

Concept of Extension, Methods and Techniques

Objective: *To understand the concept of extension, its methods and techniques, types of audio-visual aids and concepts of communication & its process.*

Introduction

The production efficiency of Agriculture in general and dairying in particular is determined by the effective implementation of technologies by the farmers in their field. The effective transfer of technologies from lab to land is major task in the context of our wide spread geographical distribution of villages, farmers and their different culture, languages and different agro-climatic zones of our country further adds the challenge for developing customized technology to the particular type of farmer. In this context, extension plays a critical role disseminating the farm technologies to the farmers through various means of approaching the farmers, by using different types of audio-visual aids and its effective communication for the adoption of latest technologies by the farmers. The primary goal of extension organization is to assist the farmers in adapting farm innovations as per their existing farm conditions, so that they can, in the long term, can contribute to the overall increased milk production of our country in general and sustain their livelihood through agricultural activity in particular.

Concept of Extension

The word extension is derived from the Latin roots 'ex' - meaning 'out' and 'tensio' meaning 'stretching'. Stretching out is the meaning of extension. The word 'extension' came to be used originally in USA during 1914, which means "a branch of a university for students who cannot attend the university proper". In other words, the word extension signifies an out of school system of education. Extension is effective education, out of school system of education where young and adult farmers learn by doing with the help of extension workers.

The main task of extension system is to assist and provide technical knowledge on different production technologies to the farmers for its application and thus achieving the highest production. The National Commission on Agriculture (1976) refers to extension as an out-of-school education and services for the members of the farm family and others directly or indirectly engaged in farm production, to enable them to adopt improved practices in production, management, conservation and marketing. It further stated that, the aim of extension is not only to advocate the improved farm practices but also aims at changing the outlook of the farmers towards the farming in total.

In India, the extension services are offered by many different agencies like Central and State government organizations, Private corporate firms, Non Governmental Organizations (NGOs), Voluntary Organizations (VO) etc. They all offer their services to the farmers in terms of technical knowledge, supply of agro inputs like seeds, fertilizers, pesticides, agricultural machineries and other implements etc.

The government funded extension systems in India can be broadly classified into three categories;

1. The First Line Extension System (Central government) - comprising the institutions of Indian Council of Agricultural Research (ICAR), New Delhi.
2. Front Line Extension System (State government) - comprising of the extension system of State Agricultural/Veterinary Universities located in each state.
3. Main Stream Extension System - comprises of concerned state governments developmental departments like agricultural extension/horticulture/dairy/veterinary/fisheries departments.

Extension Methods and Techniques

The extension worker is essentially a teacher. He must visualize the problems in proper perspective and organize the meaningful learning situation for effective learning by the farmers. In case of extension, the aim of teaching is to ensure the farmer knowledge is improved, new skills are learned and his attitude towards that particular farm technology is changed. In order to bring the gap between what is the actual situation and what ought to be the desirable situation, it essentially requires proper planning in choosing the appropriate methods of communication to the farmers for the effective transfer of technology and its adoption by the farmers at field condition.

Extension through Individual Contact Methods

In this method the extension agent communicates with the people individually, maintaining separate identity of each person. This method is followed when the number of people to be contacted are few, are conveniently located close to the communicator, and sufficient time is available for communication.

The advantages of the individual method are:

- It helps the extension agent in building rapport.
- It facilitates gaining firsthand knowledge of farm and home.
- It helps in selecting administrators and local leaders.
- It helps in changing an attitude of the people.
- It helps in teaching complex practices.
- It facilitates transfer of technology effectively.
- It facilitates in getting the quick feedback information

The limitations of the individual method are:

- This method is time consuming and relatively expensive.

- It has low coverage of audience, and
- Extension agent may develop favoritism or bias towards particular persons.

Extension through Group Contact Methods

A group may be defined as an aggregate of small number of people in reciprocal communication and integration around common interest. In this method, the extension agent communicates with the people in groups and not as individual persons. This method is adopted when it is necessary to communicate with a number of people simultaneously; who are located not far off from the communicator and reasonably good time is available for communication. In this context there will be few communicators that is extension workers who manages the group for their learning.

The advantages of the group method are:

- It enables, extension agent to have face to face contact with a number of people at a time.
- It can reach a select part of the target group.
- It facilitates sharing of knowledge and experience and thereby strengthen learning of the group members.
- It satisfies the basic urge of people for social contacts.
- It provides more opportunity for better interaction among the group members.
- It motivates people to accept a change due to group influence.
- It is less expensive than individual method due to more coverage.

The limitations of the group method are:

- Wide diversity in the interest of the group members may create a difficult learning situation.
- Holding the meeting may be regarded as an objective in itself and

- Vested interests, caste groups and village fractions may hinder free interaction and decision making by the group members.

Extension through Mass Contact Methods

In this method the extension agent communicates with a vast and heterogeneous mass of people, without taking into consideration their individual or group identity. Normally group boundary gets obliterated. This method is highly useful when a large number of and widely dispersed audience is to be communicated within a short time. There may be a few communicators such as the extension agent and some subject matter specialists. The size of the audience may be a few hundred in mass meeting, few thousand in campaign and a few lakh in newspaper, radio and television.

Advantages of mass contact method are:

- It is suitable for creating general awareness among the people.
- It helps in transferring knowledge on farming and changing opinions.
- Large numbers of people are communicated within a short span of time.
- Facilitates quick communication in times of emergency.
- Less extensive due to more coverage.

Limitations of mass contact methods are:

- It is less intensive method.
- Little scope for personal contact with the audience.
- Little opportunity for interaction
- Recommendations are generalized nature.
- Difficulty in getting feedback information and evaluation of results.

Table 6.1 Classification of Extension Methods

| S.No | Individual Methods | Group Methods | Mass Methods |
|------|--|--|--|
| 1 | Farm and Home Visit: It is a direct face-to-face contact by extension worker with farmer. | Result Demonstration: (Seeing is believing) It is done at farmer at his own field, to show the potential of new technology and get feedback information farmers. This would also motivate other farmers to adopt new technology. | Farm Publication: It includes a variety of printed materials on different technologies and distributed to the farmers. It includes, leaflets, folders, bulletin, newsletter, journal etc. |
| 2 | Farmers Call: It is a Personal visit/Phone/Mobile call made by the farmers to reach the extension agent for information. | Method Demonstration: (Learning By Doing) It is done at farmers' field by extension worker to show how to carry out the practices of new technology. This is primarily used to improve the skills of the farmers in doing new practice. | Mass Meeting: It is generally held to communicate interesting and useful information to a large number of farmers at a time through public address system. It may be a Dairy Mela, Dairy Kissan Meet, Awareness programme etc. |
| 3 | Personal Letter/E-mail: It is a letter written by an extension worker to the farmer for sharing some useful farm related information. | Group Meeting: It is method of discussing the farm technology related issues which are mutually beneficial to all the members and arriving at decision democratically. | Campaign: It is intensive educational activity for motivating and mobilizing a farming community to action, to solve a problem, or to meet the farmers demand immediately. For instance, Weed Eradication Campaign, Food & Mouth Disease (FMD of cattle) eradication campaign etc. |
| 4 | Adaptive or Minikit trail: It is done at farmers' field to determine the suitability of new technology and get feedback information. This trail in fellow farmers' field also motivates other farmers to adopt new technology. | Small Group Training: It is special training for a small group of people on certain specific knowledge or skill in doing new practice. | Exhibition: It is a systematic display of models, specimens, charts, photographs, pictures, posters etc. in a sequence so as to create the awareness and arouse the interest among the farmers on particular information/technology. Generally many different exhibition stalls are used to be kept in Kissan Melas. |

| S.No | Individual Methods | Group Methods | Mass Methods |
|------|---|---|--|
| 5 | Farm/Agri Clinic: It is the center established by extension worker to provide the specialized information to the needy farmers at this center. Now-a-days the concept of 'Mobile Clinic' has also come up where services are provided at the farmers door step. | Field Day or Farmers' Day: It is held at either farmers field or research farm field, to motivate the large number of farmers to adopt new technology. | Newspaper: It is a bunch of loose printed papers properly folded which generally contains news, views and advertisements. Many news articles on agricultural technologies are published in many dailies for the benefit of farmers. |
| 6 | | Study Tour: It is the educational trip made by a group of farmers, with the assistance of extension worker, to visit and study the improved practices adopted by any one elsewhere. | Radio/Community radio: It is an electronic audio-medium for broadcasting programmes to the audience. Many radio channels and community radio stations provide exclusive farm information on specified times for the benefit of farming community. |
| 7 | | | Television: It is an electronic audio-visual medium for broadcasting programmes to the audience. Many television channels provide exclusive farm related programmes on specified times for the benefit of farming community. |
| 8 | | | Internet: It is new medium of mass media method. Internet enables any individual, at any point of time, to access and share the required information through browsing the websites. At present, at most all the organizations/institutes working the development of agriculture have their own website with all kind of information. |

Audio-visual aids, its Importance in Extension, its Classification and Criteria for Selection

The extension primarily focuses on educating the farmers on various new technologies. For this effective teaching-learning process to happen, the teacher-extension worker needs some aids through which he can make the learners-farmers more attentive and arouse their interest for new learning. The aids used in teaching-learning process are popularly known as Audio-Visual (AV) aids (Table 6.2). Audio-visual aids are instructional devices which are used to communicate messages more effectively through sound and visuals. These AV aids facilitates quick understanding of the messages though stimulating the sensory organs like ears and eyes. The instructional devices through which message can only be *heard* known as *Audio Aids*. The instructional devices through which message can only be *seen* known as *Video Aids*. The *instructional* devices through which message can be heard and also seen simultaneously are known as Audio-Visual Aids.

Importance of AV aids

The teaching through the use of AV aids leaves a vivid and often enduring impression among the learners. These aids may be used for literate as well as for illiterate people. The AV aids, when skillfully used, in teaching-learning process, have the following advantages:

1. It draws audience attention and arouses their interest.
2. It makes learning more interesting and increase the retention of knowledge.
3. Provides experiences otherwise difficult to get and stimulate self-activity of learners.
4. It can reach more number of people irrespective of their literacy level and language.
5. It multiplies the efforts of teacher and enables to reach large number of learners.
6. Saves the time of teacher and learner.

The AV aids are broadly classified into three categories as follows:

Table 6.2 Classification of AV aids

| Audio Aids | Visual Aids | Audio-Visual Aids |
|-----------------------|----------------------------|----------------------------------|
| | Non-Projected: | Non-Projected: |
| Tape recorder | Chalk board | Drama, puppet show, talking doll |
| Public address system | Bulletin board | |
| Telephone/Mobile | Picture & photograph | |
| | Flash card/flip chart | |
| | Poster | |
| | Diagram, map, chart, graph | |
| | Specimen, model, diorama | |
| | Translide | |
| | Projected: | Projected: |
| | Slides | Motion picture (cinema) |
| | Film | video |
| | Opaque projection | |
| | Overhead projection | |

Selection of AV aids

The AV aids are used in teaching as a supplementary one not a substitute for a teacher. AV aids are used singly or in combination with other aids and extension methods. It facilitates the teacher in a better presentation of the message to the learners. Hence while choosing the AV aids a great care needs to be exercised. The choice of AV aids shall depend on following the factors:

1. Select the best aid, or combination of aids to meet the teaching objective.
2. Nature of subject being taught and changes expected in terms of knowledge/skill/attitude.

3. Nature of Learners- age, education level, interest, experience etc.
4. Size of the learning group, whether it is small, medium or big group.
5. Compatibility of the aids with the teacher and access to those aids.
6. Selected aid should be cost effective, time saving, worthy for effective learning etc.

Criteria for Selection and Evaluation of AV Aids

The selection of AV aids and its evaluation is done by establishing the indicators and its extent of achieving the learning objective is quantified by assigning the score values in a scale format. For instance the Table 6.3 provides the format for same, which is indicative only and further expanded as per the requirements.

Table 6.3 Selection of AV aids based on Indicators

| Indicators | Very much (3) | Much (2) | Not so much (1) | Not at all (0) |
|--|------------------|-------------|--------------------|-------------------|
| The extent to which the AV aid.... | | | | |
| Represents the subject/message. | | | | |
| Has the ability to draw the attention of the audience. | | | | |
| Has the ability to arouse the interest of the audience. | | | | |
| Contributes towards understanding of the topic. | | | | |
| Effectiveness in bring about changes in knowledge, skill and attitude. | | | | |
| Compatibility with teacher and learner | | | | |
| Its cost, time and effort requirements. | | | | |

Concept of Communication, Nature and Importance, Communication Process and Problems in Communication

Communication: The term communication stems from the Latin word ‘communis’ meaning common. Communication is defined as the process by which messages are transferred from a source to receiver (Rogers and Shoemaker 1971).

Another definition says “communication is a process by which two or more people exchange ideas, facts, feelings or impressions in ways that each gains a common understanding of the meaning, intent and use of messages” (Leagans 1961). Communication is thus sharing of ideas, messages, information, facts etc. with others.

Communication is the process by which the message is transmitted from the source to the receiver (Rogers, 1983).

Communication is anything that conveys meaning that carries a message from one person to another (Brooker 1949).

Communication is a mutual interchange of ideas by any effective means (Thayer 1968).

In our daily life, everywhere, we converse with each other and exchange ideas and shares information. This sharing of information with one or more persons is communication.

Farm people want knowledge to improve themselves and their community. They want knowledge to improve their ways of practicing agriculture. Extension workers, who are always in the pursuit of knowledge, have what farmers want. Farm and home advisers, extension workers obtain the knowledge from the researchers, interpret it and select out of it what the farmers want, and communicate it to them in a better way. In its real sense, communication involves the complete transfer of an idea or thought from one’s mind to that of another. It is not, therefore, enough if you tell the farm people about a new idea. They must hear it, understand it and remember it. In other words, communication is telling someone something in such a manner that he understands it.

The Communication process gains importance in agricultural technology transfer, which is a three step flow of information. Generally it begins with at the research system, where the new technologies are generated and then passed on to the second stage of Extension workers. The extension workers process the new information and design it and further transfers to the farmer clients. This whole process is knows as technology

transfer process. In the same way from farmers' side the information flows back to extension workers about the new technology and then passes to the research system. This whole process is known as feedback information process (figure 6.1). This process facilitates the extension workers and researchers to re-design the technology according to the suitability or prevailing conditions at farmers field level.

A well planned and directed communication effort brings together researchers extension agencies and farmers, which can ensure that there is a timely movement of necessary technical information into the extension system and on to the farmers and the necessary feedback information flows back to the extension-research system for its refinement. Effective communication between research and extension agencies will help researchers to better understand the current practices, problems, social conditions and technological needs of farmers. This communication can result in the establishment of priorities ensuring that more appropriate and cost effective farm technologies are generated and transferred to the farmers.

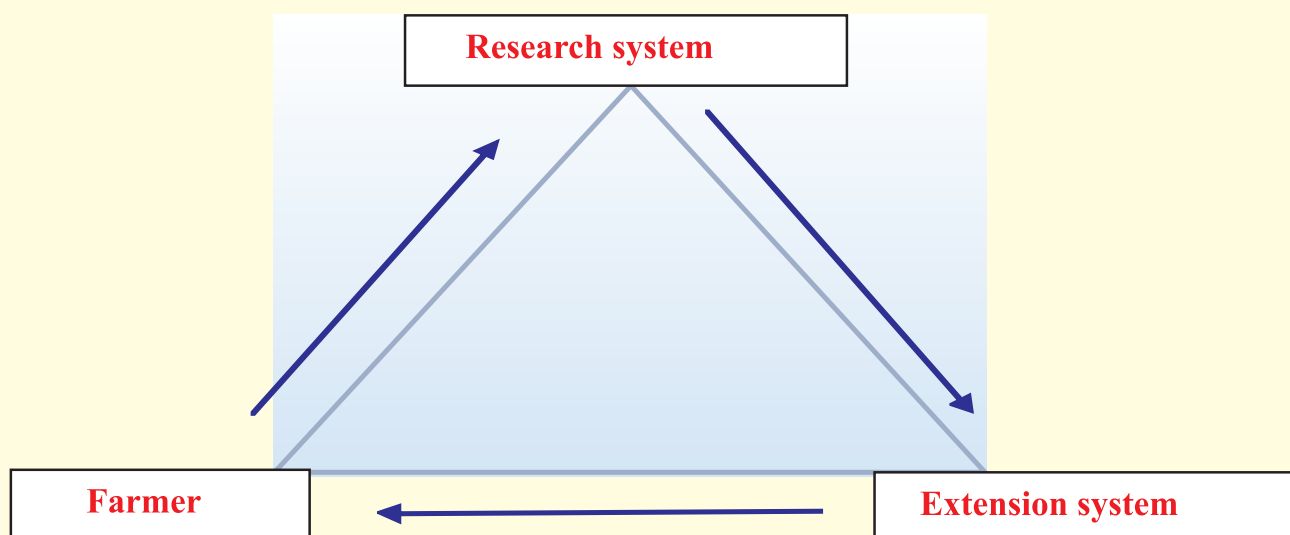


Figure.6.1. Process of Technology Transfer and Feedback Communication

Nature of Communication

1. Communication is process: It is dynamic, ongoing, ever-changing, continuous act. In a continuous process a message from one individual creates a response from the other, which then becomes the message for the first individual.
2. Communication employs many means: It takes place by many ways, many means, many levels, for many reasons, with many people.

3. Communication involves interdependence: It demands reciprocal and mutual dependence between two individuals to a communication happen.
4. Communication process comprises a number of distinguishable parts: It involves three distinct parts that is, Expression, Interpretation and Response.
5. Communication takes place within participants: Like learning, communication also takes place 'within' the individual. This is known as 'intrapersonal' communication.
6. Communication takes place at many levels: It takes place at four different levels, that is, intrapersonal, interpersonal, organizational and inter-organizational communication.
7. Fidelity varies from one communication situation to another: Fidelity i.e. the faithful performance of the communication process varies from one situation to another.

Importance of Communication in Extension

1. Extension communication establishes a favorable climate in which development can take place. For instance, communication through mass media facilitates the exchange of ideas, sharing of knowledge and improvement in skills of the learners.
2. The basic purpose of communication is to 'influence' the people through new information, ideas etc. Communication is essential for all activities like educational and entertainment.
3. Communication has a multiplier effect. It brings synergy in its process of communication in the sense, a sort of reinforcement of ideas due to various convergent forces.
4. Communication raises and aspirations of the people.
5. Communication is essential for good leadership.

Communication Process

Communication has been defined as a process. The process is a concept which is dynamic and ever-changing in nature. It implies that events and relationships are seen as dynamic, flexible and continuous and must be considered as a whole, a dynamic interaction both affecting and being affected by many variables. Thus, process has at least four elements

– acts or action, a continuous change in time, advancement or progress over time, and a goal or result. Therefore, process implies a time dimension as well as a space dimension in which action unfolds in a continuously changing progression towards some goal. Communication being a process requires at least two persons a communicator and a receiver irrespective of the mode of communication. The communicator or source conceives the idea, gives it a shape, decides the mode of communication which may be used to convey the idea, and conveys it. The receiver receives it, tries to understand it, and finally takes an action which may be either to store the information or to send the message back to the original source or take any other line of action as required by the source. The whole process, thus, may be depicted as follows:

The entire process of communication is explained in terms of S-M-C-R-E model (Rogers and Shoemaker 1971). According to this model, a source (S) sends a message (M) via certain channel (C) to the receiving individual (R), which causes some effects (E) i.e. changing the existing behaviour pattern of the receiver.

The five important elements are discussed briefly:

- **Source:** The source of the communication is important. The source may an individual or any research institutions/Universities are the originators or sources of message. In our context, an extension worker is a communicator or a source who starts the communication by advocating the improved technology to the farmers. The credibility - means the trustworthiness and competence of the source or communicator is very important for effective communication.
- **Message:** The recommendations from research, the technology, constitute the content or subject matter, the message information which is relevant to a particular set of learners constitutes the message otherwise for them it is a noise.
- **Channel:** It is the medium through which information flows from a sender to one or more receivers. Face-to-face, word of mouth is the simplest and yet one of the most widely used and effective means of communication. Of late, mass media channels like TV, Internet are most widely used medium of channels.
- **Receiver:** The receiver or audience of the message is the target of communication process. The receiver may be an individual person or a group of persons. In our context, receivers are that farmer who intends to use the new technologies. To be a successful communication, the extension worker must know the target, their needs, interests, resources, facilities, constraints and their number and location.

● **Effect:** It is the response by the receiver of the communication. Audience response is the ultimate objective of any communication process. He may ignore the message completely, or may store it, or may act as directed by the sender. Thus, it is an action or reaction on the part of the receiver in response to the message received by him from the sender. He may also send a message to the sender in response to the original message from the sender.

Problems in Communication

Communication quite often fails to convey the meaning or develop an understanding of the communication sufficient enough to bring about a change in the behaviour of the recipient. It is not only important that a communication be sent, it is much more important that it be understood. When an understanding of the communication does not take place, we can hardly expect a desired change in the behaviour of the receiver. There can always be something that can stand between you and the person with whom you are communicating, which prevents the easy and complete transfer of the information. This is the problem in communication. We need to look into those problems roots and find suitable solutions to ensure the effective.

The following factor could create the problems in any communication; these are,

- **Insufficient information:** Lack of detailed/complete information for the listeners.
- **Information overload:** Providing too much information about something which is not actually required.
- **Overconfidence:** Not knowing properly that, the listeners understood the message or not.
- **Language:** If the message is not delivered in the language of listeners, then there is no communication at all.
- **Not Attentive:** The listeners don't pay the attention to the communicator.
- **Lack of empathy:** There is the failure on your part to see the other person's point of view.
- **Closed dogmatism:** Some individuals will always have reservations in adopting anything new. They are 'closed mind' people.

- **Ignoring the leaders:** Key persons or leaders influence their fellow residents generally. Not taking them into confidence, involving them may lead to problem situation.
- **Prejudices:** Do not let your own prejudices or dislikes influence your communication and your listeners. We need to eliminate our prejudice about anything.
- **Beliefs:** Do not ignore the beliefs, customs, prejudices, dislikes and habits of the people with whom you are communicating.
- **Disorganized communication:** Organize your material for communication with care. Disorganized communication will only lead to confusion and misunderstanding.
- **Difference in thinking or perceptions:** Our thinking patterns or perceptions may differ, human as we are. It is based upon experience, values, attitudes, expectations, emotional state etc.
- **Physical environment:** Noise or any other disruption will lead to distraction of learners and it certainly affects the effective communication process.

Activity

Prepare different types of Audio-visual aids for effective dissemination of dairy information.

REVIEW QUESTIONS

1. Define Extension. What is the importance of extension in agriculture?
2. Explain the classification of extension teaching methods in brief.
3. What are AV aids and how are they useful in extension?
4. Define communication. Explain the process of communication in brief.
5. Enumerate the problems associated with the process of communication.





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