values, helping one another.
Development: Gradual and planned progressive change. Community development is defined as:
☞ Community as the unit of action.
☞ Community initiative and leadership as resources
☞ Use of both internal and external resources
☞ Inclusive participation for task accomplishment

1.4 Extension Education vs. Community Development

Extension Education	Community Development (CD)
1. Emphasizes education a means.	1. Community Development is an end objective.
2. Quite effective when carried out with individuals on a one-to-one basis.	2. Relatively more effective to involve individuals in groups.
3. Decisions are made largely by the individual.	3. Decisions are made largely by the group or community.
4. Enhances individual development to attain his or her goals.	4. Enhances the ability of groups of individuals to attain community social and economic goals.
5. Teaches about matters concerning the individual and the family.	5. Teaches about matters relating to community or region.
6. Little or no emphasis on shaping infrastructures.	6. Emphasis on shaping infrastructure.
7. Agencies instruct individuals directly in specialized subject matter areas in which they have expressed interest.	7. Agencies attempt to draw the instructional agencies together into a working team to help coordinate the instruction of the subject matter and its application in the community setting.

"SUNDAR"

☺

2.0   COMMUNICATION PROCESS

Extension education can only be carried out in a most efficient and effective way if the massage is communicated properly. Communication lies at the core of the teaching and learning process, and plays a vital role in transferring the ideas, skills, or aptitude to people accurately and satisfactorily. The extension program can be successfully driven to its goals if there is a sound and appropriate communication process in practice. It also helps bridge the gap between the source of knowledge/skills and the community by creating a bond among extension workers, researchers and target population.

Communication is a process of change. It is one of the most basic functions of extension service. The extension worker can make a good decision, think out well-conceived plans, and establish a sound program and well linked by the people. In order to achieve desired results, the communication necessarily be effective and purposive.   .

2.1   Definition

➤ *"The process by which an individual (communicator) transmits stimuli (usually verbal symbols) to modify the behavior of other individuals."*
➤ *"Communication is the discriminatory response of an organism to a stimulus. This definition says that communication occurs when environmental disturbance (the stimulus) impinges on an organism and the organism does something about it (makes a discriminatory response). If the stimulus is ignored, there has been no communication. The test is a different reaction of some sort. The message that gets no response is not a communication".*

2.1.1   Importance of Communication

Planning which is one of the most important functions of Extension Education requires extensive communication among people concerned. Moreover, effective communication is important in executing extension program and then controlling the activities with the help of feedback information. It satisfies the need of self-expression of the people who work and also those who get the work done from others. Effective communication leads to higher level of performance and job satisfaction. With effective communication 'We come alive', 'We gain at work, at home and in the society'. Communication is a very effective media for providing job satisfaction to people on the job. Good communication is a continuous, planned, and well-supported effort that conveys a philosophical aspect of the extension, its objectives, needs and activities of performance in an impressive and successful way.

In brief, communication helps in achieving the objectives or the goal of the extension education program by ensuring, as far as possible, complete understanding to get things done confidently and independently.

2.1.2   Objectives of Communication

A sound extension program depends on effective communication to achieve desired objectives. Since extension workers work through others, all their acts, rules, activities and procedures must pass through some sort of communication channel. The purposes of communication are:

➤ To develop information and understanding which are necessary for adoption of innovation.
➤ To foster an attitude which is necessary for motivation, co-operation and job satisfaction.

4

- ➢ To discourage the spread of misinformation, rumors, gossip, and to release the emotional tensions of people.
- ➢ To prepare people for change by giving them the necessary information in advance.
- ➢ To encourage ideas, suggestions for an improvement in the condition of the people.
- ➢ To ensure such free exchange of information and ideas as will assist people in understanding and accepting the reasonableness of the information and practices given by extension workers.
- ➢ To satisfy such basic human needs as the needs for recognition, self-importance and a sense of belonging.

A good communication not only ensures the transmission of information and understanding among people, but also unifies group behavior, which provides the basis for continuing people co-operation.

2.2   Interpersonal Communication

An effective communication depends on the know-how of the communication process and all the related factors concerning it. The knowledge of the factors enables analysis of the situation, and search for a solution to problems in order to improve job performance. Effective communication is a flash of lightening and even often more illuminating. It enables us to see others and make ourselves seen and known. Through Interpersonal communication the information is conveyed in such a way that it fulfills a particular need of the client as well as it can be effectively applied by the client to his or her own situation.

Communication is not a static phenomenon. It is a most dynamic and complicated phenomenon. Communication sometimes fails to accomplish its intended purposes because of an unawareness of the receivers and the inappropriate selection of communication media. Communication is made up of different parts and all play an important role. So, all the parts of the communication should be taken into consideration for effective results.

The processes involved in communication are:

1. **Communicator**: It can be any group, or even any institution that initiates a message. The initiator of a communication is called a communicator. The reason for communicating the research-based knowledge is to help people solve problems and improve their conditions.
2. **Message**: It is a package of information, contents of subject matter, or a format of objectives to be sent. The message should be properly chosen to fit the situation and the target groups, so that the communicator can make himself understood to the audience.
3. **Channel**: It is the media for transmitting the message from the source to the intended audience. It includes one, or all, means by which messages are transmitted and establishes the physical link between the one who sends the message and the recipient of that message. The media can be used in a variety of ways depending upon the purpose, time and situation. It can be in printed forms, electronic devices, radio, television, and films.
4. **Treatment of Message**: The treatment is design of method for presenting messages. Designing the methods for treating messages does not relate to formulation of message or to the selection of channels, but to the techniques used to get the information across to the audience.
5. **Encoding and Decoding**: **Encoding** is the process by which the communicator's ideas become converted into symbols that comprise the message. Encoding really involves the communicator making a prediction about the audience.
Decoding refers to the process whereby the audience interprets the symbols contained in the message. Information, in and of itself, has no meaning. It becomes meaningful only when people attribute meaning to it by interpreting.

"SUNDAR"

6. **Audience**: It is the recipient, final and most important link in communication without which the whole communication process is impotent. The audience is the receiver of the messages. In good communication, the audience aimed at, is already identified by the communicator.

7. **Audience Response**: The response by an audience to message received is in the form of action to some degree, mentally or physically. Action, therefore, should be viewed as a product, not as a process, it should be dealt with as an end, not as a means.
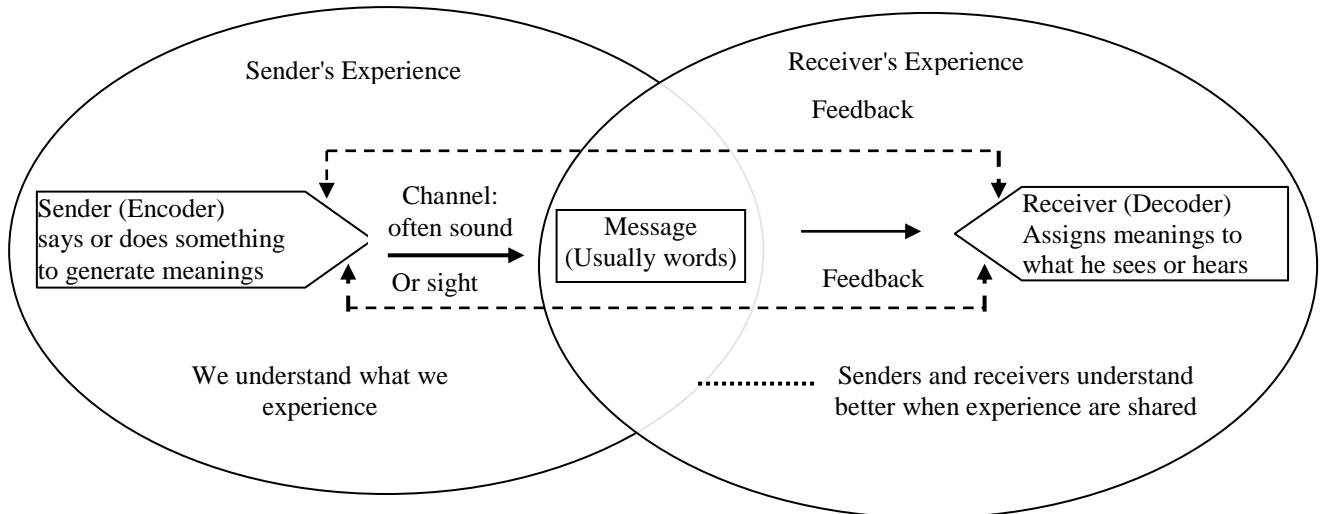
Understanding Communication

Figure : Some requirement for interpersonal Communication

Effective communication must take all of those variables into consideration. Many conscientious communicators carefully plan what they want to say or write but neglect the nonverbal channels of communication. That easily results in being misunderstood, experiencing disappointment, and failing as a communicator. In interpersonal communication the message sender should be sensitive to how the message receiver responded to the message sent and should be guided accordingly. Those who are sensitive to this point of view and serious about becoming effective communicators must try to get some idea of how well or how poorly they have done. In the interpersonal communication situation, we can partially detect how the encoding is going by how the receiver looks, by what he says, or perhaps by what he does. Like all of us, message receivers will sometimes say one thing and do another.

Trying to get feedback is a lot better than not getting any reading at all. But, it is still no way to develop accurate understanding. That requires true *interaction,* sometimes referred to as the goal of interpersonal communication. This simply means that message senders and receivers are actually listening to one another, and each truly considers what the other says in each subsequent response. It also means that each is given an opportunity to explain further. Thus, the message receiver first in line is given a second chance to understand; the message generator (communicator) may proceed by saying "by this I mean," explaining further and giving examples. This is in marked contrast to the superficial two-way communication of two people taking turns talking with neither listening. All of us have witnessed such verbal exchanges. It really doesn't deserve being called communication. Each really talks past the other because each listens only enough to know when he can start talking again.

The interaction concept has universal applicability to interpersonal communications in which accuracy of mutual understanding is a major concern. It has special significance for information flow between researchers and farmers who use the research-based information. Continuing exchanges

between the two groups, either directly or via intermediaries, help to insure that farmers get the information they want and that the research staff f members continually learn what they should research on behalf of farmers.

2.3   BARRIERS TO COMMUNICATION

The receiver is the most important component in the communication process. The communication should be made from the receivers' point of view rather than emphasizing the message from the source point of view. The success of a good communication program depends on knowing the audience properly. Without knowing the audience, the message given may lead to misconception and misunderstanding and this is perhaps the greatest barrier in communication. Due to the misunderstanding of the message, the receiver can have an entirely different understanding and notion than what the sender believes. Words - the most common forms of communication- are often misunderstood because the sender fails to make them absolutely clear or because some are intended to be obscure.

Other communication barriers are noise and the use of difficult and eloquent words that the receiver does not understand. Communication of inaccurate, confusing information or not up-to-date information distracts people from the extension-teaching program. Communication of the message with an unclear voice, fear, and unusual facial expression also cause negative feeling toward communication.

So, the worker must be aware of these barriers as well as the strengths and weaknesses of all communication methods. A good communicator avoids too many assumptions about the receiver and tries to know the audience's status, their needs, experiences, level of knowledge, and all relevant information before teaching them. This is important because much misunderstanding results from faulty communication, which creates problems in the acceptance of the extension teaching practices. Good public relation can be established by saying the right things, at the right time, in the right way, to the right people. Good communication is the crucial factor that will increase the effectiveness of public relations with Extension Service.

2.4   STRATEGIES FOR EFFECTIVE INTERPERSONAL COMMUNICATION

Effective communication must take all of those variables into consideration. In communication what counts is not what people are told but what they accept. As such there is no universal or even a standard technique of effective communication since it depends upon individuals' personality, characteristics, attitude and nature. This is also influenced by individuals' environment and social customs. Golden rule of communication should be to communicate as much as you can. Following are some of the guidelines to effective communication:

- ➢ *Audience*: In order to communicate it is important to know your audience. If the audiences are not tuned to your wavelength, you will not able to communicate.
- ➢ *Ideas*: If you do not understand and idea, you will never be able to express it to someone.
- ➢ *Ambiguity*: Do not use the words, which have vague meanings and thus avoid ambiguity.
- ➢ *Conditions*: Communication needs proper condition. Communication is affected by the receiver environment at home, work, position and other physical environment.
- ➢ *Do not talk and talk*: It is bad to talk too much as to talk too little. Communicate to the extent so as to be just enough to make your point.
- ➢ *Do not talk to impress*: Communicate to express and not to impress. You will impress if you express better. Communicate enough to inspire and not to conceal and to impress.
- ➢ *Feedback*: The key to effective communication is to obtain feedback from your listener.

➢ ***Emphasize the purpose***: Emphasize the main points and purpose, highlight them and re-emphasize them so as to ensure communication.
➢ ***Cultivate listening***: It is as important to listen well as it is to speak. A number of people do not listen for lot of reasons such as boredom, bias, fear being influenced, interruption, etc. They are selective in listening and only hear what they want to hear.
➢ ***Examine the purpose of each communication***:   We must know the purpose for communication. What we really want to accomplish form the communication must be known.

☺☺

3.0   MOTIVATION IN EXTENSION EDUCATION

Motivation

The core of all activities in extension education and in any human activity, nothing of any consequence happens until an individual wants to act. What individual can accomplish depends to a considerable extent on how and why one wants to act. The will to work is something different from the power or capacity to work. One can buy a man's time, his physical efforts, but not his enthusiasm, initiative or loyalty. Thus enthusiasms or willingness to work can be created by motivation. The goal of the individual and the organization can be achieved through stimulating people toward productive performance – called *motivational process*. It is a process of arousing action, sustaining the activity in progress, and regulating the pattern of activity.

3.1   Perception and Motivation

What is Perception: Perception can be defined as a process of observing, selecting, and organizing stimuli and then making interpretation. It therefore, refers to the way an object or situation appears to the perceiver, not the object or situation itself.

What is motivation : Motivation is the action that impels or urges an individual to assume an attitude generally favorable toward his work leading him to perform satisfactorily. Motivation cab be defined as "*a willingness to expend energy to achieve a goal or reward. It is a force that activates dormant energies and sets in motion the action of the people. It is the function that kindles a burning passion for action among the human beings of an organization*".
Motivation consists of three interacting and interdependent elements of *needs*, *drives* and *goals*.

Needs: These are the deficiencies, and are created whenever there is physiological or
      Psychological imbalance.
Drives or ***Motives***: These are set to alleviate needs. These are action oriented and provided an
      energizing thrust toward goal accomplishment. They are the very hearts of motivational process.
Goals: Goals are anything, which will alleviate a need and reduce a drive.

The motivation of people is as important as self-motivation. Others can be well motivated, when they are informed of ideas, plans, inventions or system. "*Nothing can be done, no act can be undertaken, no decision made, no thinking process brought to a real conclusion unless and until the act of communication is made an inherent part of the undertaking*". This communication of ideas, plans etc., can be made effective when certain personal qualities have been developed. The qualities are: honesty, fairness, integrity, truthfulness, loyalty, stability, tolerance, ability to assume responsibility and co-operative, give-and-take, constructive criticism and compromise when necessary, orderliness in mind and action, poise and control of temper, a sense of humor and broadmindedness.

"SUNDAR"

People can be motivated by improving human relations and dealing with people in a human way, by developing the *will to do*, by encouraging people to feel involvement in their work, and by giving them an opportunity to improve their performance and by complementing or praising them. In dealing with others, it must be borne in mind that the greatest returns can be obtained when each member of the community is properly motivated. Therefore, motivation must be used in one's day-to-day activities.

An important part of extension programming is to match an educational need with an extension program. Motivation of people by extension worker must be a constant, continuing program, attuned to new ideas in the society that will affect people in the workforce. Motivation is a three-step process: an internal need is expressed in terms of an action, which in turn leads to the achievement of an external goal. Maslow, a behavioral scientist, believes that man strives for higher needs only after lower needs have been satisfied. The most basic of man's needs are the physical one, followed several psychological needs such as safety, social, self-esteem, and self-actualization.

3.2   STRATEGIES TO ENHANCE MOTIVATION

People would not become involved in or support schooling if it weren't for its wealth-augmenting effect. Needs assessment is the critical process in the development of educational programs. Not only must needs for subject matter be identified, but also information must be obtained about people's attitudes towards and expectations to be satisfied from education in order to understand motivation.

Education is a useful way to help achieve goals, whether those goals are to remove a deficiency or to grow toward some goal. Most people are moved to become involved in education because of what it will help them to do. Unless they can clearly see a benefit they are not likely to participate.

- ➢ *Ensure Successful Learning;*
- ➢ *Make the First experience with a New Subject, Successful and Interesting;*
- ➢ *Stress the Importance of the Amount and Quality of Effort Needed for Success in Learning;*
- ➢ *Make the Learning Goal as Clear as Possible;*
- ➢ *Make the Criteria of Evaluation as Clear as Possible;*
- ➢ *Promote the Learners' self-determination within the Learning Experience;*
- ➢ *Know and Emphasize the Felt Needs of the Learners throughout the Instructional Process;*
- ➢ *Allow the Adults to Share What They have Learned and Produced;*
- ➢ *Provide Variety in the Processes and Materials Used for Learning;*
- ➢ *Use Disequilibrium to Stimulate Learner Involvement;*
- ➢ *Use Cooperative Goal Structures to Achieve Learning Outcomes;*
- ➢ *Whenever Possible, Use Performance Evaluation Procedures;*

Care should be taken to see that motivation system does not become rigid. Permanent flexibility would ensure motivational buoyancy in consonance with organizational dynamism. Motivational system has to be adjustable to the organizational and environmental changes. A perpetual matching of individual participant contents and behaviors with organizational goals and needs has to be main consideration in motivation. Extension worker may take the advantages of different motivation theories and models and draw on the experiences of other organizations. Hence each motivation model has to be tailor-made to meet its specific needs. But, it must be borne in mind that irrational crossbreeding and wholesale transplantation may turn out to be harmful, costly or dangerous.

Human beings want to work, seek responsibility, expect to know what they are responsible for and what is expected of them; and having participated in establishing the results they should achieve, like to be treated as mature, trustworthy people capable of directing and controlling themselves, and then agree willingly to be held accountable for their performance, to be measured and assessed

objectively. While satisfaction with working conditions and remuneration is important, the motivated and creative input of people is brought about largely by providing satisfaction for them in their work, a challenge to their ability and an opportunity for achievement followed by fair recognition as a reward. That job satisfaction is aided by individuals seeing their part in the whole and identifying their own objectives and growth with those of the extension services and its progress.
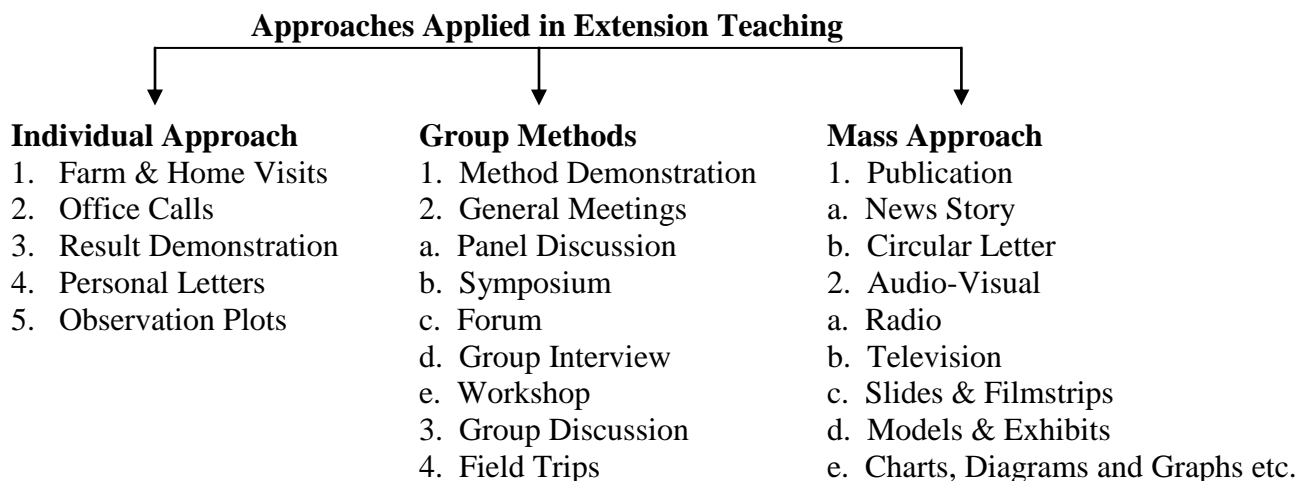
☺
☺☺

4.0   TEACHING METHODS IN EXTENSION EDUCATION

The more ways that people are exposed to teaching methods the greater they show their acceptance of the recommended practices. The repetition of material in a variety of teaching methods is the main principle of teaching and learning in extension education. The more an extension worker is in contact with people, the more they accept the teaching. Good extension teaching includes all methods of communication to make the teaching more effective. So, to accomplish the task and attain the desired goals, teaching in extension requires a correct judgment in selecting the appropriate teaching method or combination of methods depending on the situation. Extension teaching attempts to influence the behavior of a large number of people, which leads to changes in the social and economical development of the community.

In general, the teaching methods applied in extension can be classified into three groups.

4.1   Advances in Extension Teaching Methods

Extension teaching methods are the basic and proven teaching devices used to create situation in which communication can take place between instructor and the learner. In other word we can say these are the tools to the extension workers for approaching, working with, encouraging and influencing the people to accept and adopt the recommended change or practice.

Approaches Applied in Extension Teaching

Individual Approach
1. Farm & Home Visits
2. Office Calls
3. Result Demonstration
4. Personal Letters
5. Observation Plots

Group Methods
1. Method Demonstration
2. General Meetings
a. Panel Discussion
b. Symposium
c. Forum
d. Group Interview
e. Workshop
3. Group Discussion
4. Field Trips

Mass Approach
1. Publication
a. News Story
b. Circular Letter
2. Audio-Visual
a. Radio
b. Television
c. Slides & Filmstrips
d. Models & Exhibits
e. Charts, Diagrams and Graphs etc.

A. INDIVIDUAL METHODS

Although extension teaching is done in a group, learning is always an individual process. The extension worker should be familiar with the people, their situation and moreover he must have the confidence of the people. Frequent meetings, personal contact and visits to the farm and family will help to win people's confidence and persuade them to adopt a new practice.

"SUNDAR"

Objectives of Individual Approach

In the Individual methods the extension worker contacts the farmers and their family with the objectives to:

☞ Find out the people who are in the need of help and introduce himself and his goals.
☞ Find out the interests of the people.
☞ Help identify the problems of the people, their needs and solutions.

The most common methods used in extension teaching to reach people with information include:

1. Farm and Home Visits

It is a face-to-face type of individual contact by the extension worker with farmer or the members of his family on farm or at his home in connection with extension objectives. It helps discussion of the problem and gives informative solutions to specific problems. It also arouses the interest of the people to take part in the community development programs.

Objectives
☞ To give or take hand information relating to farm and conditions.
☞ To advice or assist to solve a specific problem, or teach to develop skills etc.
☞ To arouse interest among those who are deprived of the improved technology or methods.

Advantages:
– It provides information of the people's views, their conditions, and problems.
– It helps to build confidence and increase the effectiveness of the other teaching methods.
– It helps in the selection of better local leaders, and demonstrators from the community.

Limitations:
– It requires a relatively large amount of time
– The number of contacts is limited.
– It is rather expensive practice.

2 Office Call

It is a call made by a farmer or a group, on the extension worker, at his office for obtaining information or other help needed or for making acquaintance with him. The individual wants to contact the extension worker for information and assistance to their problems.

☞ **Objectives:**
– To solve immediate problems of the farmers and save the extension worker's time.
– To ensure the timely and prompt service.
– To promote the relationship.

Advantages
– People show readiness to the learning process.
– Extension agents use their time more efficiently and effectively.
– It is a good indication of the extension teaching effect.

Limitations:
– Office contacts do not reflect the actual condition of the farm and field and the pertinent problem overall.
– Office callers are very limited in numbers.

"SUNDAR"

– Extension worker cannot be at headquarters always.

3   The Result Demonstration

A result demonstration is a method of teaching designed to show by example the practical application of an established fact, or group of related facts. In other words, it is a way of showing people the value or worth of an improved practice, whose success has already been established on e research station, followed by district trials or observation plots. Though time consuming, it is an effective method because the result can be seen.

☞ **Objectives**
– To furnish local proof of the desirability of a practice.
– To create confidence of people in the agent, to create confidence of agents in the practice.

Advantages:
– It helps increase confidence in the recommendations as people see the result.
– Very good method to introduce a new system into practice.
– Opportunity to show and contact those people who are not in contact with extension workers.

Limitations:
– Takes much of agents' time in preparation.
– Few people see the demonstration.
– Success may be lowered by unfavorable weather and other factors.

4.   Personal Letters

The personal letters are not suitable for the area where the people are illiterate. But in the area where people are somewhat literate and the adult education program is carried out this method carries importance. It is a personal letter written by the extension worker to a farmer related to the extension activities.

☞ **Objectives:**
– To look for the cooperation of the farmers in connection with the extension work.
– To inform with the findings of the research applicable to farmers' situation.

5.   Observation Plots

It is a method by which the suitability of new practice to a given locality under farmer's conditions is determined. However, the need for this sort of adaptive research as a pre-requisite for successful extension work has been widely recognized. So, it is essential for extension workers to understand the important features of this method. Unlike regular trial plots, which are laid out systematically to satisfy the requirements for statistical analysis, the observation plots are designed to give rough and ready, nevertheless, reliable indications about the performance of a new variety or practice.

Advantages:
– Avoids the pitfalls of hasty recommendation and/or adoption of new practices;
– Constitutes the first step towards the spread of a new practice after testing;
– Builds confidence of the extension and research workers on the one hand and of the farmers on the other, in the utility and feasibility of a new practice;

Limitations:
– Make heavy demand on the time and energy of extension worker;
– Seasonal failures delay the assessment of the worth of a new practice, leading to consequent delay in its adoption;
– Difficult to secure suitable co-operators sometimes;

B. GROUP METHODS

"SUNDAR"

The group methods are used through teaching to develop public awareness, create interest and desire to adopt new practices. People in the group have the opportunity to ask questions, exchange ideas and stimulate each other to action. The people get the opportunity to interact with one another, share their experiences and move toward a common decision.

1. The Method Demonstration

It is relatively short-time demonstration given before a group to show how to carry out an entirely new practice or an old practice in a better way. It is designed to demonstrate "how-to-do" things properly rather than to prove the worth of the practice. The combination of both "seeing " and "hearing" makes a strong impression; moreover the participation in the practical work makes an everlasting impression.

☞ **Objectives:**
– Enable the people to develop new skills.
– Enable people to improve upon their old skills.
– Make learning easier and more interesting.

Advantages:

– Useful method to give practical knowledge to many people
– Seeing, hearing, discussing, and participating in the work stimulates action.
– Develops confidence in the extension worker if the demonstration is performed successfully.

Limitations:
– Often a portion of the audience cannot see the demonstration clearly.
– Requires a considerable amount of materials and equipment.
– Suitable only for practices involving skills.

2. General Meetings

The term general meetings include all kinds of meetings held by extension agents other than method demonstrations to make it possible for a large number of people to acquire information on the subject matter. The method of presentation may be in the form of a lecture or formal talk, informal or formal discussion, tours, or the showing of slides or a motion picture. The group method provides opportunity to share knowledge and experience with others, thereby, strengthening the learning process.

Objectives:
– It is educational in nature.
– Intended to bring change in attitudes, values, and practice.

Advantages:
– Reach a larger number of people.
– Discuss almost all aspects of the subject matter.
– Best for social contact and interaction with many people.

Limitations:
– Different characteristics and interest of people may create a difficult teaching situation.
– Available meeting place often inadequate.
– May require considerable amount of time of extension agents in arranging the meeting.

"SUNDAR"

a.   Panel Discussion

In this, a group of speakers, usually from 2 to 8, participate in a supposedly informal conversation on a topic for the benefit of the hearers. The panel is generally rehearsed before it is presented to the public.   A leader presides, introduces the speakers, and has the responsibility to see that the conversation keeps gong, by asking questions or making brief comments, and encouraging the less talkative by questions. There are usually 3 types of panel: (a) *the question-answer panel*, in which the presentation is actually a series of questions by the leader and answer by the members, (b) *set-speech panel*, each one making prepared speech, and (c) *the conversational panel*, in which members hold a conversation among themselves on the topic, with questions and comments going from one member to another.

b.   Symposium

This is a short series of lectures, usually by 2 to 5 speakers, each with a different viewpoint. The subject is not necessarily controversial, but sometimes each speaker is allowed a second speech in which he comments on the remarks made by the other speakers. Members of the audience are then encouraged to address questions and comments to any of the speakers.   The symposium is a modification of the lecture; it differs in that there is more than one speaker and more than one point of view.

c.   Forum Dialogue

It is also called 'public conversation', two persons, usually volunteers selected from the audience, discuss a question on which they may or may not have opposite views.   This is followed by discussion by the audience. This method is similar to a panel discussion but simpler and less formal. It provides an opportunity for the audience to clear up obscure points and to raise questions of additional information. It is excellent for stimulating audience participation.

d.   Group Interview

The leader interviews persons on the platform. It can be used to obtain information from experts or it can be used to obtain opinions from members of the audience. Following this procedure, members of the audience are invited to participate. The group interview is really an informal leader-dominated panel discussion. It is excellent for getting from experts the exact information the group desires, and for starting discussion, especially in large groups.

e.   Workshop

A workshop is truly a workshop. People meet in small groups to work together on problems of their own choosing under the guidance of a well-qualified staff of consultants. A workshop is composed of three parts; (a) *the planning session*, in which the participants are involved from the very beginning, (b) *a working session on problems*, (c) *a summarizing and evaluating session at the close*. Both the planning and evaluating phase focus on the work sessions, which are the heart of the workshop. The significance of this method is that the individual solves his own problem, with the help of the group and the consultants, and he leaves the workshop with a plan he believes will fit his situation.

3.   Group Discussion

It is a form of discourse directed towards a better understanding of the problem for the development of a program of action related to the problem. The purpose is to attempt to improve group education methods. Democratic discussion is stressed rather tan lecturing. The subject is introduced by the leader, the situation and problems are well developed, and then the expert may suggest solutions.

"SUNDAR"

The trick is to get the group to want to do something about it and to decide as a group to undertake some change of practice or similar action

4. Field Trip

It is the method in which a group of interested farmers accompanied and guided by an extension-worker, goes on tour to see and gain first-hand knowledge or improved practices in their natural settings. It helps stimulate interest, conviction and action in respect of a specific practice. It is also impressive the group about the feasibility and utility of a series of related and help people to recognize problems.

Advantages

– Farmers get exposure.
– Widens the vision of farmers.

Limitations:
– It is costly
– Bottlenecks of transport and accommodation.

C. MASS METHODS

Mass methods are very helpful to increase teaching efficiency and create a general awareness and interest in new ideas among people. The media used in this method are radio, television, cinema, publications, newspapers, circulars, bulletins, and posters. The use of different types of media makes possible the dissemination of information to a much larger and different group of clientele. Though the intensity of the teaching and personal contact through mass media is less, a large number of people are reached at a time at comparatively low cost.

1. PUBLICATION:

Publications are the best method of reaching and influencing a large mass of people. Publications are very useful field guides for the extension worker. Publications provide the latest information and findings of research that help gain the attention of people of all ages and sex. The main concern in extension publications is the readability of the materials. If written materials are not read and understood easily, they will not be effective teaching devices.

Advantages:
– Best method to give timely information of research findings to large number of people.
– People generally have confidence in printed materials.
– Written material can be read and studied at leisure and kept for future reference,

Limitation
– Not good for people with limited education, or illiterate people.
– Requires frequent revision to up date the information.
– Lacks social value of meetings and personal contacts.

a. News Story

News is a report of anything that interests people. It is the cheapest means of getting information about extension activities to many rural and urban people who are not in touch with an extension worker or not participating in any extension activities. The extension news story may give the results of a field demonstration, tell what took place at a meeting, reviews the findings of scientific research, or recite the accomplishments of local people who have adopted a recommended extension practice.

Once the confidence is combined with the news story it will prove very important to attract and stimulate a large number of people to take part in extension activities.

Advantages:
– Gets information across to a large number of people.
– Reaches those who are not in contact with extension agents.
– Carries the prestige and confidence of the printed word.

Limitations:
– Of no use where people cannot read or do not take newspapers.
– Writing a good news story requires special training.
– Difficult to check results.

b. Circular Letters

Circular letters are another means of reaching many people. Circular letters serve two general purposes: (i) publicize an extension activity such as a general meeting or exhibits; and (ii) give timely information about farm and home problems. They may provide additional information to supplement meetings and radio. Receiving a letter will have a great influence on the people.

Advantages:
– Give timely information to special interest groups.
– Serve as a supplement to other teaching methods.
– Relatively low cost teaching method.

Disadvantages:
– Special attention is needed to make the letter simple, understandable and informative.
– Frequent use may reduce effectiveness.
– Not good for people who are illiterate.

2. Audio-Visual

Audio Visuals-Aids are important devices to convey message, information, ideas and technology transfer to people so that they can see, hear, understand and remember if for use at present and in action in future. Audi Visual-Aids comprise any instructional device through which a message can be heard and seen. *Audio Visual Aids assist the instructor to convey to learner facts, skills, attitudes, knowledge, understanding and perception.* In extension works, these aids assist the extension workers to put across their ideas clearly, simply and summarily. Therefore, great importance is given on audio visual aids in extension where clients are illiterate and traditionally bound.

a. RADIO

Radio is one of the most widely accessible mass media. It is one of the fastest Medias to disseminate information to the largest number of people in the shortest period of time. It is unrivaled as a means of getting emergencies or timely information to rural people. Extension workers use the radio to disseminate timely information on extension activities, to advertise meetings, tours, field demonstrations, and other scheduled activities, and to teach improved extension practices. It can be a supplementary media to other teaching methods.

Advantages:
– Quickest means of communication.

"SUNDAR"

− Best for giving timely and urgent information in a short period.
− Relatively cheap media.

Limitations:
− Limited number of broadcasting facilities.
− Time assigned to Extension teaching by commercial stations is frequently poor from the standpoint of extension program listeners.
− Frequently loses out in competition with entertainment.

b. TELEVISION

Television is the best teaching media and is popular, particularly in urban areas. The viewer can see and hear the speaker at the same time, which greatly strengthens the likelihood of learning. Extension agents can give a "how-to-do-it" method demonstration program and reach an audience many times larger than the attendance at a meeting.

Advantages:
− It is a face-to-face approach of mass media.
− Both visual and audio effects of television produce impressive teaching effect on audiences.
− Reaches urban as well as rural people.

Limitations:
− Intense competition with entertainment programs in which individual family members may be interested.
− A certain amount of showmanship is required to put on a program
− Relatively expensive media.

c. Slides & Film

Perhaps the most effective visuals for presenting informative topics are 35mm slides. A slide is a transparent picture or image in an individual mount. For viewing, the image is projected by passing a strong light through the slide and then through a double objective lens, which brings the image into focus on a screen. They describe nature in complete and colorful detail. The strength of slides lies in their ability to show the real people, places and things the presenter wants to talk about. Slides are relatively inexpensive and easy to produce.

Advantages:
− They can be made at low costs;
− They provide added interest by showing local scenes, things and people.
− Slide can be retained for any length of time according to the teaching situation;

Limitations:
− The do not show motion;
− Require 'live' narration;
− Require special equipment and facilities;

Film

A film is an excellent audio-visual foe showing the steps involved in doing things or for showing continuous action. A film should be used only as a teaching tool, because sometimes cover too much detail that viewers often fail to fully understand the ideas presented. Filmstrips have the same advantages and disadvantages as slides. The filmstrip presentation is prepackaged and it is difficult to deviate from the predetermined content and sequence.

"SUNDAR"

d. EXHIBITS

Exhibits include all the visual aids employed to make the oral presentation at the extension meeting, demonstration, or farm visit more convincing. Exhibits serve as a means to reach people who do not read publications, listen to radio, watch TV and attend meetings. Exhibits help promote understanding and create good will toward extension activities. Exhibits appropriate to the problem and situation influence people to adopt better practices.

Advantages:
−   Many people may see the exhibit.
−   Promote understanding and good will of village and city people toward extension.
−   Stimulate interest in superior and improved practices.

Limitations
−   Relatively expensive in terms of agents' time and other costs.
−   Most of viewers are only seeking recreation.
−   Requires much preparation and investment.

e.   Charts, Graphs and Diagrams etc.

Charts and graphs are useful in teaching by telling a story quickly with little explanation. Charts are composed of information compiled in tabular form that is primarily to show sequence and relationships. In other words, they are diagrammatic presentations of facts or ideas.

Graphs are diagrams or lines representing numerical quantities used for quick comparisons and contrasts of statistical information. Pictorial graphs are widely used because of their ability to attract attention. They are basically line or bar graphs with symbols related to the data that replace the lines or bars. In this type of graph, each symbol represents given amounts.

Posters

The poster is an important visual aid. Posters are usually composed of an illustration, along with a few words on poster board or paper. They are designed to attract the attention of the viewer, impress him with the message. Stimulate him to take some kind of action. Posters are easily portable, and they work alone and continuously. However, they require ingenuity to prepare and limited to one message.

4.2   Selection of Appropriate Teaching Methods in Forestry Extension

The primary responsibility of extension worker is to bring about the desired changes in the learners' behavior through the proper use of various extension-teaching methods. The extension worker's main effort is to make the people recognize their particular problems and encourage them to work to solve these problems by themselves so that they can have a sense of satisfaction and pride in their achievement. A substantial number of proven extension teaching methods and techniques exist from which the extension worker may choose to set-up learning situation and to maximize the transfer of information and skill to farmers. Once the needs of an area or community have been identified, extension worker should choose the appropriate teaching methods to be the most effective in achieving their educational objectives. The selected extension teaching methods should be adjusted to the social, cultural, economic, physical and intellectual level of the people.

People learn best in different ways, some by *listening*, some by *seeing*, some by *doing* and still other through *discussion*. So there are many methods that an extension worker may use. However, these methods can not and should not be used indiscriminately because the extension methods vary in their relative effectiveness. Some methods are more effective than others in general, in all situations while some are more effective at certain stages of adoption process. Similarly effectiveness of methods

varies from practice to practice. Effectiveness also varies with the variation in size and heterogeneity /homogeneity of the target group.

4.3 Integrated Approach in Extension

The integrated approach to extension education aims at bringing about social, economic, institutional and technological change, for the development of human and natural resources in order to improve the standard of living of rural people. There are many dependent factors, which need interaction to bring about the desired change. The concept of integrated rural development is based on the fact that incorporation of multiple factors in the process of economic development programs is superior to a single approach such as agricultural extension or forestry extension, which neglects other related sectors.

Integrated effort with extension and other organizations would facilitate the generation, transfer and use of improved technologies and practices. It is based on the assumption that production increment and social improvement are not mutually exclusive but are reinforcing. This means that all national technical, economic and institutional relationships should be taken into consideration and that they should be combined in such a way as to serve the well-being and social integration of the rural people. There are two important elements in an integrated approach to rural development, *integration of the development activities into one program of action* and *integration of areas reducing the imbalance between developed and stagnated areas*.

Linkages of Extension with other Resources

Rural development aims at transforming the traditional practices to modern practices in rural communities to improve the living status of people, make them economically stable and self-sufficient. There are many social organizations involved in community development programs. Extension educators can get more benefit by establishing some functional linkages with other organizations.
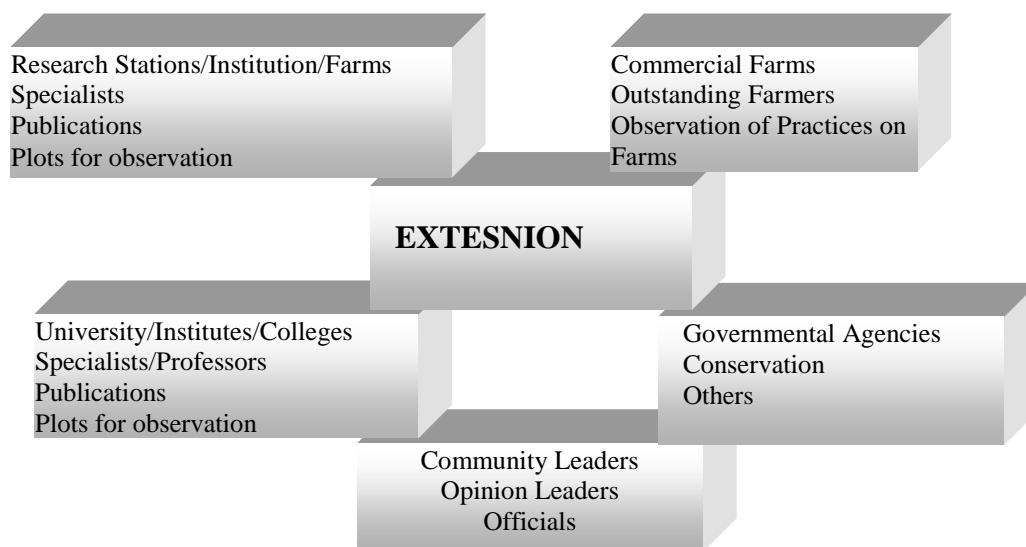

Figure: Linkages with other resources

Different Approaches to Linkage

There are some ways of establishing and maintaining linkages, which are essential to consider while planning and conducting effective extension programs. Extension relies on some linkage procedures to interact with users. These linkages help identify the users' needs as well as enable extension to plan better programs.

"SUNDAR"

☞ *Inter-organizational (institutional) linkages*: Extension relies on linkages with private associations and public agencies in order to assess users' needs and obtain information and support for its programs. These linkages include formal relationships and agreements.

☞ *Interpersonal linkages*: These are informal relationships based on personal contact and mutual trust.

☞ *Mass media linkages*: These include printed materials (newspapers, magazines, professional journals, newsletters, and bulletins), radio broadcast and television to reach many targeted people.

☞ *Individualized electronic linkages*: The linkages are established using computer system via E-mail, data bank, telephone systems etc.

The linkages with organizations the key people of those organizations are very important for the formulation of effective extension works. The linkages of extension with other organizations depend upon time, location, and problems mutual respect and trust are essential for long lasting relationship.

☺

☺☺☺

5.0   TEACHING LEARNING PROCESS

Extension education differs from school education in the sense that it attempts to influence learners to put the acquired knowledge or skill into practice. Both teaching and learning are parts of the educational process. Extension in a broader sense refers to the transfer of research-based knowledge and technological information to the target people. It also helps establish a linkage between clients and researchers so that problem can be worked out promptly. Extension education aims at changing target clienteles to enable them to use the scientific technology and improve the quality of life. The purpose of education is to develop mental capacity leading to behavioral change of the individuals.

5.1   Principles of Teaching and Learning

"Teaching is the process of providing situations in which learning takes place; in other words, arranging situations in which the things to be learnt are brought to the attention of the learners, their interest is developed, desire aroused, conviction created, action promoted and satisfaction ensured".

"Learning is a process by which a person becomes changed in his behavior through self-activity" or *"Learning is a process of progressive behavior adoption".*

Thus, teaching is a process of transmitting information to an individual or group and directing the learning process whereas learning is the process, which brings tangible changes in the behavior of individuals and these changes, can be seen as increased knowledge, skill and modified attitude and aspirations. Though teaching and learning are interrelated activities, the teaching can exist without learning and learning can occur outside the domain of a designed and structured teaching situation.

5.1.1   Principles of Teaching
− Begin at the level of the learner.
− New ideas must be related to the old.
− Adjust the pace to be learner's capacity.
− Bring the idea to the attention of the learner repeatedly and over a period of time.
− Learning must make sense to the leaner.
− Progress must be constantly appraised and redirected.
− Purpose must be the focal point.
− Different teaching aids should be used to engage maximum number of senses.

− Appropriate and timely recognition should be given to student achievement.
− Course content should be organized into meaningful units.
− Theory should be related to practice.
− The teacher should recognize and utilize the effects of the social environment on learning.

5.1.2 Learning Principles

☞ *People tend to learn rapidly when they have strong desire to learn.*
☞ *People learn best when they have clear goals for their learning activities.*
☞ *Learning should be meaningful to the learners:*
☞ *Learn best when they get satisfaction & the leaning techniques can be used in practice.*
☞ *Learning should be challenging and satisfying*:
☞ *Learning should improve the understanding of the learners*:
☞ *Physical and social environment affect learning*:
☞ *Adult learners have a wide range of variation in learning ability:*
☞ *Adults have learning capacity*:
☞ *Theory and practice should be related to the learning*:
☞ *Learning requires effective communication*:

5.1.3 Steps in Extension Teaching

In order to bring about the desired changes in the behavior of people, the extension teacher needs to organize activities so that there will be repetition of the desired behavior, each successive repetition building on the one before it. Some systematic steps are necessary to be followed to bring about the desired change in human behavior. This conscious attention to organization of teaching activities in a sequence greatly increases the efficiency of learning.
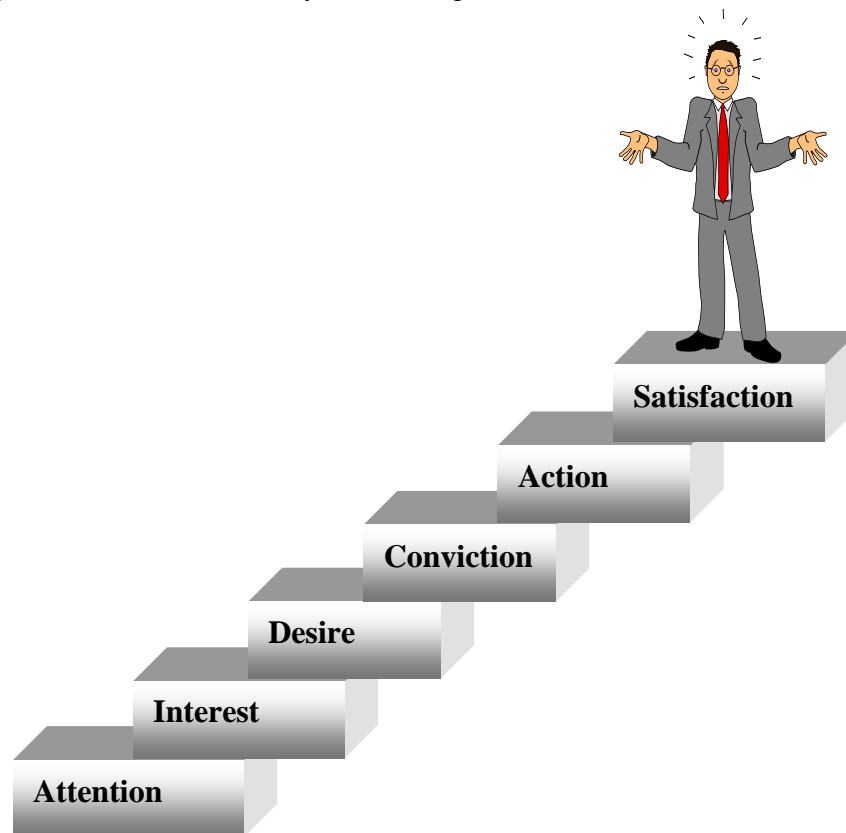

Figure: STEPS IN TEACHING

21

☞ *Attention:* The extension educator's first task is to draw their attention toward new ideas. Until the individuals give attention to the new change and consider the conditions desirable, there is no recognition of a problem to be solved or satisfied.

☞ *Interest:* Once the attention of the people is gained, it becomes possible for the extension educator to arouse their interest in the new idea. The message should be given very clearly and in an attractive way so that people can understand the importance and validity of the new practice.

☞ *Desire:* To create a strong desire for more information about the new practice or technology the educator should continue to stimulate the learner's interest.

☞ *Conviction*: It is the act of teaching and persuading the learners to act on the new knowledge and skill. The teacher's main endeavor is to turn the learners' interest into action. .

☞ *Action:* Without people's involvement in action the teaching effort is meaningless. Action is the main gate through which the goal can be achieved. The teacher should help remove the obstacles and try to convert the conviction into action.

☞ *Satisfaction:* The end product of the teaching effort is the individual's satisfaction, which comes from putting the new idea into practice, meeting a need requirement, or acquiring some skill to bring change in behavior. Follow-up by the teacher is required at this level to help the learners, to evaluate the progress and increase confidence in the learners so that they can continue the action with satisfaction.

5.2   Adult Learning Process

The models and techniques used in teaching are based on the principles or assumptions of the individual or social development. A variety of resources and technologies are used in extension and more emphasis is given on learning rather than teaching of the adult. The extension method is evolved from a combination of methods and, with extension workers, aims at achieving rapid communication and wide spread adoption of desirable innovation in every field of adult-literacy. Adult education includes a set of organized activities carried on by a wide variety of institutions for the accomplishment of specific educational activities. The aims of extension education adult education are to enable people to make desirable changes in their behavior that contribute to better living. Extension should be conducted with the basic objectives of disseminating useful and practical information, which could cover the entire range of life, focusing on the interest or needs of the adult learner and his immediate problems. It is important to link the literacy with developmental activities including the development of the Self and the development of the environment.

Adult learning is a form of change in the behavior of those who participate in the program. People should be adequately motivated to change their behavior. The major resistance in change is the already established behavior. Participants should know what kind of behavior their new learning is to produce and how can they achieve it. During the teaching process the participants should be given continuous feedback about their progress. Reporting of progress is necessary to continue motivation toward a learning goal and reinforcement of the correct behavior. The subject materials and the course contents should be wisely chosen to match the particular needs and requirements of the adult learners. The teacher's main task is to provide opportunities for the participants to acquire the desired learning in a meaningful way. When the adults take the initiative in the teaching process and play an active role, the learning becomes meaningful.

Just as teaching techniques need to match the educational objective, so should they be chosen with the learner in mind? Adults have definite preferences of learning methods and may be more motivated to participate in learning experiences when given the opportunity to learn in their preferred style. Some would rather learn through abstract thinking – by discussions, lectures, or by the use of audiotapes or books. Others prefer an observed experience such as a demonstration a film, or a field trip. For those who would rather be involved in active experimentation, the use of games, role-play

exercises, case studies, and tests may be more appropriate. Application in a real-life setting can be done through applied projects, self-analysis, and checklists. The more methods that can be incorporated into a presentation, the ore likely participants will experience some of their preferred learning styles.

Evaluations from past courses that you or your colleagues have taught are also valuable inputs for planning. With this information about your audience you can select strategies that would most likely move the learners toward their goals.

5.3   Organizing Learning Process

To gain the attention of adult learners is one thing; to hold is quite another. The teacher of adults face a group whose attention may be easily lost, whose interest may wander, and whose effort is parceled out with serious caution. This is normal. The teacher's best initial preparation for working with adults is to be personally convinced and readily able through the process of instruction to demonstrate that what is being learned could not possibly be considered a waste of time or unrelated to the lives and values of the learners. Research consistently shows that adults are highly pragmatic learners. They have a strong need to apply what they have learned and to be competent in that application.

Teaching is a process of arranging situations that stimulate and guide the learning activity towards the goal of the desired change of the behavior of the learner. It consists of the arrangement of favorable situations in which people can learn more easily. Teaching in extension education is a difficult task in the sense that people and learning situations differ greatly. Teaching will be effective if the learning situation is properly handled and effective experiences are provided. The time of the people is extremely limited and their needs and interests are numerous. So, the learners have to be convinced that they are getting out of the learning task something worth their investment of time and effort. The extension teacher should know that the importance of the teaching does not depend on the inherent quality of the contents but on the felt needs of the learners. It is not what the teacher believes is important, but what the learners feel is relevant.

At least five factors influence the teaching-learning situation. Extension workers must be aware of these five elements so they can use them to enhance the effectiveness of the teaching-learning situation. The main element, of course is the learner.
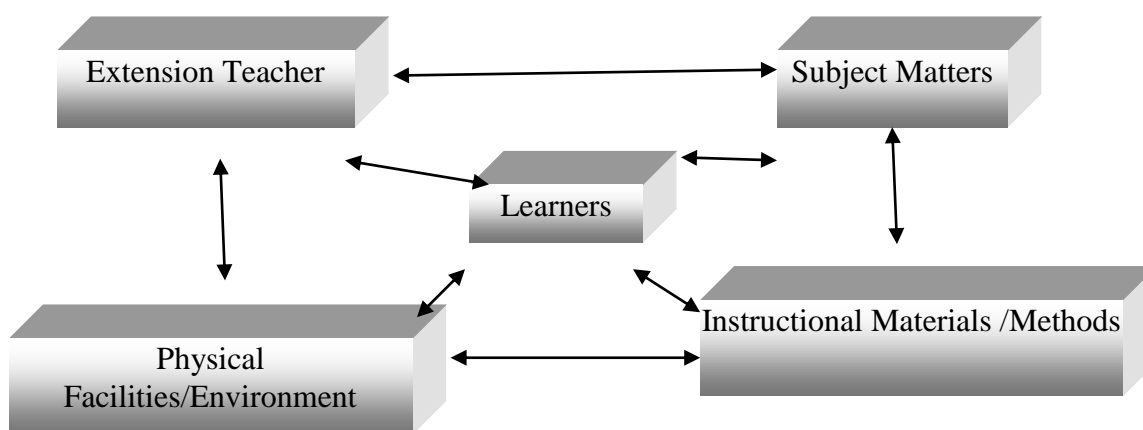
Figure: Teaching Learning Process

☞ The *learners* are the most crucial factor in the learning process. The main aim of extension education is to change the behavior of the people with the help of other elements of this process. Success can be achieved if the learners' interest is converted into action.

23

☞ The *teacher* should develop a pleasant personality and be very helpful and friendly to the learners. He should develop the quality of firmness in thought, clarity of the subject matter, sincerity to the work, sympathy to the learners and cheerfulness in personality.

☞ The *subject matter* should be selected from the standpoint of what the learners want to learn but not what the educator wants to teach. The learners should know the subject matter and its usefulness to their situation. If not, they will loss their interests in learning.

☞ The *learning environment* should be calm and peaceful. The learners should be provided with physical facilities so that they can do their practical exercise in the presence of the instructors to develop clear understanding and confidence within them.

☞ The *teaching equipment* and all *teaching materials* should be readily available. The appropriate teaching aids should be used to clarify the new topics to be taught. Different methods of teaching and suitable instruments should be used to teach and communicate the ideas clearly to the audiences.

☺

☺ ☺ ☺ ☺

6 ADOPTION AND DIFFUSION OF INNOVATION

The major function of most extension practitioners is to facilitate the adoption of new ideas and practices by their clients. In order to be most effective in this role an understanding of the processes and factors involved in the diffusion and adoption of innovations – of how new ideas and practices are communicated among members of our client systems and how they decide to adopt or reject these innovations.

6.1 Adoption and Diffusion

An *Innovation* is an idea, practice or object perceived as new by an individual. The innovation may not be new to all people, but may be new to that person who has not yet accepted the idea. Innovation can be related to objects, social acts and abstract ideas. The rate at which a new idea (innovation) is adopted will depend partly on the characteristics and the nature of the idea. Some innovations spread faster than other. Innovations, which are relatively simple and compatible with past experience, are usually adopted more quickly than more complicated and unusual innovation. People's perception is influenced by the values, beliefs, attitudes, and objective assessment of relative advantage, compatibility etc.

Most innovation-decisions begin with the *knowledge function* when we are first exposed to an innovation. But the function also continues throughout the decision process as we acquire more information and understanding of the innovation. Extension practitioners need to provide for three types of knowledge in this function.

Awareness-knowledge: Consists of information and consciousness of the existence of an innovation and its main features.

How-to-knowledge: Consists of information and understanding necessary to use or apply an innovation properly. This type of knowledge is probably most essential at the trial or decision stage.

Principles-knowledge: Consists of understanding the principles underlying the innovation and its use. It is usually possible for clients to adopt and regularly use an innovation without understanding the principles-knowledge involved.

6.2   Characteristics of Innovation

- *Relative advantage*:   This is the degree to which an innovation is considered better than the previous idea or object and intended to replace it. The relative advantage is taken in terms of economic benefit. New practices that are expensive tend to be adopted more slowly.
- *Compatibility*: Compatibility is the degree to which the people perceive an innovation to be consistent with their values, management objectives, the level of technology and their development strategies. People's attitudes and values toward a new idea are often affected by their past experiences.
- *Complexity*: This is the degree to which an innovation is understood and can be used by people. A new idea that is relatively simple to understand and use will generally be adopted more quickly than a more complex one.
- *Triability*: People collect the required information; learn new skills and it try in a small scale to see the result of this new method. If the new method is profitable and inexpensive they adopt it readily.
- *Observability*:   Observability is the degree to which the result of an innovation is visible to people. The easier the innovation for people to see the advantages of the innovation, the more likely they are to adopt it.
- *Utility*: If the new practice is viewed as a major improvement over an existing method, it is likely to be adopted rapidly.
- *Group activities*: Some ideas require group adoption whereas others may be accepted on a quite individual basis.

6.3   The Adoption Process

The adoption does not take place all of sudden. It is a process that takes time to be accepted by people. They take time to think before making a decision. The *adoption process* (which is also known as innovation-decision process) is the mental process through which an individual passes from the first knowledge of innovation to a decision to adopt or reject and finally confirm the decision.

Adoption is a decision to make the full use of a new idea for the best result. Rejection is a decision not to adopt an innovation. Discontinuance is a decision to cease the use of an innovation after earlier adoption.

- *Awareness*: The individual is first exposed to new ideas, practices or products. The first stage toward adoption of an innovation is that the individual should be exposed to new ideas. Individuals must be convinced and made aware of the usefulness of the new ideas or practices.
- *Interest*: At this stage the individual is motivated to find out more information about the new ideas. He becomes personally interested to know more about the new idea and relates them with his past experiences and other practices he has had. He tries to seek the potentialities of the new practices.
- *Evaluation*:   Once the individual becomes interested in an innovation he tries to see its potentialities with other methods. The individual studies and analyzes the acquired information to see how this new information fits his situation. Evaluation is partly a matter of getting more information about the new practice and deciding whether or not to try the practice. He compares the relative advantages of the new practice over the past one he has used. When he is satisfied with the potentialities of the new practice he makes a decision to apply it to his present situation.
- *Trial*: The individual applies the new information to a test in a real situation. He looks for more practical information of the new technique and a method of applying it first on a trial basis. Most individuals will not adopt a change without trying it first on a small scale.
- *Adoption*: If the individual is satisfied with the trial, he then decides to use the new practices on a large scale. If the individual gets full satisfaction from the new practice he may continue, or he

25

may reject it after practicing it for some time. Only the repeated use of the practice indicates that the adoption has taken place.

6.4 Innovativeness and Adopter Categories

Innovativeness is the degree to which an individual is relatively early in adopting new ideas compared to others in the community. Adopter categories deal with the members in a community on the basis of the innovativeness of the individuals. Depending upon their adoption behavior, farmers are classified into different categories.

☞ *Innovators*: They are the first persons in the community to adopt an innovation. They are known as experimenters since they try out innovation before anyone else in their community. They are elite groups of the community with large farm size, relatively higher income, social status and are active in community organizations. They have access to many sources of information and moreover possess a venturesome spirit.

☞ *Early adopters*: Those people who quickly follow the lead set by innovators. The early adopters compared with the average people in the community are educated, younger in age, enthusiastic, and involved in formal organizations. They have high social status and have many informal contacts within the community. They are very innovative in nature and always looking for advice and information from different sources and they have more contact with extension workers.

☞ *Early majority*: Those people who carefully watch the innovators and the early adopters for a short time and adopt innovation earlier than the average farmers. Their educations, farming experience and contacts with extension workers are slightly higher than the average farmers.

☞ *Late majority*: Those people who are conservative and careful in nature, and do not adopt a new practice until most of their neighbors have already adopted the innovation. They have less education, social status and extension contacts.

☞ *Laggards*: Those people who are last to adopt the change. They are the oldest farmers and have little education, few social contacts and low participation in formal organizations. They resist the changes until everyone in the community has adopted them.

6.5 Rate of Adoption

The rate of adoption is greatly affected by the social system, as well as the technical characteristics of an innovation and the personal attitudes of the adopters. It is measured by the length of time required for a certain percentage of members of the system to adopt the innovation. An extension worker who understands every nook and corner of the social system can speed up the adoption process. The key of success is to encourage many local leaders to become early adopters and more early adopters to become innovators.
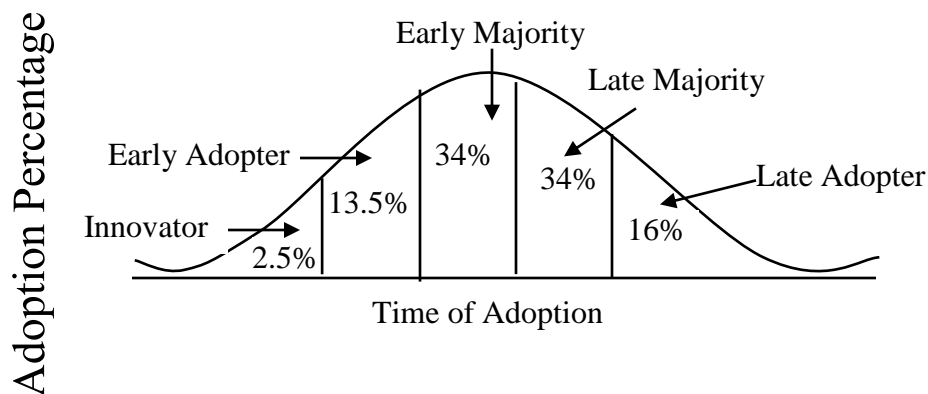

Figure: Distribution of Farmers among the five categories according to time of adoption

The Roles of Different People in the Individual Adoption Process

26

"SUNDAR"

Just as farmers use different mass media sources of information at different stages to perform different functions in the adoption process, so do they seek different people for information and advice? Some of those sought serve primarily as communicators of information, some as legitimators (persons relied on for advice when arriving at decisions to adopt), and some as pioneers or forerunners. The last are called innovators. They perform a number of services for potential adopters short of directly communicating advice and information.

7.   PLANNING AND IMPLEMENTATION OF EXTENSION PROGRAM

Program development is a deliberate series of actions and decisions through which the people are affected by the potentialities of the program. The identification of clientele to be reached and the problems to be solved are fundamental to plan development. Program planning is a continuous series of deliberate activities or operations leading to a definite and well-executed plan of action to accomplish particular objectives. Planning includes the study of the past and the present so that a forecast can be made about the future. This could serve as a basis for the goals to be achieved, the needs to be fulfilled.

7.1   Definition and Importance of Planning

➢ According to Kelsey and Hearne, "*An Extension program is a statement of situation, objectives, problems, and solutions. It is relatively permanent but requires constant revision. It forms the basis for extension plans*".
➢ Leagans says *"An Extension Program is a set of clearly defined, consciously conceived educational objectives derived from an adequate analysis of the situation, which are to be achieved through extension teaching"*.
➢ Houle states that *the analysis or planning of educational activities should always be made on the realities of human experience and their constant change*.

7.1.1   Importance of a Program

➢ To ensure careful consideration of what is to be done and why;
➢ To establish objectives towards which progress can be measured and evaluated;
➢ To aid in the development of leadership;
➢ To prevent mistaking the means for the end, and to develop both felt and unfelt needs;
➢ To avoid waste of time and money, and promote general efficiency;
➢ To co-ordinate the efforts of the different people working for rural development;
➢ To provide evaluation of results;
➢ To have available in written for a statement for general public use;

7.1.2   Programming Principles

"SUNDAR"

☞ Programs must be developed on the basis of needs and problems of the people concerned;
☞ A program should be made with people and not for them;
☞ The program should have a plan of action;
☞ A program is a continuous process;
☞ Program should be cooperative and coordinating in nature;
☞ Programming is a teaching-learning process;
☞ Provides for Evaluation of results;

7.2   PROGRAM PLANNING PROCESS

Program planning is a continuous process, which guides implementation. Implementation gives further information for planning to adjust implementation and this process continues. The program development process consists of continuous and cooperative activity, involving lay people and the extension staff, in which problems are identified, objectives are set forth, and action is taken to reach the objectives.

Although program-planning process is often considered to be an art, experience and research have contributed substantially to its more scientific dimension. The essential basis for extension program planning is to be found in the concept of planned change. People aspire to a fuller and more rewarding life, and will strive to control their environment as much as possible.
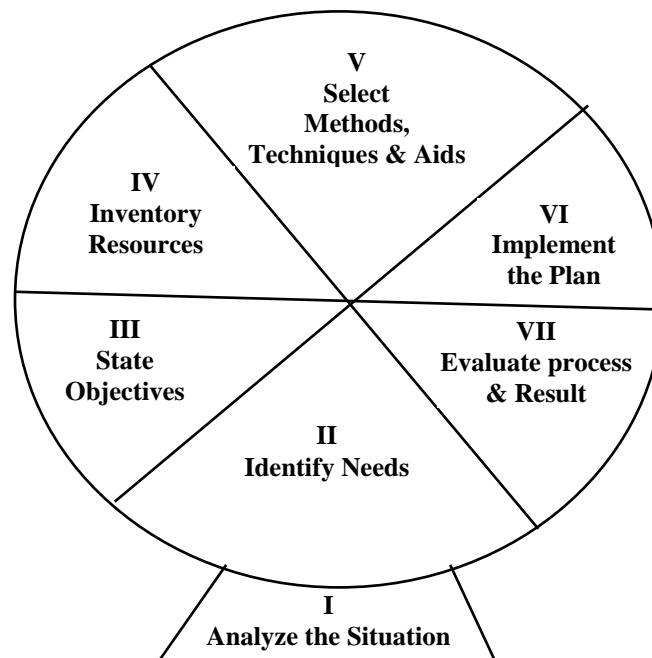
Elements of the Program

Figure: The Program Planning Process

1. Analyze the Situation: A through analysis of the relevant facts of the situation is necessary for the development of a sound program. The analysis of sources and patterns of income, the land and its use, and natural resources helps define clientele more specifically. A useful guide for assembling general information relating to geographic areas or local problems or issues might include about: *people*; *resource*, facilities and *leadership*.

2. Identify Needs: Detailed information of the problems, the people are confronting, is gathered and analyzed in terms of the situation as it was, what it is at present and what it might be in the future. Social, intellectual, spiritual and emotions needs, representing higher-level needs, are less tangible than lower-level needs associated with economic and material domains. Extension worker

28

should try to distinguish the needs associated with the learning or subject content of extension, from the more human psychological needs.

Once needs identification has been carried out, there may be more needs identified that can be acted upon. Needs must be prioritized so they can be met in a systematic way – so people will know when their concerns will be dealt with. You should communicate what is being done to meet needs. Otherwise, the next time an attempt is made to identify them there may be an apathetic response. Undoubtedly needs will be articulated that do not 'fit' the organization's mandate. It is important to be honest about what is appropriate to undertake, and to encourage the referral of other needs to those who can help.

3. State Objectives: The more clearly the objectives indicate expected outcomes, the more useful they are. Objectives are the fundamental to program effectiveness and success. Objectives in extension are set in such a way that the end result may respond to the needs. Objectives that recognize the thought and action of both the teacher and the learner should be incorporated into the program. Objectives are tricky to formulate because of the potential for stating them at different levels. Program objectives are statements indicating where we want to go (in terms of situational change), in a specific time, from where we are now. Thus we get a sense of direction of movement, as indicated.

4. Inventory Resources: Although the general resources of the community may have been described as part of the situational analysis, it can frequently be helpful, following the identification of needs and stating of objectives, to inventory the more specific resources that apply to these program priorities. Resources available to the individual, organization or community may be roughly classified into 'internal' and 'external'. Internal resources are those directly or locally available to people involved in a particular program. External resources must be requested from others, and frequently attained in competition with other programming organizations.

5. Select methods, Techniques and Aids: These elements involve deciding on the 'how' of going about delivering the program. When deciding which to use in a selected program plan, it is useful to keep in mind such factors, as: what the educational objectives are, which methods, techniques and aids can be used most effectively, and which are likely to work best with the participants involved. These assessments help finalize the program plan in readiness for implementation.

6. Implementation: The implementation of the program includes the preparation of instructional objectives, correct combination of subject matters and educational methodologies and other resources. The tasks to be performed for each activity should be identified, strategies developed and responsibilities assigned. The relative success of program implementation depends particularly on, first, the effective investment of time and effort in the prior elements of the program planning process, and second, the type of critical changes that take place in the program during the program implementation.

The relative success of program implementation, and the likely changes required, will depend particularly on, first, the effective investments of time and effort in the prior elements of the program planning process, and second, the types of critical changes that take place in the program environment (i.e., community) during the period of program implementation. The more critical and rapid the changes, the more difficult it is to keep program plans up-dated.

7. Evaluate Process and Results: The programs must be measured at regular intervals to be sure that the people are responding to the teaching, and the methods adopted are successful. Evaluation tells whether or not the educational goals are achieved. Careful analysis of the program leads to learning new methods, techniques and devices that affect the success of a program. On the basis of

"SUNDAR"

these findings an improved plan of work can be prepared. The evaluation results determined at any level should be reported. It is good to inform and share the results of the evaluation with learners and encourage them to participate in other stages of the program. Reporting is the outcome of the evaluation activities and this provides a concrete ground to all extension professionals and interested persons to make better decisions for a new improved educational program. Extension programming is an on-going process and it should be modified and improved on the basis of experience to attain maximum results.

☺

☺☺☺☺☺☺

8. MONITORING AND EVALUATION OF EXTENSION PROGRAM

Evaluation is the major part of extension education. It is an intended to measure progress and provide fair indication of the success of an extension program in achieving the desired goals. There is need for critical analysis of what is actually accomplished through the implementation of an extension program. It helps judge the program effectiveness and gives a basic background for improving future planning. It is the most important component of the program planning process. It is the process of judging the worth of a program on the basis of its performance. Evaluation is used to make an explicit judgment about the worth of a program by collecting evidence to determine whether the standards are met.

8.1 Definition and objectives of Monitoring and Evaluation

Conceptually, monitoring and evaluation correspond in many aspects to formative and summative evaluation. Monitoring is the process of periodic measurement of program inputs, activities, outputs and impacts during program implementation. Indicators used for monitoring are the number of people reached, the number of visits made and so on. Monitoring helps to correct actions quickly if deficiencies occur in certain areas during program implementation.

Evaluation, on the other hand, is the process of making judgment about program inputs, activities, outputs and impacts against standards. By definition, monitoring and evaluation are interrelated. The monitoring process provides the information needed in making necessary judgments.

It is a measure of progress and identifies what learning took place. More specifically, evaluation may be taken as 'a process by which the values of an enterprise are ascertained," or "an analysis by which one is able to understand and appreciate the relative merits or deficiencies of persons, groups, programs, situations, methods, and processes'. It is 'a method for determining how far an activity has progressed and how much further it should be carried to accomplish objectives'. In other words, program evaluation is the process of judging the worth or value of a program. The judgment is found by comparing evidence on what the program is with what the program should be.

8.2 Types of Evaluation

"SUNDAR"

The Evaluation is of different types depending on the nature, purposes and methods used to evaluate a program.

Informal verses Formal Evaluation

The Evaluation is of different types depending on the nature, purposes and methods used to evaluate a program. Educational evaluation has two sides: *formal* and *informal*.

☞ *Informal evaluation*: This is a casual type of evaluation dependent on implicit goals, intuitive norms and subjective judgment. The evaluation is generally made without considering the principles of the evaluation. They are unsystematic, the criteria and evidence used in making judgment are implicit. They can, therefore, be biased and misleading.

☞ *Formal evaluation*: This depends on checklists, structured situation, controlled comparison and standard tests. Formal evaluation concentrates more on outcomes - abilities, achievements, attitudes, and aspiration of the participants of the program.

Formative verses Summative Evaluation

☞ *Formative Evaluation*: It refers to evaluations used to facilitate the decisions made as a program progress. It aims at providing information as the program progresses and determining how well the program is working. In other words, formative evaluation leads to (or should lead to) decisions about program development (including modification, revision, and the like).

☞ *Summative Evaluation*: It is the evaluation of the end result of the program. It summarizes the effects of a program for final decision on materials, methods, and effects. It aims at providing an overall progress of the results. In other word, summative evaluation leads to decisions concerning program continuation, termination, expansion, adoption, and so on.

Internal and External Evaluation

There are two types of evaluation depending on the evaluators, who conduct the evaluation.

☞ *Internal Evaluation*: It is conducted by people within an organization. The internal evaluator being the employee of the organization knows all about the organization and program objectives. The internal evaluator can use his knowledge better in program evaluation.

☞ *External Evaluation*: It is conducted by people outside of the organization. The evaluator may be Knowledgeable and skilled in evaluation and less subject to the effect of internal conflicts. However, it is difficult for an outsider to learn as much about the program as the insider.

8.2.1   Purpose of Evaluation

Program evaluation, as it determines the value of the program, is considered the essential part of the extension system. Evaluation is an on-going process. The purpose of evaluation is not to prove, but improve the program and thus it should be purposive.

☞ To determine whether the goals and objectives are met.
☞ To determine the needs of the participants.
☞ To provide feedback to the program participants.
☞ To mobilize the participants
☞ To meet the requirements of the program planners.
☞ To focus the goals and objectives.
☞ To give basic ground for the needed change in the program.
☞ To improve the program management and effectiveness.
☞ To help learn more and remain accountable.
☞ To get the feeling of accomplishment.
☞ To identify the impact on individual or community

8.3　　　Steps in Monitoring and Evaluation of Extension Program

There are many approaches to the evaluation process. The evaluation approaches may vary depending upon the nature, purpose, scope, complexity of the program and the available resource. Though there are several approaches applied to the evaluation process, many of these are similar and fundamental to all evaluation processes.

☞ *Select and identify the program to be evaluated*: Determine which program is to be evaluated.
☞ *Determine the purpose of evaluation*: There may be many purposes, but identify the specific one for which the evaluation is going to be done. Best on the most important purposes decisions should be made and evaluation should be focused accordingly.
☞ *Determine the audience for evaluation*: The audience for the evaluation should be identified carefully so that efforts can be made to get the information required for the particular audience. The potential audiences may include the evaluator, fellow extension staff, supervisors, support groups, program participants, program sponsor, and the general public. The evaluator needs to select the primary audience for the specific evaluation effort because different audiences will have different concerns about the program
☞ *Determine the issues that are expected to be identified*: The issues should be identified and prioritized depending upon the resource and time constraints. These issues help to determine the appropriate information to collect to make evaluative judgment.
☞ *Determine the criteria for evaluation*: These are the instruments for measuring merit or worth of the program. They are predetermined rules, standards, norms, or descriptive statements considered ideal characteristics for measuring the outcomes of programs. Generally, a properly stated objective of a program provides a basis for criteria. For this reason, many authorities advise against focusing solely or too heavily on program objectives while conducting evaluations. The evaluator should take into consideration the criteria generally held by the actual ad potential clienteles, the general public and the legislators, who represent them, experts in a given fields, and the extension agency.
☞ *Determine resources*: Resources are major concern for conducting evaluation. Consideration of resources - money, man power and time are very essential while conducting the evaluation. This gives a clear understanding of whether one can accomplish the purpose of evaluation within the limit of available resources or not.
☞ *Determine the form of data and the sources to collect the data*: Data sources are the people or things that provide the information that becomes evidence for the program. Evidence is an indication, or outward sign. In evaluation, evidence consists of -
★ Acts, words, numbers, or things that provide a sign or indication.
★ Proof of the extent to which the quality being examined is present in a program and pattern, which provides a picture for judging the extent to which criteria have been met. Only the data needed to assess the issues should be collected.
Various sources can be used to gather data:
★ Observation: Which implies watching what people are doing, or what they have done. It can be used for collecting evidence for a wide range of things.
★ Documents: A number of evidence data can be generated from various types of documents such as records, program plans, minute of meetings and so on.
★ Interviews and Questionnaires: Questionnaires take less time to administer than interviews, but take more time to get good response rate. Interviews take more time but provide immediate feedback.

☞ *The analysis of data*: The data need to be analyzed so that the meaning can be drawn to relate the evidence with the program. Evaluation data can be analyzed in many ways depending on the

"SUNDAR"

nature and purpose of the analysis. It can take the form of relatively complex and sophisticated statistical methods. Analysis performed on inadequate or inappropriate data and techniques may lead to false implications and conclusion. The relation and comparison made and the statistical procedures used should be within the limit of the understanding of the users. The relation and comparison made and the statistical procedures used should be within the limit of the understanding of the users.

☞ *Report the findings*: The pay off of an evaluation comes when the findings are reported to the audience. There are many ways of reporting evaluation. The report should be prepared based on audiences and their level of understanding. Good communication techniques should be used to make the report clear. The reporting should be made easy and understandable so that the audience can understand the evaluation. Reporting provides an opportunity to summarize, interpret and record the effectiveness of a program.

☺

☺☺☺☺☺☺☺

"SUNDAR"