

Fundamentals of Dairy Extension



CHAPTER NOTES

COMPILED BY

MR. ANIL KUMAR MANDAL

DAIRY TECHNOLOGIST VKIDFT MANNUTHY KERALA

(KVASU)



AGRIMOON.COM

All About Agriculture...

Module	Index	Page No.
01.	History, Growth of Agricultural Extension Education as a Discipline in India, Conceptual Background, Concepts of Extension.	4-5
02.	Dairy Extension Education, Differences between Formal Education and Extension Education.	6-7
03.	Concept of Extension Education, Objectives of Extension Education.	8
04.	Functions of Extension, Philosophy of Extension Education, what is philosophy, Need & Component of extension.	9-10
05.	Principles of Extension Education.	11-13
06.	Extension Education process, Extension is a Teaching- Learning process.	14-17
07.	Teaching process in extension, Extension teaching methods.	18-23
08.	Selection of extension teaching methods, Factors for Selection of Extension Teaching Methods.	24-27
09.	Audio-visual-aids, Dale's Cone of Experience, Types of Audio-Visual Aids, Functions of Audio-Visual Aids, Limitations of Audio-Visual Aids, Important Audio-Visual Aids.	28-32
10.	Nature and importance of communication, Structural and functional grammar; meaning and process of communication & Models verbal and non-verbal communication.	33-41
11.	Listening and note taking, field diary and lab record; indexing, footnote and bibliographic procedures. Reading and comprehension of general and technical articles, abstracting.	42-47
12.	Key elements of communication and problems in communication.	48
13.	Adoption and diffusion of innovations, Adoption process, Innovation Decision Process and Adopter categories.	49-52
14.	Groups - Concepts and Types.	53-56
15.	Programme-planning, Principle of extension programme-planning, The programme-planning process, Features of programme planning, NEED.	57-59
16.	Leaders and Leadership, Qualities of a Good Leader, Types of Leader or Leadership Style,	60-62
17.	Rural Leadership, Importance of Rural Leadership Qualities of Rural Leadership, How to identify and select potential-leaders? ,Training of village leaders, Content Area of Leader's training, Essential Features of Leaders training.	63-65

18.	Conceptual orientation about different terms like ATMA, ATIC, TAR – IVLP, PTD, PRA, RRA, Differences between PRA and RRA.	66-67
19.	Dairy and Animal Husbandry Development Programmer in India, operation flood.	68-72
20.	Format for citing a Reference Newspaper or Magazine Article.	73
21.	Projectors, Opaque projector, Over Head Projector, Slide Projector Film/Movie Projector- Digital Projector, Video Projector, Retinal Projectors.	74-79
22.	Organizing seminars & conferences.	80
23.	Script Writing, Writing for Radio, Procedure for writing a Radio script (Drama), Writing for Television.	81-84
24.	Writing Skills, Importance of technical writing, Functions of technical writing, Format and structure of technical writing, Forms of technical/scientific writing, Précis Writing and Summarizing.	85-89
25.	Data Collection Methods.	90-91
26.	Presentation Skills, impromptu presentation, public speaking.	92-98
27.	Group Discussion Technique, Poster and chart, Flash card and flannel Graph, Circular letter.	99-104
28.	Brain-storming Technique for developing the Decision-making Process, Interview-technique(s), Prepare Closing.	105-109
29.	Identification of problems of village farmers through interview method.	110-113

MODULE 1. History of Extension

Extension is related to agriculture and hence Agricultural Extension.

The dissemination of relevant information and advice to farmers, however, has a long and chequered history prior to the emergence of modern forms of agricultural extension in the nineteenth century.

The first known example was in Mesopotamia (roughly, present-day Iraq) around 1800 B.C

Ancient civilizations had extension – Mesopotamia – 1800 BC – clay tablets inscribed with advice on watering crops and killing rats - Egypt – Nile floods - Roman, Latin and Greek texts on practical farming – Wood block printing in China – Information inscribed in rocks in India

History is related to development of Technology – Need of Extension was felt because of Industrial Revolution – 1760 to 1840 – transition to new manufacturing process – Hand production changed to machines – rise in factory system - Textiles – Britain – major turning point in history – every aspect of life was effected–rise in income and population – better standard of living–Britain underwent an agricultural revolution simultaneously – growth of capitalistic economy.

Growth of agricultural societies to take technology to doorsteps of farmers in Scotland -1728 – through lectures and publications

University extension was started in Britain in 1840 to take knowledge to common people – William Sewell used the term ‘extension’ for the first time in his report on ‘suggestions for extension of university’. – James Stuart, fellow of Trinity College started giving lectures to men’s clubs and women’s associations – father of University extension – Cambridge University started extension centers upon his request - the extension activity was taken up later by Oxford and London Universities also.

In US – rapid urbanization caused set back to agriculture – to keep rural people in rural areas – out of school education (extension) started - Balancing of rural and urban life - formation of cooperative extension service -**Dr. J.P. Leagans of USA is the father of Extension** (Died in 2001) - Professor in the Cornell college of agriculture- he coined the term ‘extension education’ and **Dr. K.N. Singh (Kedar Nath) is the father of Extension in Indian context.**

Dr. K.N. Singh from Bihar was ADG of ICAR - Died in 2012 – Said to be a good teacher, excellent researcher and a versatile extension worker.

Growth of Agricultural Extension Education as a Discipline in India

The teaching of extension education at undergraduate level started in the year 1950 at the College of Agriculture, Calcutta University.

The first post-graduate teaching was launched in 1955, at Bihar Agricultural College, Sabour. Then was the post-graduate programme initiated at the College of Nagpur during 1958.

Further, creation of a separate Division of Agricultural Extension at Indian Agricultural Research Institute (IARI), New Delhi in 1958 with assistance from Ford Foundation (Founded in 1936 by Edsel and Henry Ford in New York) under the expert advice of legendary Dr. J. Paul Leagans was a landmark event in the history of extension education.

The Ph.D. programme in the discipline of extension was first introduced at IARI in 1961. Subsequently, Punjab Agricultural University, Ludhiana, followed with Master’s and Ph.D. Programmes in Agricultural Extension in 1961.

At the same time, Division of Dairy Extension was established at National Dairy Research Institute (NDRI), Karnal in May 1961 to undertake extension activities, besides teaching and research in Dairy Extension.

Conceptual Background

The National Commission on Agriculture (1976) appointed by the Government of India stated the scope and jurisdiction of extension in the following terms: 'Extension and Extension education relate to the process of conveying the technologies of scientific agriculture to the farmer in order to enable him to utilise the knowledge for better agriculture and better economy'. This consists of provision for non-formal educational facilities through organised extension services, introduction of agricultural education in schools and education through non-degree institutional programme to impart vocational skills to the farmers for improving their productive activities

Concepts of Extension

The word '**Extension**' is derived from the Latin roots '**ex**' meaning '**out**' and '**tension**' meaning 'stretching'.

According to N. Rolling (1986) – '**Extension**' refers to the actual work done by professional extension agents at various levels of management. While '**Extension Education**' refers to the body of knowledge concerning that work or practice.

'**Extension**' involves the conscious use of communication of information to help people form sound opinions and make good decisions. (Van Den Ban, 1974). Prof. Van Den Ban was a Dutch scholar of agricultural extension who died on May 7, 2016.

Extension is everything that people who think themselves as extensionists do as part of their professional practice. (Leenwis,2004). He is a professor of Wageningen University, Netherlands.

Extension Education is an applied science consisting of contents derived from research, accumulated field experiences and relevant principles drawn from behavioural sciences synthesized with useful technology into a body of philosophy, principles, contents and methods focused on the problems of out of school education for adults and youth. (Paul Leagans,1961)

MODULE 2. Dairy Extension Education

Dairy Extension Education is the process of educating dairy stakeholders how to live better by learning ways to improve their farm, home and community institutions.

Dairy Extension Education is 'helping people to help themselves' in changing their behaviour (knowledge, attitude and skill), in a desirable direction, in order to bring overall development in an individual, his family, his community and thereby for the nation through dairy development.

But the task of developing an individual is not so easy. For this, an Extension Educator is to be a teacher, guide, friend and philosopher to the villagers/dairy stakeholders. Thus, if one aspires to be an Extension Educator, he must possess an attitude and aptitude essentially demanded by the profession (i.e. interest and ability to work for the villagers) in addition to having a sound knowledge and understanding of the subject. Thus, it can be a challenging profession with a satisfaction for the work done.

The Dairy Extension Education focuses on the applied dimension of education by extending and applying knowledge and problem-solving to address individual and community issues in the field of dairying. The foundation of Dairy Extension Education is responding to priority needs by involving the dairy stakeholders.

In India, the terms Community Development and Extension Education became more popular with the launching of Community Development Programme in 1952 & with the establishment of the National Extension Service in 1953. Since then, Community Development has been regarded as a programme for an overall development of the rural people; whereas Extension Education happens to be the mean to achieve this objective.

Extension Education has now developed as a full-fledged discipline, having its own philosophy, objectives, principles, methods & techniques which must be understood by every extension worker & others connected with the rural development.

It might be mentioned here that Extension Education, its principles, methods & techniques are applicable not only to agriculture but also to veterinary & animal husbandry, dairying, fisheries, home science, health and family planning. Based upon its application & use, various nomenclatures have been given to it, such as agricultural extension, veterinary & animal husbandry extension, dairy extension, fisheries extension, home science extension, public health extension, and family planning extension.

Differences between Formal Education and Extension Education

It may, however, be mentioned here that when Extension Education is put into action for educating the rural people, it does not remain formal education. In that sense, there are several differences between the two. Some of these differences are:

Differences between formal education and extension education

Formal Education	Extension Education
1. The teacher starts with theory & works up to practical.	1. The teacher (extension professional) starts with practical & may take up theory later on.
2. Students study subjects.	2. Clients study problems.
3. Students must adapt themselves to the fixed curriculum offered.	3. It has no fixed curriculum or course of study & the clients help to formulate the curriculum.
4. Authority rests with the teacher.	4. Authority rests with the clients.
5. Class attendance is compulsory.	5. Participation is voluntary.

6. Teacher instructs the students.	6. Teacher teaches & also learns from the clients.
7. Teaching is only through instructors.	7. Teaching is also through local leaders.
8. Teaching is mainly vertical.	8. Teaching is mainly horizontal.
9. The teacher has more or less homogeneous audience.	9. The teacher has a large & heterogeneous audience.
10. It is rigid.	10. It is flexible.
11. It has all pre-planned & pre-decided programmes.	11. It has freedom to develop programmes locally and they are based on the needs & expressed desires of the people.
12. It is more theoretical.	12. It is more practical & intended for immediate application in the solution of problems.



MODULE 3. Concept of Extension Education

Concept is an idea, plan or intention. The basic concept of extension education is to reach the unreached. It includes the development of attitude, skill and knowledge among the rural people. Extension and Extension education relate to the process of conveying the technologies of scientific agriculture/dairying to the farmer in order to enable him to utilize the knowledge for better agriculture and better economy. This consists of provision for non-formal educational facilities through organized extension services, introduction of agricultural education in schools and education through non-degree institutional programme to impart vocational skills to the farmers for improving their productive activities.

The concept says that there is unlimited potential in the people; there should be development, continuous and motivated learning and capacity building.

Objectives of Extension Education

Objectives are the expressions of the ends towards which our efforts are directed. In other words, an objective means a direction of movement. Before starting any programme, its objectives must be clearly stated, so that one knows where to go and what to be achieved.

Fundamental objective

Fundamental objective of extension education is the overall development of the rural people, which means the development of dairy stakeholders by improving their living standards.

Agricultural extension in our country is primarily concerned with the following main objectives:

1. Dissemination of useful and practical information relating to agriculture, including improved seeds, fertilizers, implements, pesticides, improved cultural practices, dairying, poultry, fisheries, veterinary & animal husbandry, and food & nutrition.
2. Practical application of useful knowledge to farm & home.
3. Improvement in all aspects of the life of the rural people within the framework of the national, economic & social policies involving the population as a whole.

General objectives of extension

The following are the general objectives:

1. To assist people to discover and analyse their problems and identify their needs.
2. To develop leadership among people and help them in organizing groups to solve their problems.
3. To disseminate research information of economic and practical importance in a way people would be able to understand and use.
4. To assist people in mobilizing and utilizing the resources which they have or need from outside.
5. To collect and transmit feedback information for solving management problems.

MODULE 4. Functions of Extension

Keeping the objectives in view, the function of extension is to bring about desirable changes in human behaviour by means of education. Changes may be brought about in their knowledge (Paneer making, ICT etc), attitude, skill, understanding (comprehension), goals (goal is the distance in any given direction one is expected to go during a given period of time), action (way) and confidence (self- reliance and ability).



Change in knowledge means change in what people know. For example, farmers who did not know of paneer making technology but he came to know of it through participation in extension programmes. The Extension Agents (EAs) who did not know of Information Technology (IT) came to know of them after attending a training course.

Change in skill is change in the technique of doing things. The farmers learnt the technique of paneer making which they did not know earlier. The EAs learnt the skill of using IT.

Change in attitude involves change in the feeling or reaction towards certain things. The farmers developed a favourable attitude towards the paneer making. The EAs developed a favourable feeling about the use of IT in extension programme.

Change in understanding means change in comprehension. The farmers realized the importance of the milk processing (paneer making) in their farming system and the extent to which it was economically profitable and desirable, in comparison to the selling of raw milk.

Change in goal is the distance in any given direction one is expected to go during a given period of time. The extent to which the farmers raised their goal in dairy farming, say increasing milk yield of their dairy animals.

Change in action means change in performance or doing things. The farmers who did not cultivate the HYV fodder crop earlier cultivated it.

Change in confidence involves change in self-reliance. Farmers felt sure that they have the ability of rearing high yielder dairy animals. The EAs developed faith on their ability to do better extension work. The development of confidence or self-reliance is the solid foundation for making progress.

Philosophy of Extension Education

Philosophy literally means love for wisdom. Philosophy refers to the investigations about life and its various components. Since, philosophy is a system of values and beliefs, knowledge of philosophy may guide one's work. It can become a tool for improving practice and consistent work-behaviour. Thus, philosophy is a practical tool to provide rationale for decisions. The principles on the other hand are thumb rules for action. The practical implication is that the philosophy of a particular discipline would furnish the principles or guidelines with which to shape or mould the programmes or activities relating to that discipline.

What Is Philosophy?

Philosophy owes its origin to the Greek words 'Phileo' meaning love and 'Sophia' meaning wisdom. Thus, it literally means love for wisdom. In the early phases of its growth, philosophy embraced all branches of knowledge. Later with growth of sciences, range of subject matter dealt by it narrowed. However, philosophy concerns itself with the fundamental questions about human existence and its place in the world. The purpose of human life, its guiding values, forces of transformation, the way of knowing reality and deciding what is right, etc. are the concerns of philosophy. It is a special system of knowledge dealing with complex problems and question of life. The methods of inquiry in this case are in depth, logical, rigorous and holistic. Thus, philosophy is a system of knowledge with its own methods of inquiry to delve deep into the questions of human existence and laws in an integrated fashion.

According to Kelsey and Hearne (1967), the basic philosophy of extension education is to teach people how to think and not what to think.

Need for Extension

The need for extension arises out of the fact that the condition of the rural people in general, and the farm people in particular, has got to be improved. There is a gap between what is the actual situation and what ought to be the desirable situation. This gap has to be narrowed down by the application of science and technology in their enterprises and bringing appropriate changes in their behaviour.

According to Supe(1987), the researchers neither have the time nor are they equipped for the job of persuading the villagers to adopt scientific methods, and to ascertain from them the rural problems. Similarly, it is difficult for all the farmers to visit the research stations and obtain first-hand information. Thus, there is need for an agency to interpret the findings of research to the farmers and to carry the problems of the farmers to research for solution. This gap is filled by the extension agency.

Component of Extension

Extension is generally thought of at three components, extension education, extension service and extension work. Extensions at these components are interrelated, but at the same time maintain their separate identity.

MODULE 5. Principles of Extension Education

A common definition of Principle is 'fundamental truth and a settled rule of action'. Principle is a statement of policy to guide decisions and actions in a proper manner.

A point of view/an assumption (proof not known) → Hypothesis → (acceptable) → Theory → (Rigorous tests under different settings) → Findings → Principle

The extension work is based upon some working principles and the knowledge of these principles is necessary for extension personnel. Some of these principles, as related to extension education, are mentioned below:

1. Principle of people's need and interest

Extension work must be based on the needs & interests of the people. These needs & interests differ from individual to individual, from village to village, from block to block, from state to state; therefore, there cannot be one programme for all people.

2. Principle of grass root level organisation

A group of rural people in local community should sponsor extension work. The programme should fit in with the local conditions. The aim of organising the local group is to demonstrate the value of the new practices or programmes so that more & more people would participate.

3. Principle of cultural difference

Extension work is based on the cultural background of the people with whom the work is done. Improvement can only begin from the level of the people where they are. This means that the Extension professionals has to know the level of the knowledge, & the skills of the people, methods & tools used by them, their customs, traditions, beliefs, values, etc. before starting the extension programme.

4. Principle of cultural change

Extension education starts with what the learner knows, has and thinks. With this in mind and with an attitude of respect towards clients, the extension professionals must seek to discover and understand the limitations, taboo and the cultural values related to each phase of programme so that an acceptable approach could be selected in the locality

5. Principle of cooperation and people's participation

Extension is a co-operative venture. It is a joint democratic enterprise in which rural people co-operate with their village, block & state officials to pursue a common cause. Ultimately without the cooperation of people the work cannot be successful and desired result cannot be achieved. The first task of extension education is the cooperation of people and their participation in work. Extension helps people to help themselves. Good extension work is directed towards assisting rural families to work out their own problems rather than giving them ready-made solutions. Actual participation & experience of people in these programmes creates self-confidence in them and also they learn more by doing. People should realise that the task of extension education is their own task. Participation in extension work generates confidence among people for the work. It is not

essential that all the members of the society should participate but Extension professionals should try for maximum participation of people.

6. Principle of applied science and democratic approach

Extension education is based upon democratic principles. It is based on discussions and suggestions. Discussions are held with the people on actual field conditions, so that they participate in work. Extension professionals provide practical look to the scientific inventions so that farmers can easily adopt them on their farm.

7. Principle of learning by doing

According to this principle, farmers are encouraged to learn by doing the work themselves and by participating in it. When a person does a work, he gains practical knowledge and experiences the difficulties. Extension professionals are able to understand the problems and provide proper guidance to the farmers and thus, they are able to receive proper information/feedback.

8. Principle of trained specialists

It is very difficult that extension personnel should be knowledgeable about all problems. Therefore, it is necessary that specialists should impart training to the farmers from time to time.

9. Principle of adaptability in use of extension teaching methods

People differ from each-other, one group differs from another group and conditions also differ from place to place. An extension programme should be flexible, so that necessary changes can be made whenever needed, to meet the varying conditions. Extension professionals should have knowledge of extension methods so that they can select proper method according to the condition. Teaching methods should be flexible so that they can be properly applied on people according to their age groups, educational background, economic standard and gender. In extension education, two or more methods should be applied according to the principle of adaptability.

10. Principle of leadership

Extension work is based on the full utilisation of local leadership. The selection & training of local leaders to enable them to help in carrying out extension work is essential to the success of the programme. People have more faith in local leaders & they should be used to put across a new idea so that it is accepted with the least resistance.

11. Principle of whole family

Extension work will have a better chance of success if the extension professionals have a whole-family approach instead of piecemeal approach or separate & uninterested approach. Extension work is, therefore, for the whole family, i.e. for male, female and children.

12. Principle of evaluation

Extension is based upon the methods of science, and it needs constant evaluation. The effectiveness of the work is measured in terms of the changes brought about in the knowledge,

skill, attitude, and adoption behaviour of the people, not merely in terms of achievement of physical targets.

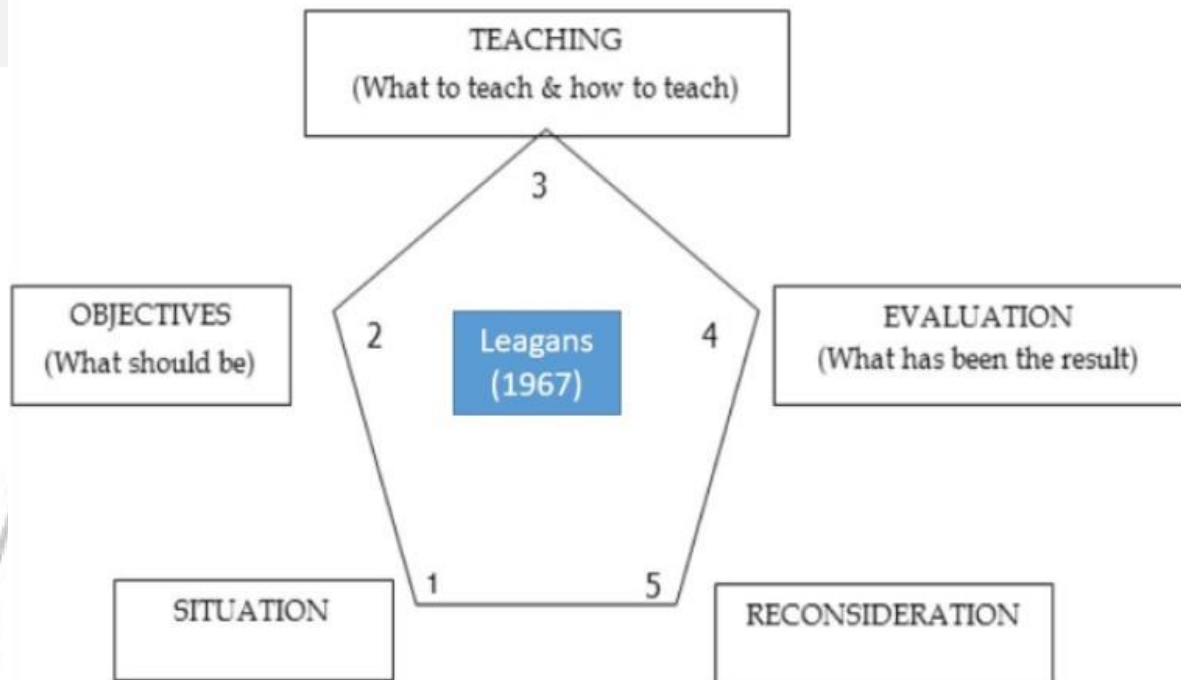
13. Principle of satisfaction

The end-product of the effort of extension teaching is the satisfaction that comes to the farmer and his family members as a result of solving a problem, meeting a need, acquiring a new skill or some other changes in behaviour. Satisfaction is the key to success in extension work. A satisfied stakeholder is the best advertisement.



MODULE 6. Extension Education process

Extension education is a participatory process and involves five essential and interrelated steps. The sequence of steps is discussed as per the concept developed by Leagans.



1. Situation (What it is now) – Collection of facts and analysis of situation
2. Objectives (What it should be) – Finding the objectives
3. Teaching (What to teach and how to teach) – The content and methods
4. Evaluation (What has been the result) – determining the extend of achievement
5. Reconsideration (What next to do) – results in starting of a new phase of extension

The continuous process of extension education shall go on, resulting in progress of the people from a less desirable to a more desirable situation.

Extension is a Teaching- Learning process

Dairy extension is an educational process for bringing desirable changes among the dairy stakeholders, which involves both learning, & teaching and needs some tools or methods commonly known as extension-teaching methods. It is, therefore, necessary here to understand what is meant by learning, teaching & extension methods.

Teaching is the process of arranging situation in which the important things to be learnt are called to the attention of the learners, their interest developed, desire aroused and action promoted.

Learning is the process by which an individual, through one's own efforts and abilities changes the behaviour. Any change of behaviour which takes place as a result of experience may be called learning.

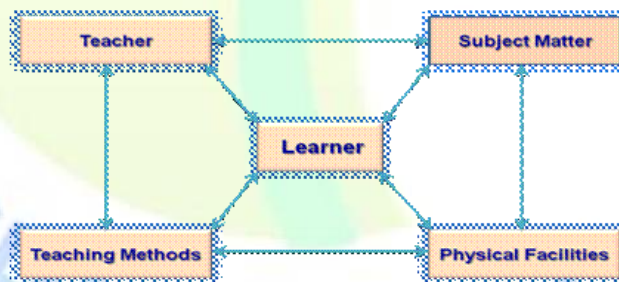
Process means a course of procedures, something that occurs in a series of actions or events conducting to the desired end.

Criteria for effective extension teaching

1. Extension teaching requires specific and clearly defined objectives
2. Extension teaching requires a suitable learning situation
3. Extension teaching requires effective communication
4. Extension teaching requires both content and method
5. Extension teaching must be looked upon as an intentional process
6. Extension teaching must result in effective learning
7. Extension teaching must accomplish certain kinds of educational changes in relation to the subject matter taught
8. Extension teaching requires careful evaluation of results

Extension Learning Process

'Learning' is the process by which an individual, through his own activity, attains a change in his behaviour (Leagans, 1961). It is an active process on the part of the learner. The essential role of an extension worker is to create effective 'learning situations'. An effective learning situation requires the following essential elements (Leagans, 1961):



Elements of learning situation

Teacher (Instructor)

A successful teacher is the one who takes into account the following important considerations:

- Understands the nature of the learner and is in a position to evaluate his motives & ability.
- Reacts appropriately to the feelings, emotions and attitudes of the learners.
- Is conscious of the fact that the learner responds to the whole gamut of learning situation.
- Is professionally alert.
- Is well-composed even in the adverse conditions.
- Has the ability to maintain better human relations.
- Always makes efforts for his professional growth.

- Selects those experiences which suit to the abilities and needs of the learners.
- Should be close to masses and belong to the same groups for making dialogues easier.

Learners

They should have:

- Clear objectives regarding the use of the subject matter.
- Interest in the subject matter.
- Need for the subject matter.
- Ability to understand and opportunity to apply the subject matter.
- Physical and mental preparation.

Subject matter (contents)

The subject matter should fulfil the following conditions:

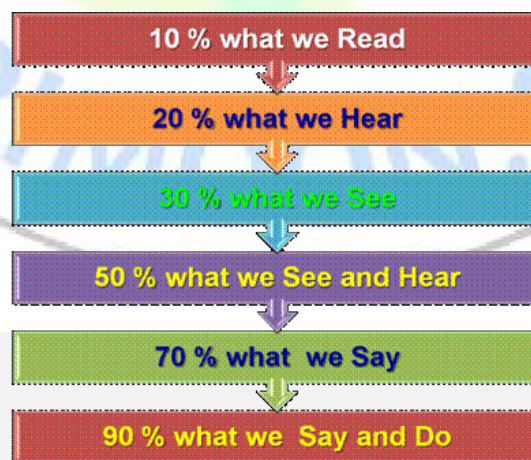
- Should be in the line with the needs and interests of the learners.
- Should be valid, authentic, factual and applicable.
- Should be well-organized.
- Should be at a level where it could be understood by the learners.
- Should be timely & appropriate.

Teaching methods

Subject matter cannot effectively be transferred without the help of suitable teaching methods and aids. Proper selection and skilful handling of teaching methods and aids facilitate creation of desirable learning situation. Teaching methods & aids should be:

- Readily available.
- In working conditions.
- Suitable to the subject-matter.
- Diversified, flexible and suited to the needs of the clients.

The following points need to be kept in mind while using extension methods for appropriate involvement of different sense organs:



People remember the things

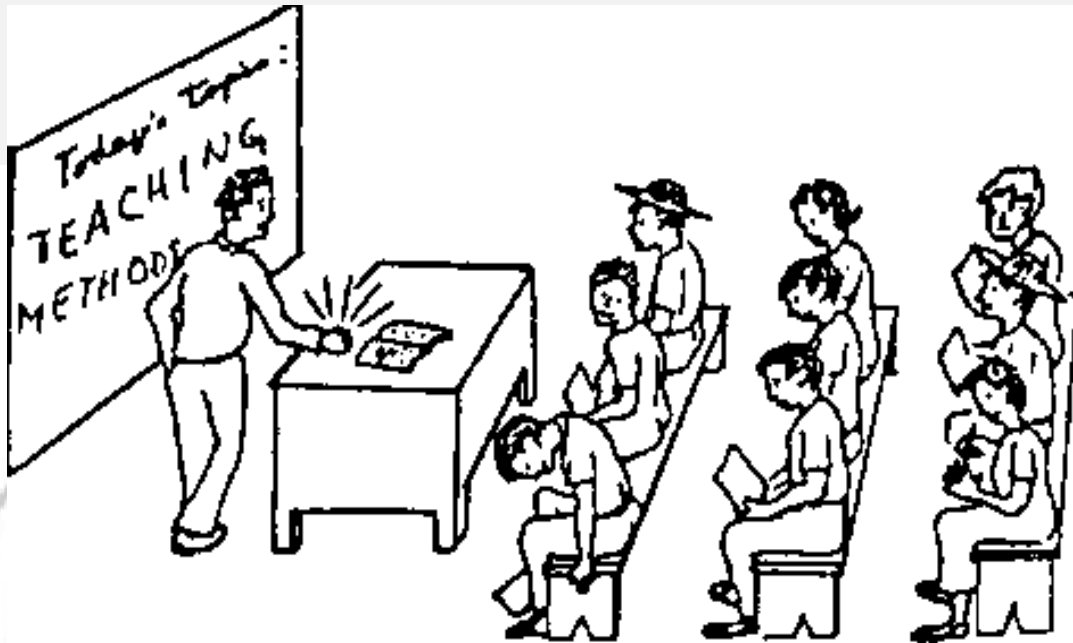
Physical facilities

Light, ventilation, chair and table arrangements, outdoor facilities, gardening & good landscaping should be satisfying and comfortable, if possible. The good teacher will make all these arrangements prior to the meetings.

The teacher should skilfully manipulate the elements of the learning situations & provide satisfactory learning experiences for the stakeholders. The main aim of the teacher is to bring about a change in the behaviour of the learners with the help of a judicious combination & use of different elements.



MODULE 7. Teaching process in extension



Teaching in Extension

We gain the ability to substitute the 'good and new' developmental ideas with the 'old and outdated' through learning. Thus, learning is most effective when done under organized teaching.

Teaching is defined as an interactive process primarily involving classroom talk, which takes place between teacher and pupil, and occurs during certain definable activities (Amidon, 1963).

Steps of Teaching

Extension teaching is a planned and deliberate act on the part of the extension agent. The extension agent has to move step by step in a scientific and logical way to impart training to the clients who are farmers, farm women and rural youth. The role of the extension agent is that of a facilitator and motivator. Though details of the procedure may vary from situation to situation, there are some steps which are basic to extension teaching.



Steps in extension teaching (Wilson and Gallup, 1955)

Attention

Attention is the starting point to arouse the interest of the learners. Research suggests that the attention of people is attracted by various senses in the following proportions (Reddy, 1998). The famous extension saying is, *seeing believes*. Thus, seeing and hearing are the major senses involved to attract attention and enhanced learning.

Attention of people through various sense organs

Sense	Percent
Seeing	87.00
Hearing	7.00
Smell	3.50
Touch	1.50
Taste	1.00

Interest

Once attention is captured, instructors and/or extension professionals can bring the audience's attention to developmental needs and arouse their interest in further consideration of ideas. Extension professionals should make them understand how development contributes to the overall well-being of the community.

Desire

It concerns about the continuation of the audience's interest in the developmental ideas or better practices, until that interest becomes a desire, or, a motivating force.

Conviction

In this step, people know what action is necessary and just how to take that action. Extension professionals also ensure that people visualize the action in terms of their own situations and acquire confidence in their own ability to participate in the people-centred developmental initiatives.

Action

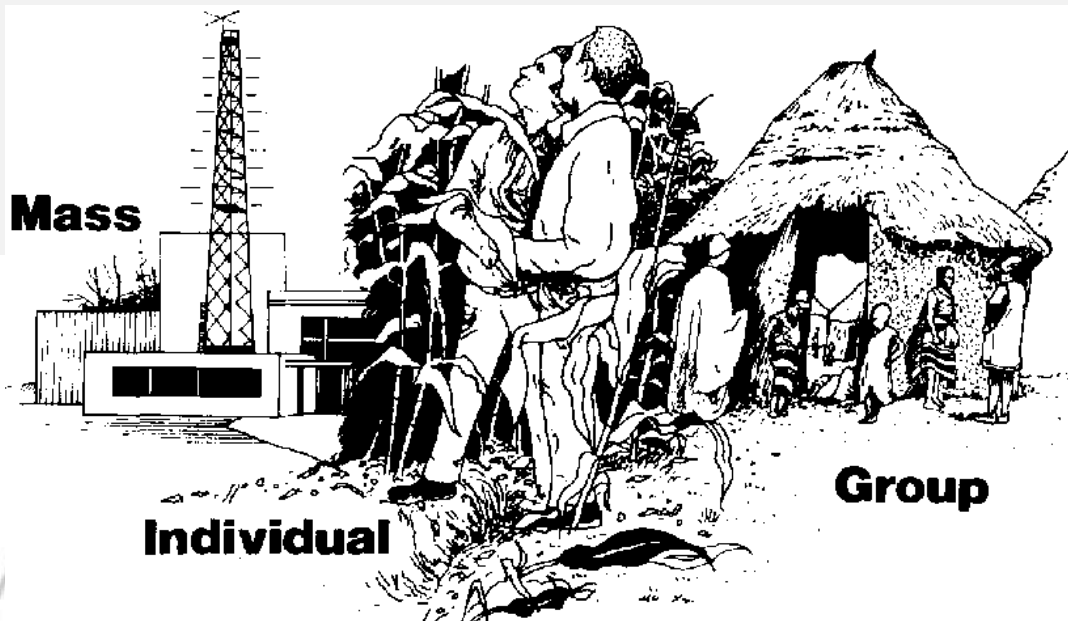
Unless this conviction is converted into action, the efforts of extension for development will go unrewarded. It is the job of extension professionals to make it easy for the people to act. For example, if the adoption of a new high yielding cattle breed is the action needed by farmers, that breed should be made available within the reach of farming communities, along with other recommended package of practices. If the action does not quickly follow desire and conviction, the new idea may fade away. Therefore, this phase should never be ignored.

Satisfaction

Satisfaction is the end product of extension teaching process. Follow up action(s) by extension professionals helps people to learn and evaluate the development progress. The saying, *satisfied customer is the best advertisement*, also applies to extension and development work. Satisfaction helps the people to continue developmental work with increased attention, interest, desire, conviction and action.

The six steps in teaching discussed as above, often blend with each other. As an extension professional, you need to arrange the learning situations in all the six teaching steps with the help of suitable extension teaching methods and audio-visual aids. Various teaching methods and audio-visual aids are not equally suited for every step in teaching. Every method and aid under certain circumstances makes a contribution to each step. It depends on the extension professional how he handles the situation.

Extension teaching methods



Introduction

Extension teaching methods are the tools & techniques used to create situations in which communication can take place between the rural people & the extension professionals. These are the methods of imparting new knowledge & skills to the rural people by drawing their attention towards such technologies, thereby arousing their interest and helping them to have a successful experience of the new practice. A proper understanding of these methods and their selection for a particular type of work is necessary.

Classification of Extension Teaching Methods

According to use and nature of contact

Extension teaching aid is dependent on the number and location of audience and time available for communication. One way of classifying the extension methods is according to their use & nature of contact in relation to interpersonal, group and mass communication. Based upon the nature of contact, they are classified into following categories:

Individual-contact methods

Extension methods under this category provide opportunities for face-to-face or person-to person contact between the rural people and the extension professionals. These methods are very effective in teaching new skills and creating goodwill between farmers and the extension professionals.

Group-contact methods

Under this category, the rural people or farmers are contacted in a group which usually consists of 20 to 25 persons. These groups are usually formed around a common interest. These methods also involve a face-to-face contact with the people and provide an opportunity for the exchange of ideas, for discussions on problems and technical recommendations. In this way, the future course of action is finalized.

Mass or community-contact methods

An extension professional has to approach a large number of people for disseminating information and helping them to use it. This can be done through mass-contact methods conveniently. These methods are more useful for making people aware of the new technologies, quickly.

Classification of extension-teaching methods according to their use

Individual contacts	Group contacts	Mass contacts
Farm & home visits	Method and result demonstration	Print media (viz. Newspapers, Newsletters, magazines, leaflets, posters, pamphlets, circular letters bulletins) Also called farm publications
Farmer's calls Telephone calls Farm clinic	Group meetings, discussions Small group training	Electronic media (viz. Radio, television, cell phones)
Adaptive/Mini kit trials	Conferences, seminars, workshops, etc.	Internet-based media
Personal letters	Field trips, field days, campaign, Study tours	Exhibitions, <i>dairy mela</i> , Campaign, Mass meeting

According to form

Extension teaching methods are also classified according to their forms, such as written, spoken & audio-visual. Some of the important methods under each of these 3 categories are listed below:

Classification of extension-teaching methods according to their form

Written	Spoken	Object or visual
Bulletins	General & special meetings	Result demonstrations
Leaflets, folders, news articles	Farm & home visits	Demonstration plots
Personal letters	Official calls	Motion-pictures or movies, charts
Circular letters	Telephone calls, radio	Slides & film-strips, models, exhibits

A brief description of some of the extension methods which are commonly used by extension professionals is given below:

Farm & home visit: Farm & home visit constitutes the direct or face-to-face contact by an extension professional with the farmer or the members of his family. During these visits, information is exchanged or discussed. The visits may be to get acquainted with the problems of the farmers. Such visits provide an opportunity for a two-way communication.

Method demonstration: It is used to show the technique of doing things or carrying out new practices e.g. clean milk production, paneer making, ghee making, etc. This method is usually used for groups of people.

Result demonstration: Result demonstration is meant for proving the advantages of recommended practices and to demonstrate their applicability to the local conditions. It is conducted by a farmer under the direct supervision of an extension professional. It is designed to teach others, in addition to the person who conducts the demonstration. It helps the farmers to learn by seeing & doing. This method can be used to show the superiority of practices, such as dahi culture, value addition, hygienic handling of animals, etc.

Group discussion: All the farmers cannot be contacted by extension professionals individually because of their large number. It is convenient & feasible to contact them in groups. This method is commonly known as group discussion. It is used to encourage & stimulate the people to learn more about the problems that concern the community through discussion. It is a good method of involving the local people in developing local leadership & in deciding on a plan of action in a democratic way.

Exhibition: An exhibition is a systematic display of information, actual specimens, models, posters, photographs, and charts, etc. in a logical sequence. It is organised for arousing the interest of the clientele in the things displayed. It is one of the best media for reaching a large number of people, especially illiterate & semi-literate people. Exhibitions are used for a wide range of topics, such as planning a model village, showing high-yielding breeds of cattle and buffaloes, new agricultural implements and the best products of village industries.

Campaign: Campaign is used to focus the attention of the people on a particular problem, e.g. milk adulteration, vaccination and prevention of animal diseases, tick control etc. Through this method, maximum number of farmers can be reached in the shortest possible time. It builds up community confidence and involves the people emotionally in a programme.

Field tour: Conducted tours for farmers are used to convince them and to provide them with an opportunity of seeing the results of new practices and products, skills, etc. and to give them an idea regarding the suitability & application of these things in their own area. Such tours may also be arranged to enable the rural people to visit places & institutions (connected with the problems of rural life), such as research institutions, training institutions, agricultural universities, model villages, areas of advanced developments, leading private farms, exhibitions, and agricultural & cattle fairs/ *dairy mela*.

Print media: Newspapers, magazines, bulletins, leaflets, folders, pamphlets and wall newssheets are another set of mass media for communicating information to a large number of literate people. They are used for communicating general & specific information on a programme of technology or a practice. Small folders, leaflets & pamphlets are used to give specific recommendations about a practice, such as clean milk production, vaccination schedule, detection of milk adulterants, etc.

Radio: It is one of the most powerful media of communication. It is a mass medium of communication and can reach a large number of people at any given time involving the least expense. Extension professionals use the radio for communicating information on new methods & techniques, giving timely information about the control of animal diseases such as foot & mouth disease (FMD), animal pests, weather, market news, etc. For this purpose, talks, group discussions, folk-songs, dialogues & dramas are usually broadcast. There are radio programmes broadcast by All India Radio (AIR), FM (frequency modulated) radio, community radio, etc.

Television: It combines both audio & visual impact and is very suitable for the dissemination of agriculture & dairy information. It is more useful in teaching to do a specific job. A beginning has been made in India for using this medium for development programmes and it is expected that its use will become more extensive in the coming years. At present, along with the Government-owned channel (Door darshan), several other private channels are telecasting various kinds of entertainment and developmental programmes to reach the viewers.

Leaflet: A leaflet is a single sheet of paper used to present information on only one developmental idea in a concise manner, using simple language.

Folder: A folder is a single piece of paper folded once or twice, and, when opened, the material is presented in sequence.

Pamphlet: A pamphlet is an unbound single sheet of paper that is printed on both sides, printed in colours with action photographs, giving full information about a topic in greater length than in folders or leaflets.

Bulletin: A bulletin is a publication of around 20 pages, with the primary objective of giving complete information which the intended readers can apply to their own situation.

Booklet: When the extension material exceeds 20 pages and is less than 50 pages, it is called booklet.

MODULE 8. Selection of extension teaching methods

Dairy extension has its roots in researches related to dairy and animal husbandry sciences, but the method of sharing this information with stakeholders depends on a social sciences process. The major role of extension professionals in this process is to educate the dairy stakeholders. Hence, it is his responsibility to provide better learning situations so that learners can learn effectively. No single technique alone is suited to all situations. Therefore, a combination of suitable teaching methods may be employed to do the needful, some of which are being discussed below:

1.Methods for Getting Attention

To provide learning experiences for people, extension professionals must get their clients' attention. This is the fundamental stage for successfully making the ideas enter the minds of people, and it requires planned and frequent use of a variety of teaching methods, viz. pictures, demonstrations, news, success stories, survey results, slogans, posters, radio talks, cartoons, displays, exhibits, etc.

2.Methods for Developing Interest

The amount and direction of developmental accomplishments of extension teaching are largely determined by the interests of the people. Learning without interest does not take place to any appreciable degree. People who are interested in solving developmental problems acquire more information about them. Interest usually represents the objectives or goals of an individual. Development means comparatively little to people until they are able to connect it to their interests.

The factor of interests tends to control the influence of extension education, because only those people who are interested will take part in developmental activities. The methods that are useful in developing people's interest are: meetings, radio talks, publications, tours, result demonstrations, photographs, charts, etc.

3.Methods for Developing Confidence

Development and maintenance of confidence should be parallel to all other changes in people's attitudes and behaviour. Confidence is the key to achieve results from extension education, because action taken by people is voluntary. Confidence of the client corresponds to the goodwill of the extension professionals. Once broken, confidence is difficult to restore, either in oneself, or in the community as a whole. It is, therefore, necessary for extension professionals to safeguard the factor of confidence in all the steps of teaching. In an ideal extension teaching, confidence should grow in intensity, as desire is created and followed by action and satisfaction. Methods that are useful in developing and maintaining confidence are: economical and practical recommendations, readily adoptable developmental practices, widely seen demonstrations, and personal visits.

4.Methods for Creating Desire

Desire has a definite focus, unlike attitudes and interests which are general, which is specific to the objects to which it is attached. Desire comes only when a developmental idea, or intervention, suggested by extension professionals is considered favourable by people. It may be noted here that desire is an outgrowth of interest and confidence.

In creating desire, appeal to the feelings and emotions of people should be employed to support the interest they already have. A desire is a want, and to make that want to be felt and to satisfy the want, the right teaching methods must be used to stimulate feelings and emotions, viz. exhibitions, demonstrations, pictures, working models. For example: solar water heating devices, circulars suggesting benefits, 'before' and 'after' pictures that demonstrate development, and actual development results presented in all possible ways.

5.Methods to Ensure Action

Action follows desire. If action does not follow soon after the desire has been created, the desire soon fades away and people continue as before. Consequently, a variety of extension teaching methods must be planned and used to ensure action that result in development. The methods useful for promoting action are: use reminders; ensure the participation of leaders in development work; cooperative action; success stories and radio talks about & by people taking-action.

6.Methods for Maintaining Satisfaction

Satisfaction depends upon the confidence, pride and success as a result of adoption of developmental initiatives. After a developmental practice has been adopted by people, it is important to remain in touch with them till they experience real satisfaction and continue with the practice. Continuation of the practice and recommendations to others is an indication of satisfaction. Methods that are useful in maintaining satisfaction are: personal contact, whenever possible; timely hints; showing the value of results; giving more information; and publicity in media.

Factors for Selection of Extension Teaching Methods

No single "rule-of-thumb" can be given for the selection and use of the various extension methods for ensuring success in all situations. On one hand, the individual contact methods furnish the most direct opportunities for influencing people effectively; on the other hand all other methods of group and mass procedures are dilutions or compromises created by the pressure of necessity. We must reach more people, teach them more often, and keep down the cost per contact. In order to get most effective results the extension professionals should: select the appropriate methods; have a suitable combination of the selected methods and; use them in proper sequence, so as to have repetition in a variety of ways. For doing this, a number of factors should be considered, such as:

1.Audience

Based upon the principle of *sine qua non*, it is imperative that the instructors must be aware of the type of audience they are going to interact with. In addition, size of the audience coupled with level of their educational qualification also contributes significantly as a factor influencing the choice of extension teaching methods. For instance, group discussion cannot be used effectively when the number of participants exceeds thirty; method demonstration can be used for a relatively small audience, while lecture meetings can be used for large audiences.

2.Teaching objective

Before starting the selection process for identifying suitable methods, the objectives of the whole process must be very clear in minds of the instructor as well as learners. In this regard, some specific queries need to be addressed: do you want to think about a change in thinking or knowledge or in attitude or feeling or in action or skill? If you want merely to inform or influence a large number of people slightly, you should use mass media. If you want to influence a relatively small number of people to make maximum improvements, resort to individual contact methods. If

you want to change attitude or arrive at a consensus of opinion, arrange group discussion or work through village leaders. If you want to teach a skill, use the method demonstration.

3. Subject matter

Where the new practice is simple or familiar (i.e., similar to those already being followed) the news article, radio or circular letter will be effective, whereas complex or unfamiliar practices will require face-to-face contacts, written materials and audio-visual aids.

4. Stage of development of extension organization

In the initial stages of extension, result demonstrations will be necessary to gain confidence of farmers. But if extension work is already well established and the farmers have confidence in extension services, result demonstrations may not be necessary and local illustrations of adoption by village leaders will suffice,

5. Availability of communication media

The availability of certain communication media (i.e. newspapers, telephones, radio etc.) will also have a direct bearing on the extent to which these methods can be used.

6. Relative cost of the method

The relative cost of the method (i.e., the amount spent on extension teaching in relation to the extent of practices changed) is also an important consideration in their selection and use.

7. Extension professional's familiarity with extension method

An extension professional's familiarity with, and skill in the use of, several extension methods will also influence his choice and use of the methods.

Considerations in the Selection of Extension Teaching Methods

The following guidelines are helpful in the selection of suitable extension teaching methods:

Educational level of the audience

For illiterates - Personal visits.

For educated - Written materials

Size of the audience

- For less than 30 - Lecture, Group discussion
- For more than 30 - Mass methods

Teaching objective/ Needs of people

- To bring awareness - Mass methods
- To change attitude - Group discussion
- To impart skill - Demonstration

Subject matter

- To prove value of a recommended practice - Result demonstration.
- To teach a new skill, or an old one in an improved way - Method demonstration
- To disseminate simple technology - News article

- To teach a complex technology -Face-to-face contact with audio visual aids

Extension organization's credibility

- New organization, yet to gain confidence of people - Result demonstration
- Well established organization with proven success- Circular letter

Size of extension staff

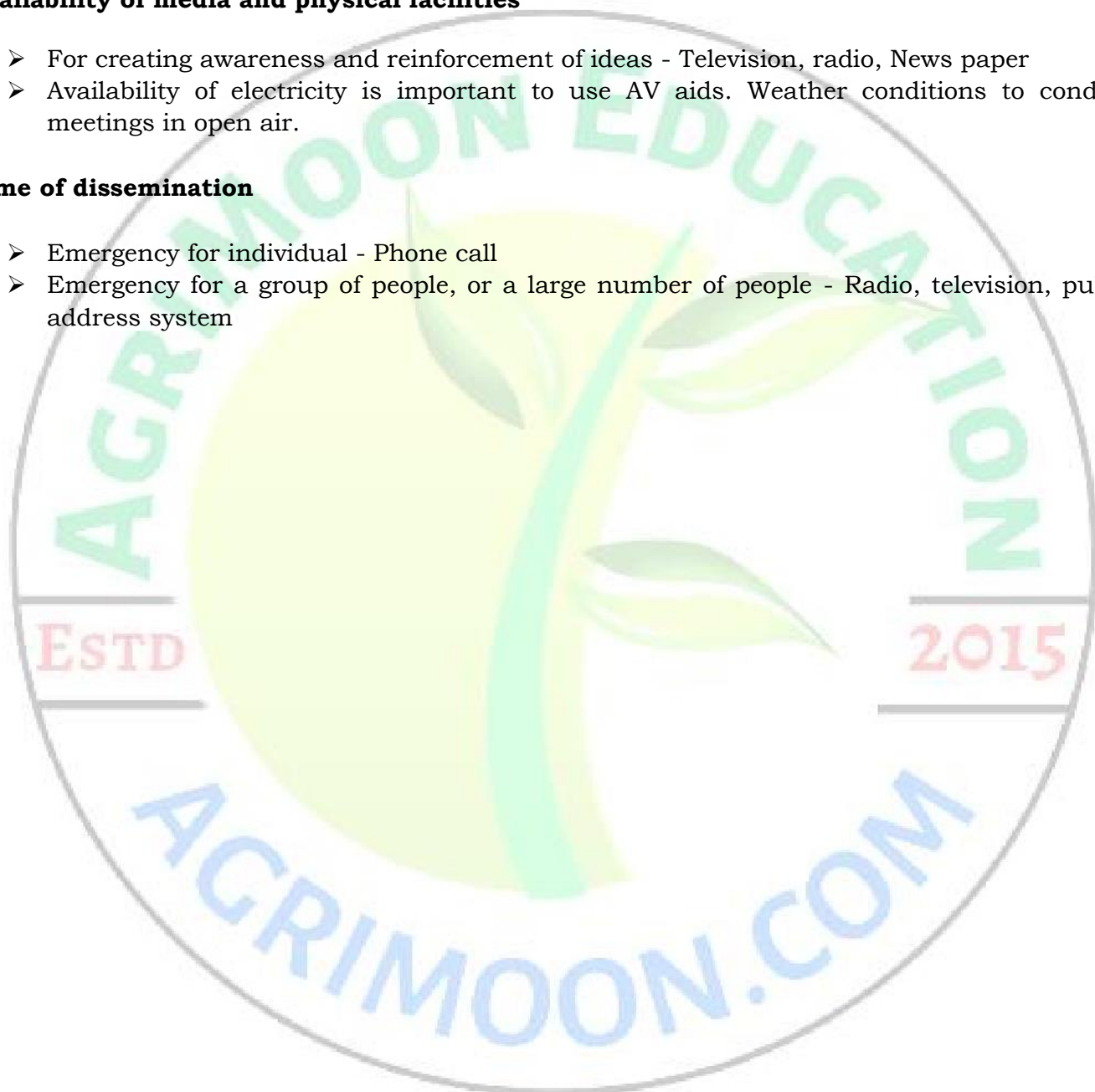
- Few staff members - Group and mass contact methods
- Large number of staff - Individual contact methods

Availability of media and physical facilities

- For creating awareness and reinforcement of ideas - Television, radio, News paper
- Availability of electricity is important to use AV aids. Weather conditions to conduct meetings in open air.

Time of dissemination

- Emergency for individual - Phone call
- Emergency for a group of people, or a large number of people - Radio, television, public address system



MODULE 9. Audio-visual-aids

There are a number of audio-visual aids that could be used in our day-to-day life. This unit will focus on selected audio-visual aids that are normally available and accessible to the users. The term audio-visual aid refers to anything that an extension professional uses to help to convey the message when communicating with his clientele. The spoken words are the main communication tools. However, when the extension professional is speaking to a large village meeting or discussing a problem in a field with a group of farmers, its impact and effectiveness can be greatly enhanced by the use of suitable audio-visual aids. **Audio-visual aids are instructional devices through which the messages can be heard and seen, simultaneously.**

'The best way to peoples' heart is through their stomach, but the best way to their brain is through their eyes and ears'- An old proverb

Audio-Visual Aids

An audio aid is an instructional device in which the message can be heard but not seen. A visual aid is an instructional or communicating device in which the message can be seen but not heard.

An audio-visual aid is an instructional device in which message can be heard as well as seen.

Strictly speaking, no teaching method is complete without talk/speech. It must be remembered that audio-visual aids can only supplement the teacher, but cannot supersede & replace/supplant him.

Dale's Cone of Experience

Dale's Cone of Experience is a model that incorporates several theories related to instructional design and learning processes. During the 1960s, Edgar Dale theorized that learners retain more information by what they 'do' as opposed to what is 'heard', 'read' or 'observed'. His research led to the development of the Cone of Experience. Today, this 'learning by doing' has become known as 'experiential learning' or 'action learning'. The cone of experience as modified by Sheal (1989) provides a linkage between learning, activity and participant involvement.

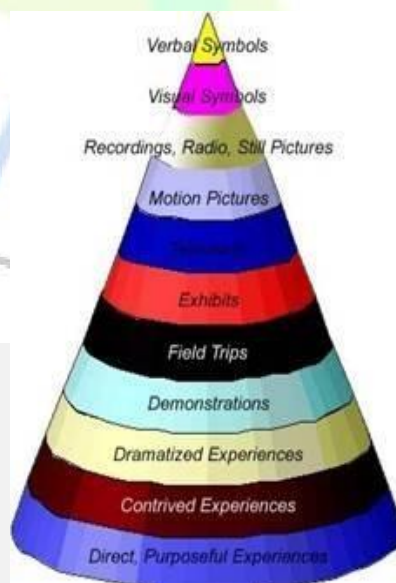


Diagram for Dale's cone of experience

Note: Contrived – deliberately created



Cone of experience as modified by Sheal (1989)

Between the two extreme of 'reading' and 'doing the real thing' are a number of other ways through which people learn. As one moves downwards from the principle of the cone, increased involvement, and learning occur.

Types of Audio-Visual Aids

1. Verbal symbols

They are designations that bear no physical resemblance to the objects or ideas for which they stand. These are used together with every other material on the 'Cone of Experience'.

2. Visual symbols

Visual symbols involve reproducing real situations, chalkboard and overhead projector (the most widely used media), help students see an idea, event, or process. Examples are flat makes, chalkboards, sketches, bulletin, boards, flash cards, flannel graphs. Types of such visual symbols could be:

- Non-projected: (for individual use) e.g. photographs, illustrations.
- Projected: (for group use) e.g. photographs & illustrations-used in opaque projector, sides, and filmstrips.

3. Recordings, radio

Recordings: On disc, tape or wire, as it offers wide scope for recording continuously, use the matter, erase it & re-use the conversations recorded.

Radio: It is a mass medium or mass contact medium. It facilitates dissemination of information to a large and heterogeneous group of clientele.

4. Motion pictures or films

These are silent pictures or combination of sight and sound.

5. Exhibitions

Exhibitions are planned display of models, specimens, charts, posters etc. presented for public view for information, advertising or entertainment.

6. Field-trips/Farm & home visits

These are face-to-face types of individual contact methods employed by the extension professionals to interact with the farmer or members of his family on the farm or at his home for specific purpose connected with extension.

7. Demonstrations

Methods 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 worth of an improved practice, whose success has already been established.

8. Dramatized experiences

Participating in a reconstructed experience e.g. dramas, puppet shows.

9. Contrived experience

A contrived experience may be construed as an edited version of reality, which is differing in nature from the original in size or in complexity or in both e.g. models of animals, mock-ups of machinery, objects, and specimens.

10. Direct, purposeful experience

It is the unabridged version of life, itself, with three elements: directness, purposefulness, and responsibility for the outcome e.g. ploughing, cultivation of fodder crop, etc.

The use of audio-visual aids in extension teaching is based on the principle that one must see and try to do, along with hearing, in order to go through all the six steps in the extension teaching learning process.

Seven Rs of Audio-Visual Aids

- Right aid
- Right place
- Right way
- Right time
- Right people
- Right message
 - Right Extension personnel

Functions of Audio-Visual Aids

- Convey meaning clearly
- Capture attention, arouse and sustain interest
- Enhance the correctness, clarity and effectiveness of the idea and skills being transferred

- Help in learning more, faster, and with thoroughness
- Help in remembering for a longer period
- Reach more people, irrespective of their level of literacy or language
- Save the instructor's time
- Reduce the possibility of misinterpreting concepts
- Clarify the relationship between material objects and concepts
- Supplement the spoken word - the combination of audio and visual stimuli is particularly effective since the two most important senses are involved
- Highlight the main points of the message clearly.

Limitations of Audio-Visual Aids

- Learners may sometimes form distorted impressions, unless audio-visual aids are supplemented with required explanations
- They may tempt the instructor to narrow down his teaching to only a few big ideas, not giving the complete picture of a subject
- Some instructors acquire the mistaken notion that they have little to do when audio-visual aids are used.

Important Audio-Visual Aids

Audio-Visual aids are supporting materials & they alone cannot generate learning. They should be considered only a tool that helps to do a job in a better way. Visual aids are of different types. The following are the more commonly used ones in India:

Posters

A good poster creates awareness & interest among the people. It inspires & takes people towards action. It consists of 3 main parts. The first usually announces the purpose or the approach, the second sets out conditions, & the third recommends action. A poster should be bold enough to attract attention of the people, & should communicate only one idea at a time. It should have simple letters which are clear & forceful. The size of a poster should not be less than 50 X 75 cm.

Flannel graphs

Flannel graphs serve as a good teaching aid when a piece of sandpaper is fixed to the back of a picture, a photograph, a letter, etc. They can be made to adhere easily to a piece of thick flannel cloth, fixed on a board. They are used as an aid for group methods like informal talks or lectures.

Flash cards

Flash cards are a set of small compact cards approximately 30 to 45 cm. in size, and are used to bring home an idea, such as the benefits of a smokeless *chulha*, the rearing of cross breed cows, compost-making and other practices. Pictures on the theme are drawn on these cards in a logical sequence, which are then flashed before the audience. Upon seeing them, the villagers are able to follow a story more easily.

Puppets

Puppets are very popular and especially suitable for village situations. Puppet shows can be effectively organised to gather the rural people. For a puppet show, a short story, brief scenes and quick dialogues are necessary. Such shows can teach a lesson about any specific topic like animal health, literacy, or home-making.

Models

Models create a sense of realisation in a person. Models of new farm equipment, compost pits, sanitation devices and animals are mostly prepared for those people who are not in a position to see them in the actual form. They are used to create interest, promote understanding and influence the people to adopt a certain practice.

Bulletin-boards

A bulletin-board can serve the purpose of making announcements, displaying events of short duration & photographs of local activities. The information should be written in simple language.

Photographs

They are a very simple visual aid. Good photographs show some action & catch the feelings & emotions of the people. They are so arranged that they tell a story. They are displayed on a bulletin-board at a common meeting-place where a large number of people can see them. They should be clear & bold in composition with proper captions. One good picture is perceived as equivalent to 1000 words.

Cultural programmes

Local cultural programmes, such as folk-songs & dramas, are used as an effective medium of communicating the message of development programmes. Dramatization of a theme or story creates a lively interest among the audience. Folk-songs & dances related to the subjects of local interest & importance, when acted on the stage, bring them home more forcefully.

For an effective use of extension teaching methods, it is not enough to know these methods and their techniques. What is more important is the appropriate selection of a method or combination of methods for a particular situation. In fact, when a farmer is exposed to a new idea for several times by different methods or a combination of methods, he is likely to accept it more quickly. Farmers learn about new practices through several stages. These stages are known as

Awareness stage - when a person comes to know of a new practice but lacks the complete information.

Interest stage - when he becomes interested in a new idea & wants to know more about it.

Evaluation stage - when he mentally applies the new idea to his present situation & evaluates it.

Trial stage - when he applies the new idea or practice on a small scale in order to determine its utility under his own situation.

Adoption stage- when he decides to continue the full use of the practice. Thus, it is the cumulative effect on people through exposure to an idea repeatedly that result in action

MODULE 10. Nature and importance of communication

Communication is the process of exchanging information, ideas, thoughts, and feelings between individuals or groups. It is a fundamental aspect of human interaction and plays a crucial role in various aspects of life, including personal relationships, professional settings, and societal functioning. Here are some key points on the nature and importance of communication:

Nature of Communication

1. **Process-Oriented:** Communication is an ongoing process involving the sender, the message, the medium, and the receiver. It requires continuous feedback to be effective.
2. **Dynamic:** Communication is dynamic and constantly evolving. It adapts to the context, participants, and the environment in which it occurs.
3. **Symbolic:** It involves the use of symbols, such as words, gestures, and images, to convey meaning. The interpretation of these symbols can vary among individuals.
4. **Contextual:** Communication is influenced by the context in which it takes place. This includes the physical setting, cultural background, and social norms.
5. **Relational:** It helps to establish and maintain relationships. Effective communication can strengthen bonds, while poor communication can lead to misunderstandings and conflicts.
6. **Purposeful:** Communication often has a purpose, such as informing, persuading, entertaining, or building relationships.

Importance of Communication

1. **Building Relationships:** Effective communication is essential for forming and nurturing personal and professional relationships. It helps in expressing emotions, building trust, and understanding others' perspectives.
2. **Facilitating Understanding:** Clear communication ensures that information is accurately conveyed and understood, reducing the likelihood of misunderstandings and errors.
3. **Decision-Making:** In organizations, effective communication is vital for making informed decisions. It enables the sharing of relevant information and encourages collaborative problem-solving.
4. **Conflict Resolution:** Good communication skills are crucial for resolving conflicts. They allow individuals to express their viewpoints, listen to others, and find mutually acceptable solutions.
5. **Enhancing Productivity:** In the workplace, effective communication can improve efficiency and productivity by ensuring that everyone is on the same page and working towards common goals.
6. **Promoting Engagement:** Engaging communication can motivate and inspire individuals, fostering a positive environment and encouraging active participation.
7. **Adapting to Change:** Effective communication helps individuals and organizations adapt to change by providing clear information, addressing concerns, and facilitating smooth transitions.

8. **Cultural Understanding:** In a globalized world, communication helps bridge cultural differences, promoting understanding and cooperation among diverse groups.

Communication

Communication stems from the Latin word 'communis' meaning 'common' or 'sharing'. Communication is a process by which two or more people exchange ideas, opinions, facts, feelings or expressions in a way that each gain a common understanding of the meaning, intent, and use of message' (Leagans,1961).

Structural and functional grammar

Definition: Structural grammar is concerned with the arrangement and relationship of words in a sentence. It focuses on syntax, the set of rules that dictate how words are combined to form sentences.

Key Components:

1. **Parts of Speech:** The basic building blocks of sentences, including:

- **Nouns:** Person, place, thing, or idea (e.g., dog, city, happiness)
- **Verbs:** Action or state of being (e.g., run, is)
- **Adjectives:** Describe or modify nouns (e.g., happy, blue)
- **Adverbs:** Describe or modify verbs, adjectives, or other adverbs (e.g., quickly, very)
- **Pronouns:** Replace nouns (e.g., he, they)
- **Prepositions:** Show relationships between nouns or pronouns and other words (e.g., in, on)
- **Conjunctions:** Connect words, phrases, or clauses (e.g., and, but)
- **Interjections:** Express emotion (e.g., wow, oh)

2. **Sentence Structure:**

- **Simple Sentences:** Contain a single independent clause (e.g., She reads.)
- **Compound Sentences:** Contain two or more independent clauses joined by a conjunction (e.g., She reads, and he writes.)
- **Complex Sentences:** Contain one independent clause and at least one dependent clause (e.g., She reads because she loves books.)
- **Compound-Complex Sentences:** Contain two or more independent clauses and at least one dependent clause (e.g., She reads because she loves books, and he writes.)

3. **Grammatical Rules:**

- **Subject-Verb Agreement:** The subject and verb must agree in number (e.g., She reads vs. They read).

- **Tense Consistency:** Maintaining the same tense throughout a sentence or related sentences.
- **Punctuation:** Using symbols like periods, commas, and question marks to clarify meaning and indicate pauses or stops.

Importance:

- Ensures grammatical correctness and clarity.
- Helps in constructing well-formed sentences.
- Facilitates comprehension and communication.

Functional Grammar

Definition: Functional grammar focuses on how language is used in context to achieve specific purposes. It examines the roles that language structures play in communication and how these structures convey meaning.

Key Components:

1. Language Functions:

- **Informing:** Providing information or facts.
- **Requesting:** Asking for something or making a request.
- **Persuading:** Influencing someone's thoughts or actions.
- **Expressing Emotions:** Conveying feelings or attitudes.

➤ Contextual Use:

- **Formal vs. Informal Language:** Adapting language according to the situation (e.g., professional vs. casual settings).
- **Spoken vs. Written Language:** Differences in language use between speech and writing.
- **Genre-Specific Structures:** Using specific language features appropriate for different types of texts (e.g., reports, narratives).

2. Pragmatics:

- **Speech Acts:** The actions performed by utterances, such as promising, ordering, greeting, or apologizing.
- **Implicature:** Information implied by the speaker but not explicitly stated.
- **Deixis:** Words that depend on context to convey meaning (e.g., here, there, you, me).

Importance:

- Enhances effective communication by aligning language use with communicative goals.

- Improves adaptability in language use according to different contexts and audiences.
- Provides insights into the practical application of language in real-life situations.



Communication Process

The term communication stems from the Latin word 'Communis', meaning common. According to Rogers and Shoemaker (1971), Communication is the process by which messages are transferred from a source to receiver van den Ban and Hawkins (1988) defined communication as the process of sending and receiving messages through channels which establishes common meanings between a source and a receiver. Leagans (1961) defined communication as the 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. Communication, then is a conscious attempt to share information, ideas, attitudes and the like with others.

BASIC FUNCTIONS OF COMMUNICATION

Communication has four basic functions

- 1. Information function.** The basic requirement of adapting and adjusting oneself to the environment is information. There must be some information about what is going on in the environment which concerns the people. The getting or giving of information underlies all communication functions, either directly or indirectly.
- 2. Command or instructive function.** Those who are hierarchically superior, in the family, society or organization, often initiate communication either for the purpose of informing their subordinates or for the purpose of telling them, what to do, how to do, when to do etc. The command and instructive functions of communication are more observable in formal organizations than in informal organizations.
- 3. Influence or persuasive function.** According to Berlo (1960), the sole purpose of communication is to influence people. Persuasive function of communication to induce people, is extremely important for extension in changing their behaviour in the desirable direction
- 4. Integrative function.** A major function of communication is integration or of continuously offsetting any disintegration at the interpersonal or at the organizational level. This helps to maintain individual, societal or organizational stability and identity.

MODELS OF COMMUNICATION

According to Aristotle, communication has three ingredients-

1. Speaker -the person who speaks

2. Speech- the speech that the individual produces

3. Audience- the person who listens.

The Shanon-Weaver (1949) model is consistent with Aristotle's proposition. According to them, the ingredients of communication are-

1. Source

2. Transmitter

3. Signal

4. Receiver

5. Destination.

Compared with the Aristotelian model, the source is the speaker, the signal is the speech and the destination is the audience, plus two added ingredients, a transmitter which sends out the source's message and a receiver which catches the message for the destination.

According to Berlo (1960), the model of communication consists of

1. Source

2. Encoder

3. Message

4. Channel

5. Decoder

6. Receiver.

Code is a system of signals for communication. Encode means to put the message into code or cipher. Channel means the medium through which the signals move, the decoder means which converts the message in the code into ordinary language which may be easily understood.

The communication model forwarded by Leagans (1963) has the following elements-

1. Communicator

2. Message

3. Channel

4. Treatment

5. Audience

6. Response.

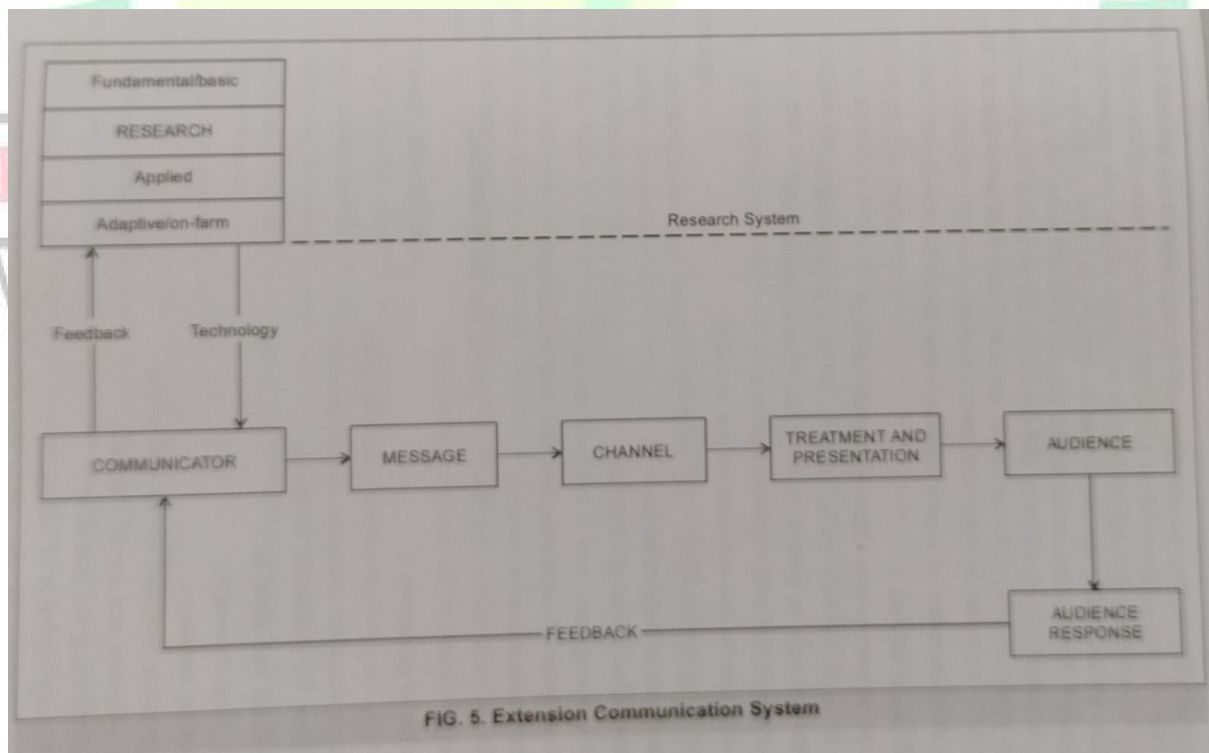
The task of communication, according to him, is to provide powerful incentives for change. Success at this task requires thorough understanding of the six elements of communication, a skilful communicator sending useful message through proper channel, effectively treated, to an appropriate audience that responds as desired.

Rogers and Shoemaker (1971) thought of the communication process in terms of the **S-M-C-R-E model**, the components of which are-

1. Source
2. Message
3. Channel
4. Receiver
5. Effects.

According to them a source (S) sends a message (M) via certain channels (C) to the receiving individual (R), which causes some effects (E) i.e. changing the existing behaviour pattern of the receiver.

Communication system



The elements of the extension communication system are discussed in brief. The characteristics of each of the elements, which may contribute to the success or failure of communication are furnished as per Leagans (1961).

I. Communicator

In the context of agriculture and rural development, extension agent is the communicator who starts the process of communication. The extension agent and mass media like radio are sometimes visualized as sources or originators of message, which is not correct. Knowledge generates through research and as such the Research Institutes, Research Projects, Universities are the originators or sources of message. The extension agent obtains the required information from research and carries it to the audience, the farmers. The extension agent is the communicator, a carrier of information. To enhance the process, extension agents may take the help of some aids, known as audio-visual aids. They also carry back the reactions of the farmers, their problems etc. as feedback information to research, for finding out solutions for the same.

2. Message

The recommendations from research, the technology, constitute the content or subject matter, the message. Information which is relevant to a particular set of audience constitutes the message, otherwise for them this is 'noise'. A good message should clearly state what to do, how to do, when to do and what would be the result.

3. Channel

Channel of communication constitutes 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, particularly for the developing countries. As society changes from traditional to modern, the emphasis shifts from oral to media system of communication. Because of the large number of audience or receivers of information, and because of physical distance of the communicator and the receivers of information, it is necessary to use different media of communication. Even in interpersonal face-to-face, word-of-mouth communication, it becomes necessary to use some aids to make communication more effective.

4. Treatment and presentation

Treatment means the way a message is processed so that the information gets across to the audience. The purpose of treatment is to make the message clear, understandable and realistic to the audience. Presentation means how the message is communicated or placed before the audience. Treatment and presentation of the message shall depend to a great extent on choice of the channel and the nature of audience. Treatment and presentation are creative tasks which have to be 'tailor-made' for each communication function. The tasks can not be reduced to a formula or recipe. For example, treatment of a message will be different when it is conveyed in a meeting, or published in a folder or broadcast. Similarly, there will be difference in treatment and presentation of the message according to the level of literacy, socio-economic status and progressiveness of the audience.

5. Audience

The audience or receiver of message is the target of communication function. An audience may consist of a single person or a number of persons. It may comprise men, women and youth. An audience may be formed according to occupation groups such as crop farmers, fruit farmers, dairymen, poultry keepers, fish farmers, home makers etc. Audience may also be categorized according to farm size such as marginal, small, medium or big farmers; or according to whether they belong to scheduled caste, scheduled tribe etc.

6. Audience response

Response of the audience is the ultimate objective of any communication function. Response of an audience to messages received may be in the form of some kind of action, mental or physical. Until the desired action results, extension communication does not achieve essential objective.

FEEDBACK

Extension communication is never complete without feedback information. FEEDBACK means carrying some significant responses of the audience back to the communicator. Communication work is not an end in itself. The extension agent should know what has happened to the audience after the message has reached them.

Feedback has the following characteristics-

- (1) feedback is source oriented,
 - (ii) feedback varies in different communication situations,
 - (iii) feedback affects the source or communicator,
 - (iv) feedback exerts control over future messages,
 - (v) feedback affects communication fidelity, and
 - vi) feedback maintains the stability and equilibrium of a communication system.
- Verbal and non-verbal communication

Verbal Communication

Definition: Verbal communication involves the use of words to convey a message. It can be spoken or written and is the most explicit form of communication.

Types of Verbal Communication

1. **Spoken Communication:**
 - **Face-to-Face Conversations:** Direct interaction between individuals.
 - **Telephone Calls:** Voice communication over distances.
 - **Video Calls:** Visual and voice interaction using technology.
 - **Public Speaking:** Delivering speeches or presentations to an audience.
 - **Meetings:** Formal or informal discussions in a group setting.
2. **Written Communication:**
 - **Emails:** Digital written messages sent electronically.
 - **Letters:** Formal written correspondence.
 - **Reports:** Structured written documents detailing information or findings.
 - **Text Messages:** Short written messages sent via mobile devices.
 - **Social Media Posts:** Written content shared on social platforms.

Importance of Verbal Communication

- **Clarity:** Provides precise and clear information.
- **Detail:** Allows for detailed explanations and instructions.
- **Feedback:** Enables immediate feedback in conversations.
- **Record Keeping:** Written communication provides a record for future reference.
- **Persuasion:** Effective for convincing or influencing others.

Non-Verbal Communication

Definition: Non-verbal communication involves the use of body language, gestures, facial expressions, and other visual cues to convey a message without words.

Types of Non-Verbal Communication

1. **Body Language:**

- **Posture:** How a person stands or sits, which can indicate confidence, openness, or defensiveness.
- **Gestures:** Movements of the hands or arms to express ideas or emotions (e.g., waving, pointing).
- 2. **Facial Expressions:**
 - **Smiling:** Indicates happiness or friendliness.
 - **Frowning:** Shows displeasure or confusion.
 - **Eye Contact:** Indicates attention, interest, or honesty.
- 3. **Paralinguistic:**
 - **Tone of Voice:** The quality or emotion in the speaker's voice.
 - **Pitch and Volume:** The highness or lowness and loudness of the voice.
- 4. **Proxemics:**
 - **Personal Space:** The physical distance maintained between individuals, which can indicate intimacy or formality.
- 5. **Haptics:**
 - **Touch:** Physical contact, such as handshakes, hugs, or pats on the back, which can convey warmth, comfort, or support.
- 6. **Appearance:**
 - **Clothing and Grooming:** The way a person dresses and presents themselves, which can convey professionalism, status, or personality.

Importance of Non-Verbal Communication

- **Complementing Verbal Communication:** Enhances and reinforces spoken or written messages.
- **Conveying Emotions:** Effectively communicates feelings and attitudes that words may not fully capture.
- **Building Relationships:** Helps establish rapport and trust through positive body language and expressions.
- **Regulating Interaction:** Indicates when it is someone else's turn to speak or how engaged a listener is.
- **Cross-Cultural Communication:** Provides a universal mode of communication that can transcend language barriers.

Integration of Verbal and Non-Verbal Communication

Effective communication often involves a combination of both verbal and non-verbal elements. For instance, a speaker might use a confident tone and maintain eye contact to reinforce the importance of their words. Similarly, a written message might be enhanced by the writer's choice of language and tone to convey the appropriate emotion or intent.

MODULE 11. Listening and Note Taking

Listening

Definition: Listening is the active process of receiving and interpreting spoken messages.

Types of Listening:

1. **Active Listening:** Fully engaging with the speaker, understanding their message, and providing feedback.
2. **Passive Listening:** Hearing the speaker without full engagement or response.
3. **Critical Listening:** Evaluating the message for accuracy, logic, and credibility.
4. **Empathetic Listening:** Understanding the speaker's emotions and feelings.

Importance:

- **Understanding:** Ensures comprehension of the message.
- **Building Relationships:** Shows respect and attention, fostering trust.
- **Problem Solving:** Helps identify issues and solutions through clear understanding.
- **Feedback:** Provides the basis for effective and relevant responses.

Techniques:

- **Pay Attention:** Focus fully on the speaker.
- **Show That You're Listening:** Use non-verbal cues like nodding or eye contact.
- **Provide Feedback:** Paraphrase or ask questions to ensure understanding.
- **Defer Judgment:** Allow the speaker to finish before forming an opinion.
- **Respond Appropriately:** Give thoughtful and relevant replies.

Note Taking

Definition: The practice of recording information from a source to aid memory and comprehension.

Methods:

1. **Cornell Method:** Divides the page into sections for notes, cues, and a summary.
2. **Outlining:** Organizes information hierarchically with main points and subpoints.
3. **Mapping:** Visual representation of information, showing relationships between concepts.
4. **Charting:** Using tables to organize information into categories.
5. **Sentence Method:** Writing every new thought or point on a separate line.

Importance:

- **Retention:** Helps in remembering information.
- **Organization:** Structures information logically.
- **Review:** Provides a reference for studying or revisiting information.
- **Comprehension:** Enhances understanding of the material.

Tips:

- **Be Selective:** Focus on key points and concepts.
- **Use Abbreviations:** Save time by shortening common words and phrases.
- **Review Notes:** Go over your notes soon after taking them to reinforce learning.
- **Use Visual Aids:** Incorporate diagrams or charts to illustrate complex information.

Field Diary and Lab Record

Field Diary:

Definition: A field diary is a journal used by researchers to record observations, experiences, and reflections during fieldwork.

Components:

1. **Dates and Locations:** Record where and when observations are made.
2. **Activities:** Describe what was done, including methods and procedures.
3. **Observations:** Note details about the environment, participants, and any relevant occurrences.
4. **Reflections:** Include personal insights, thoughts, and preliminary interpretations.
5. **Sketches and Maps:** Visual aids to support textual descriptions.

Importance:

- **Data Collection:** Provides a detailed account of fieldwork activities.
- **Reflection:** Helps researchers think critically about their observations and methods.
- **Documentation:** Serves as a record for future reference and analysis.

Tips:

- **Be Consistent:** Write regularly to capture ongoing changes and details.
- **Be Detailed:** Include as much relevant information as possible.
- **Reflect:** Consider not just what you observe, but what it might mean.

Lab Record:

Definition: A lab record is a detailed log of experiments conducted in a laboratory, including procedures, observations, results, and analyses.

Components:

1. **Title:** A clear and descriptive title of the experiment.
2. **Objective:** The purpose or goal of the experiment.
3. **Materials:** List all equipment and materials used.
4. **Method/Procedure:** Step-by-step instructions on how the experiment was conducted.
5. **Results:** Data collected during the experiment, often presented in tables or graphs.
6. **Discussion:** Interpretation of results, including any errors or anomalies.
7. **Conclusion:** Summary of findings and their implications.
8. **References:** Citing any sources or previous work that informed the experiment.

Importance:

- **Accuracy:** Ensures precise documentation of experiments.
- **Reproducibility:** Allows others to replicate the experiment and verify results.
- **Analysis:** Provides a basis for interpreting and understanding results.
- **Record Keeping:** Serves as an official record for academic, research, or industrial purposes.

Tips:

- **Be Detailed:** Record every step and observation, no matter how minor it seems.
- **Use Clear Language:** Write in a way that others can easily understand and follow.
- **Review Regularly:** Regularly check for completeness and accuracy.

Indexing

Definition: Indexing is the process of creating an index, which is an organized list of topics, names, or other items in a document or book, along with the corresponding page numbers.

Components:

1. **Keywords:** Important terms, concepts, or names that appear in the document.
2. **Page Numbers:** The specific pages where each keyword or topic is discussed.
3. **Cross-References:** Links between related topics or keywords within the index.

Importance:

- **Navigation:** Helps readers quickly locate specific information in a document.
- **Organization:** Provides a structured overview of the document's content.
- **Efficiency:** Saves time by allowing readers to bypass irrelevant sections.

Tips:

- **Be Consistent:** Use the same format and style throughout the index.
- **Be Specific:** Choose precise keywords that accurately reflect the content.
- **Update Regularly:** Ensure the index remains accurate as the document is revised.

Footnotes

Definition: Footnotes are notes placed at the bottom of a page that provide additional information, citations, or references related to the main text.

Components:

1. **Reference Number:** A superscript number in the main text that corresponds to the footnote.
2. **Footnote Text:** The additional information or citation provided at the bottom of the page.

Importance:

- **Clarification:** Provides explanations or additional details without cluttering the main text.
- **Citation:** Offers a way to cite sources or reference materials directly on the page where they are mentioned.
- **Credibility:** Enhances the credibility of the document by showing the sources of information.

Tips:

- **Be Clear:** Write footnotes that are concise and directly relevant to the text.
- **Consistent Formatting:** Use a consistent format for all footnotes, as specified by the chosen citation style.
- **Limit Length:** Keep footnotes brief to avoid overwhelming the reader.

Bibliographic Procedures

Definition: Bibliographic procedures involve the systematic listing of books, articles, and other sources referenced in a document. This is typically found at the end of a document in the form of a bibliography or reference list.

Components:

1. **Author(s):** Names of the authors or editors of the sources.
2. **Title:** The title of the book, article, or document.
3. **Publication Information:** Details such as the publisher, publication date, volume, issue, and page numbers.
4. **Format:** The specific layout and punctuation required by the chosen citation style.

Importance:

- **Credit:** Gives proper credit to the original authors and sources.
- **Verification:** Allows readers to verify the sources and further explore the topic.
- **Avoid Plagiarism:** Helps to avoid plagiarism by acknowledging all sources of information.

Common Citation Styles:

1. **APA (American Psychological Association):**
 - Used primarily in social sciences.
 - Example: Author, A. A. (Year). Title of work. Publisher.
2. **MLA (Modern Language Association):**
 - Used primarily in humanities.
 - Example: Author, A. A. Title of Work. Publisher, Year.
3. **Chicago/Turabian:**
 - Used in a variety of disciplines.
 - Example: Author, A. A. Title of Work. Publisher, Year.
4. **IEEE (Institute of Electrical and Electronics Engineers):**
 - Used in technical fields.
 - Example: [1] Author, "Title of paper," in Title of Published Proceedings: Proceedings of the Title of Conference, Location, Month, Year, pp. xx-xx.

Tips:

- **Choose the Right Style:** Use the citation style required by your academic or professional field.
- **Be Consistent:** Apply the chosen style consistently throughout your document.
- **Check Details:** Pay attention to punctuation, capitalization, and formatting specifics of the citation

Reading and comprehension of general and technical articles style.

Reading and Comprehension of General and Technical Articles

Reading and Comprehension

Definition: Reading and comprehension involve understanding and interpreting written text, both in general and technical contexts.

Reading General Articles

Types of General Articles:

- **News Articles:** Current events and news stories.
- **Opinion Pieces:** Editorials and opinion columns.
- **Feature Articles:** In-depth explorations of topics, often human-interest stories.
- **Blogs:** Personal or professional insights on various topics.

Strategies for Reading General Articles:

1. **Preview the Text:**
 - **Skim:** Look at headings, subheadings, and any highlighted or bold text.
 - **Scan:** Quickly glance through the article to get a sense of its structure and main points.
2. **Active Reading:**
 - **Ask Questions:** Consider what you hope to learn from the article.
 - **Annotate:** Mark important points, unfamiliar terms, or key arguments.
3. **Understand the Main Idea:**
 - **Identify the Thesis:** Find the central argument or main point.
 - **Summarize:** Write a brief summary of the article in your own words.
4. **Critical Reading:**
 - **Evaluate Arguments:** Consider the strength and validity of the arguments presented.
 - **Identify Bias:** Be aware of any potential bias or perspective the author may have.
5. **Reflect and Respond:**
 - **Reflect:** Think about how the article relates to what you already know.
 - **Respond:** Formulate your own opinions or questions about the content.

Reading Technical Articles

Types of Technical Articles:

- **Research Papers:** Academic studies and findings.
- **Technical Reports:** Detailed documentation of technical projects or experiments.
- **Manuals/Guides:** Instructions on using equipment or software.
- **White Papers:** Authoritative reports on specific topics or issues.

Strategies for Reading Technical Articles:

1. **Pre-Reading:**
 - **Abstract and Conclusion:** Read these first to understand the purpose and findings.
 - **Figures and Tables:** Examine visual data for an overview of results.
2. **Detailed Reading:**
 - **Introduction:** Understand the background, objectives, and significance of the study.
 - **Methods:** Learn about the procedures and techniques used.
 - **Results:** Focus on the data presented.
 - **Discussion:** Interpret the results and understand their implications.
3. **Note Taking:**
 - **Summarize Key Points:** Write down important concepts, methods, and findings.
 - **Highlight Definitions:** Note technical terms and their meanings.
4. **Analyse Data:**
 - **Interpret Figures:** Understand graphs, charts, and tables.
 - **Compare Results:** Relate the findings to previous research or known theories.
5. **Critical Evaluation:**
 - **Assess Validity:** Evaluate the reliability and validity of the methods and results.
 - **Identify Limitations:** Note any limitations or potential sources of bias.
6. **Synthesize Information:**
 - **Integrate Findings:** Relate new information to your existing knowledge.
 - **Formulate Questions:** Develop questions for further exploration or clarification.

General Tips for Reading and Comprehension

- **Set a Purpose:** Know why you are reading and what you aim to achieve.
- **Take Breaks:** Avoid fatigue by taking regular breaks during long reading sessions.
- **Discuss:** Talk about what you've read with others to enhance understanding.
- **Practice Regularly:** The more you read, the better your comprehension skills will become.

précis writing, summarizing

Abstracting

Definition: Abstracting involves creating a concise and comprehensive summary of a longer text, focusing on its main points and significant details. An abstract is often used in academic and professional contexts to give readers a quick overview of the content.

Types of Abstracts:

1. **Descriptive Abstracts:** Provide a brief overview of the main topics and scope of the text without going into detail.
2. **Informative Abstracts:** Include detailed information about the main points, methods, results, and conclusions of the text.

Steps to Write an Abstract:

1. **Read the Original Text:** Understand the main points, scope, and purpose.
2. **Identify Key Elements:** Focus on the introduction, main arguments, methods, results, and conclusions.
3. **Draft the Abstract:** Write a concise summary including all key elements.
4. **Revise:** Ensure clarity, coherence, and conciseness. Remove any unnecessary details.

Example of Abstracting

Original Passage: "The study explores the impact of social media on teenagers' mental health. By conducting a survey with 1,000 participants, the research identifies a significant correlation between excessive social media use and increased levels of anxiety and depression. The results suggest the need for strategies to limit social media consumption among teens to improve their mental well-being."

Abstract: "This study examines the effect of social media on teenagers' mental health, finding a significant link between high social media usage and elevated anxiety and depression levels. A survey of 1,000 participants indicates the need for strategies to reduce social media use among teens to enhance mental well-being."

MODULE 12. Key Elements of Communication

1. **Sender:** The person or entity initiating the communication, conveying the message.
2. **Message:** The information, ideas, or thoughts being communicated.
3. **Medium:** The channel through which the message is transmitted (e.g., spoken word, written text, email, social media).
4. **Receiver:** The person or entity receiving and interpreting the message.
5. **Feedback:** The response from the receiver back to the sender, indicating whether the message was understood correctly.
6. **Context:** The environment or situation in which the communication takes place, influencing how the message is interpreted.
7. **Noise:** Any interference or distractions that can distort or hinder the communication process (e.g., background noise, misunderstandings, technical issues).
8. **Clarity:** Ensuring the message is clear and easily understood, free from ambiguity.
9. **Conciseness:** Communicating the message in a succinct and straightforward manner.
10. **Consistency:** Ensuring the message aligns with previous communications and remains coherent.

Models of communication, process, feedback and problems in communication

Problems in Communication

1. **Noise:** Any interference that distorts the message.
 - **External Noise:** Physical sounds that interfere with communication (e.g., traffic noise).
 - **Internal Noise:** Psychological factors that interfere with communication (e.g., stress, preconceived notions).
2. **Language Barriers:** Differences in language or terminology that hinder understanding.
 - **Example:** Technical jargon that the receiver does not understand.
3. **Cultural Differences:** Variations in cultural backgrounds and practices that affect communication.
 - **Example:** Differences in non-verbal communication norms.
4. **Emotional Barriers:** Emotional states that affect how messages are sent and received.
 - **Example:** Anger or frustration leading to miscommunication.
5. **Perception Barriers:** Differences in how people perceive and interpret messages.
 - **Example:** Different interpretations of the same statement based on personal experiences.
6. **Information Overload:** Providing too much information at once, overwhelming the receiver.
 - **Example:** A long and detailed email that the receiver cannot process effectively.
7. **Lack of Feedback:** Absence of response or feedback, leaving the sender uncertain about message reception.
 - **Example:** Sending an email and not receiving a reply.

Overcoming Communication Problems

1. **Active Listening:** Pay full attention to the speaker, show interest, and provide feedback.
2. **Clarity and Conciseness:** Use clear and concise language to convey the message.
3. **Adaptation:** Adjust communication style based on the audience and context.
4. **Feedback Seeking:** Actively seek feedback to ensure understanding.
5. **Minimize Noise:** Reduce physical and psychological noise during communication.
6. **Cultural Sensitivity:** Be aware of and respect cultural differences in communication styles.
7. **Emotional Regulation:** Manage emotions to maintain effective communication.
8. **Simplify Information:** Break down complex information into manageable parts

MODULE 13. Adoption and diffusion of innovations and categories of farmers

One major goal of extension is to make the farming community adopt new and profitable technologies. So an understanding of adoption and diffusion processes is important for extension agents.

ADOPTION is a decision to make to make full use of information as the best course of action available.

DIFFUSION is the process by which an innovation is communicated through certain channels over time among the members of a social system. Characteristic of the message communicated is its newness.

INNOVATION is an idea, practice or object that is perceived as new by individual or other units of adoption.

PERCEPTION is an activity through which an individual becomes aware of objects around oneself and of events taking place.

New technologies are innovations like new breeds, nutrition, new medicines, new products, new processing techniques, new packaging, marketing models etc. Technology is made by research institutions as well as farmers.

Irrespective of time, whenever a person comes to know of a technology, it is innovation for him.

Attributes of innovations

Attributes are qualities, characteristics or traits of an object. It is not the intrinsic quality; but the quality of innovation as people see about them is important in extension. The perceived qualities are:

1. **Relative advantage:** The degree to which an innovation is perceived as better than the existing one. E.g.: More yield, more income, saves time, labour, less risk etc. Multiple use of an innovation is also relative advantage. Location specific innovation is also a relative advantage. More is the relative advantage; more likely is the adoption.
2. **Compatibility:** The degree to which an innovation is perceived as being consistent with the existing values, past experience and needs of the potential adopters. It has 2 dimensions – cultural compatibility (E.g. milk product in Brahmin dominated areas) and situational compatibility (E.g. New breed adaptable to the climate). The name given to an innovation also affects its compatibility (E.g. Sunandini). Better compatibility; better adoption.
3. **Complexity:** The degree to which an innovation is perceived as difficult to understand and use. Innovation should be simple. High yielding cows is a complex technology; but relative advantage is high. So people adopt it. Complex technology requires complimentary adoption of additional technologies. High yielder needs better nutrition, housing, treatment etc. Also this requires consistent training and communication for adoption and continued use.
4. **Trialability:** The degree to which an innovation may be experimented on a limited basis. New seeds and fertilizers can be tried; but not new equipment's.

Early adopters are more concerned with trialability.

5. **Observability:** The degree to which the results of an innovation are visible. Visible results accelerate adoption. About fertilizers, use of N shows visible results; but not P and K. The preventive aspects of disease control are not visible; but the curative effects are visible.
6. **Predictability:** The degree of receiving expected benefits from the adoption of an innovation. Subsistence farmers are cautious in adopting technologies because of fear of failure.

When all other attributes are positive in adoption; complexity is an attribute which is negatively related to adoption.

The adoption process

The way in which an individual adopts an innovation is viewed as a process; a series of related events in a time sequence. There are 5 stages:

1. **Awareness stage:** The individual learns of the existence of a new idea; but lacks information about it. Only knows the name; not the idea.
2. **Interest stage:** The individual develops interest in the innovation and seeks additional information about it. Knows the idea; but don't know how it works or its potentialities.
3. **Evaluation stage:** The individual makes mental application of the new idea to the present and anticipated future situations and decides whether or not to try it.
Judging the worth of innovation and comparison E.g. is milking machine.
4. **Trial stage:** The individual actually applies the new idea on a small scale in order to determine the utility in own situation. E.g. Mineral mixture.
5. **Adoption stage:** The individual uses the idea continuously on a full scale. Once the trial is satisfied, the farmer goes for a continuous use.

Innovation-decision process

According to Rogers (1983) Innovation-Decision process is the process through which an individual or other decision-making unit passes from the first knowledge of an innovation, to forming an attitude towards the innovation, to a decision to adopt or reject to implement the idea and confirm to this decision. It is conceptualized to have 5 stages:

1. **Knowledge:** It occurs when an individual or decision-making unit is exposed to the innovation's existence and gains some understanding of how it functions. In addition to knowledge, a farmer would like to know how and why to use it.
2. **Persuasion:** It occurs when an individual or other decision-making unit forms a favourable or unfavourable attitude towards the innovation. The individual perceives the attributes of innovation and develops a general idea. This can be positive or negative.
3. **Decision:** It occurs when an individual or other decision-making unit engages in activities which lead to a choice to adopt or reject the innovation. Trial occurs at this stage.
4. **Implementation:** This occurs when the innovation is put into use.

5. **Confirmation:** This occurs when an individual seeks reinforcement of an innovation decision already made, but may reverse this previous decision if exposed to conflicting messages about the innovation.
6. **Rejection:** It is a decision not to adopt an innovation. It can be active rejection (after trial) or passive rejection (never considering the use).
7. **Discontinuance:** It is a decision to reject an innovation after having previously adopted it. It can be of two types – replacement discontinuance (reject for a better idea) and disenchantment discontinuance (dissatisfaction in performance)

Over-adoption

Over adoption happens when people continue to adopt an innovation, rather vigorously, when experts feel that it should not be done. E.g. Tube wells, pesticides, concentrate etc. It results in negative effect and may cause deterioration of related systems. Insufficient knowledge about the innovation and inability to predict the consequences lead to over-adoption.

Extension agent has to prevent over-adoption through surveillance, training and communication.

Consequences of Innovations –

1. Desirable or undesirable
2. Direct or indirect
3. Anticipated or unanticipated.

Channels of innovation communication –

1. Mass media and
2. Interpersonal communication

Adopter categories

All individuals of a social system do not adopt an innovation at the same time. So we can classify the individuals under different adopter categories on the basis of when they begin using a new idea. There are 5 adopter categories:

1. **Innovators:** First to adopt an idea; venturesome; few in number; also termed as deviants. They have qualities like cosmopolite, ability to take risk, financial resource to absorb loss, literate, contact with research institutions and more prestige in community.
2. **Early adopters:** They are localites and are an integral part of community. They are opinion leaders. They are literate, more participative and have good contact with mass media. They are more interested in tried ideas; not untried ideas.
3. **Early majority:** They adopt new ideas just before the average members of the society. They are neither early nor late. They take a longer time to decide for adoption. They are not opinion leaders; but actively participate in extension programmes. They have limited resources; and hence don't take hasty decisions. They are active localites and are more associated with interpersonal communication.

4. **Late majority:** They are cautious and skeptical and adopt new idea just after the average members of the community. They see the benefits gained by already adopted people. They are low in education.
5. **Laggards:** They are traditional and last to adopt an innovation. By the time they adopt the idea, another innovation might have replaced the present one. They are suspicious of innovations, innovators and extension agents. They are illiterate, resource poor and have least participation with outside world.

The duty of an extension agent is to reduce the gap widening among the various groups in adoption of innovations. So more concentration has to be done with laggards and late majority by selecting appropriate messages, selection of better channels, frequency of visits, increasing access to credit etc.

Group approach in transfer of technology is better to reduce the differences in adoption levels of people as it results in greater coverage, better decision making, collective action and equity.



MODULE 14. Groups - concepts and types

From the birth to death an individual-associates with groups in some ways or other. Group influences his attitudes, thinking and behaviour-throughout his life.

A group consists of two or more people who interact with one another and recognize themselves as a distinct social unit. The definition is simple enough, but it has significant implications. Frequent interaction leads people to share values and beliefs. This similarity and the interaction cause them to identify with one another. Identification and attachment, in turn, stimulate more frequent and intense interaction. Each group maintains solidarity with all other groups and other types of social systems. Groups are among the most stable and enduring social units. They are important both to their members and to the society at large.

Through encouraging regular and predictable behaviour, groups form the foundation upon which society rests. Thus, a family, a village, a political party, a trade union, etc. are the examples of group.

Definition

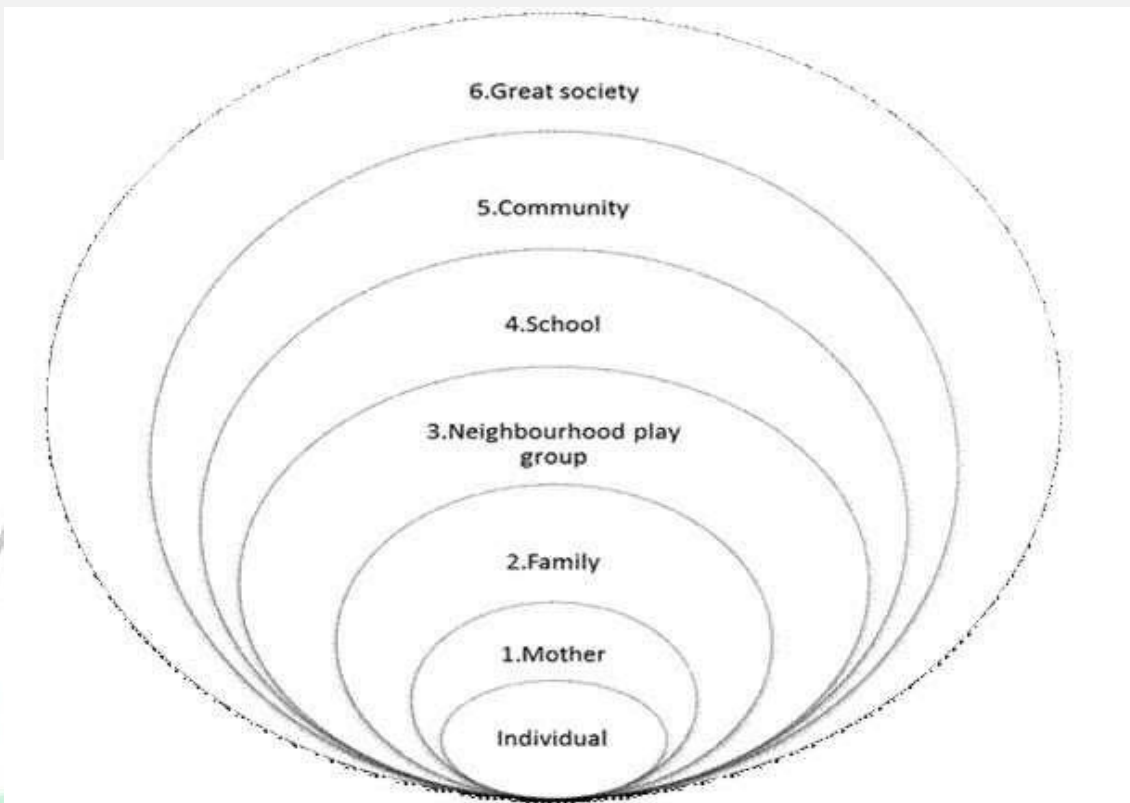
A group is a unit of two or more people in reciprocal interaction or communication with each other. Certain premises, or considerations and characteristics basic to understanding of the concept of groups are as follows:

Groups do not form by mere plurality of numbers. Communication and interaction is essential. Two persons can be physically close to one another, in fact seated next to each other and yet not form a group. On the other hand, two other persons, living miles apart, talking to each other over telephone may form a group and of, perhaps, sharing a very intimate kind of relationship. The difference is in terms of interaction and communication

While communication and interaction are essential, it must be reciprocal. One-way communication does not constitute group interaction. People in a group must influence each other on the psychological plane, although the influence may not be equal. Further, this communication need not be face-to-face, but it may be through telephone, letter, radio or other suitable communication media like the internet. Physical proximity, then, is not a determining factor in group formation. Groups may be long-lived or of brief duration. They exist only as long as there is reciprocal psychological interaction.

Similarly, a social group is a collection of people who interact with each other and share similar characteristics and a sense of unity. At the same time, a social category is a collection of people who do not interact but who share similar characteristics. For example, women, men, the elderly, and high school students all constitute social categories. A social category can become a social group when the members in the category interact with each other and identify themselves as members of the group.

A social aggregate is a collection of people who are in the same place, but who do not interact or share specific characteristics.



Widening group contact

In-groups, out-groups, and reference groups

In Group: An in-group is a social unit an individual belongs to, interacts with, and shares a sense of 'we-ness' with. He/she psychologically identifies himself as a member. There is also in-group heterogeneity. Language and communication are important in making in-group.

Out Group: An out-group, on the other hand, is a social unit or group of people where an individual neither belongs to nor identifies with. The construction and maintenance of boundaries (physical or symbolic) are the primary ways by which groups establish what it means to be 'in' and, by contrast, what it means to be 'out'.

To some extent, every social group creates boundaries between itself and other groups, but a cohesive in-group typically has three characteristics:

- Members use titles, external symbols, and dress to distinguish themselves from the outgroup.
- Members tend to clash or compete with members of the out-group. This competition with the other group can also strengthen the unity within each group.
- Members apply positive stereotypes (fixed image) to their in-group and negative stereotypes to the out-group.

Reference Group: A reference group is a concept referring to a group to which an individual or another group is compared. Sociologists call any group that individuals use as a standard for evaluating themselves and their own behaviour a reference group.

Primary and secondary groups

Groups play a basic role in the development of the social nature and ideals of people. Primary groups are those in which individuals intimately interact and cooperate over a long period of time. Examples of primary groups are families, friends, peers, neighbours, classmates, sororities, fraternities, and church members. These groups are marked by primary relationships in which communication is informal. Members of primary groups have strong emotional ties. They also relate to one another as whole and unique individuals.

In contrast,

secondary groups are those in which individuals do not interact much. Members of secondary groups are less personal or emotional than those of primary groups. These groups are marked by secondary relationships in which communication is formal. Members of secondary groups may not know each other or have much face-to-face interaction. They tend to relate to others only in particular roles and for practical reasons.

An example of a secondary relationship is that of a producer/seller and consumer.

Primary relationships are most common in small and traditional societies, while secondary relationships are the norm in large and industrial societies. Because secondary relationships often result in loneliness and isolation, some members of society may attempt to create primary relationships through interactions among fellow members. This does not mean, however, that secondary relationships are bad.

Difference between primary and secondary group

SN	Primary Groups	Secondary Groups
1	Small size (often less than 20 or 30 persons)	Large size
2	Personal and intimate relationships among members	Impersonal and aloof relationships among members
3	More face-to-face communication	Less face-to-face communication
4	Permanency in nature	Temporary in nature
5	Members are well-acquainted and have a strong sense of loyalty' or "we" feeling; a strong amount of group pressure is present	Members are not well-acquainted and anonymity prevails
6	Informality is most common; the group usually does not have a name, offices or a regular meeting place	Formality prevails. Group often has a name, offices, and a regular meeting place
7	Group decisions are more traditional and non-rational	Group decisions are more rational and the emphasis is on efficiency

In urban societies, secondary relationships are more as compared to the rural society. Primary groups like friends and relatives, directly influence the behaviour of the individual. The impersonal nature of relationship in the secondary group makes up for the absence of the bondage which the primary relations have.

Formal and informal groups

This is a classification of groups according to the mode of organization and functioning of the group.

Formal groups: As the name indicates the formal groups have procedures of functioning. These groups have: a name or title; selected and titled officers; a written purpose and; a regular, common, meeting time and place. The formal groups such as village councils, farmer's societies and school committees have definite rules of operation.

Informal groups: Informal groups like friends, groups of a neighbour-hood do not have any such characteristics. There is no organization or rules. The members have maximum freedom to think and act.

The more people join a group, the less personal and intimate that group becomes. In other words, as the group increases in size, its members participate and cooperate less, and are more likely to be dissatisfied. A larger group's members may even be inhibited, for example, from publicly helping out victims in an emergency. In this case, people may feel that because so many others are available to help, responsibility to help is shifted to others. Similarly, as the group increases in size, its members are more likely to engage in social loafing, in which people work less because they expect others to take over their tasks.



MODULE 15. Programme-planning

Programme planning is defined as a decision-making process which gives direction and intensity to extension education efforts to bring about social, economic and technological changes. It decides that in the present situation, how and what ought to be changed and what things could be used for getting better results. Programme planning is an educational tool for helping people to identify their own problems and make timely and judicious decisions.

In this context, Leagans has said, 'Effective rural development results from choice, not from chance. It results from design, not from drift; it results from a plan and not by trial and error'.

Need or objectives for programme planning

1. To ensure careful consideration of what is to be done and why.
2. To furnish a guide to judge among the new proposals.
3. To establish objectives whose progress can be measured and evaluated.
4. To have a means of choosing the important from the incidental problems and the permanent from the temporary changes.
5. To develop a common understanding about the means and ends between various functionaries and organizations.
6. To ensure continuity during changes in personnel.
7. To help develop leadership.
8. To avoid wastage of time and money and promote efficiency.
9. To justify expenditure and to ensure flow of funds.
10. To have a written statement for public use.

Principle of extension programme-planning

The planning of an extension programme is done on the basis of certain well recognized principles which should be clearly understood & followed by extension workers. The main principles are:

1. The programme-planning should be based upon a careful analysis of the actual situation.
2. In a good programme-planning, problems for action are selected on the basis of recognized needs.
3. A good programme-planning determines objectives & solutions which are feasible & offer satisfaction.
4. The programme should be permanent & flexible to meet a long-term situation, short time changes & emergencies.
5. A sound programme should have both balance & emphasis.
6. A good programme has a definite plan of work.
7. Programme-planning is a continuous process.
8. Programme-planning is a coordinating process.
9. Programme-planning should be educational & directed towards bringing about improvement in the ability of the people to solve their own problems individually and collectively.
10. A good programme-planning provides for the evaluation of results.

The programme-planning process

The 8 steps involved in this process are as follows:

1. **Collection of facts.** Sound plans are based on availability of relevant & reliable facts. This includes facts about the village people, physical conditions, existing farm & home practices, trends & outlook. Besides, other facts about customs, traditions, rural institutions, peoples' organizations operating in the area, etc. should be collected. The tools & techniques for collecting data include systematic observations, a questionnaire, interviews & surveys, existing governmental records, census reports, reports of the Planning Commission, Central Bureau of Statistics, & the past experiences of people.

2. **Analysis of the situation.**

After collecting facts, they are analysed & interpreted to find out the problems & needs of the people.

3. **Identification of problems.**

As a result of the analysis of facts the important gaps between 'what is' & 'what should be' are identified & the problems leading to such a situation are located. These gaps represent the people's needs*.

4. **Determination of objectives.**

Once the needs & problems of the people have been identified, they are stated in terms of objectives & goals. The objectives represent a forecast of the changes in the behaviour of the people & the situation to be brought about. The objectives may be long-term as well as short-term, & must be stated clearly.

5. **Developing the plan of work.**

In order to achieve the stated objectives & goals, the means & methods to attain each objective are selected & the action plan, i.e. the calendar of activities is developed. It includes the technical content, who should do what & the time-limit within which the work will be completed. The plan of work may be seasonal, short-term, annual or long-term.

6. **Execution of the plan of work.**

Once the action plan has been developed, arrangement for supplying the necessary inputs, credits, teaching aids, extension literature etc. has to be made & the specific action has to be initiated. The execution of the plan of work is to be done through extension methods for stimulating individuals & groups to think, act & participate effectively. People should be involved at every step to ensure the success of the programme.

7. **Evaluation.**

It is done to measure the degree of success of the programme in terms of the objectives & goals set forth. This is basically done to determine the changes in the behaviour of the people as a result of the extension programme. The evaluation is done not only of the physical achievements but also of the methods & techniques used & of the other steps in the programme-planning process, so that the strong & weak points may be identified & necessary changes made.

8. **Reconsideration.**

The systematic & periodic evaluation of the programme will reveal the weak & strong points of the programme. Based on these points the programme is reconsidered & the necessary adjustments & changes are made in order to make it more-meaningful & sound.

From the above -mentioned cycle, it is clear that the planning of an extension programme comprises a logical series of consecutive steps. The first 4 steps form the programme-phase. The steps 5-7 form the action-phase. The step 8, i.e. reconsideration, joins the 2 phases together, where it leads to the fact-collecting step, thus beginning once more the never ending or continuous process of planning the extension programme.

Importance of programme planning

- Avoid wastage of resources - Provide guidance
- Continuity - Reliable information
- Institutional support - Leadership development
- Minimize conflicts - Local support
- Future programmes - Best use of innovations

Features of programme planning

- Careful analysis of the actual situation.
- Problems selected on the basis of recognized needs.
- Determine feasible objectives & solutions Permanent & flexible
- Balance & emphasis.
- A definite plan of work.
- Continuous process.
- Coordinating process.
- Educational and result in problem solving Evaluation of results.

NEED - It is the difference between 'what is' and 'what ought to be'. Need can be assessed by a) Participatory method b) Primary Source method and c) Secondary Source method You can refer the book 'Programme Planning' by A S Sandhu

MODULE 16. Leaders and Leadership

Leading is the process of influencing people so that they will strive willingly and enthusiastically towards attainment of the organization and group goals. Some of the concepts of leadership are as follows:

- Leadership is the process of directing the behaviour- of others towards the accomplishment of some common objectives.
- Leadership is influencing people to get things done to a standard and quality above their norm and doing it willingly.
- Leadership is a process by which a person influences others to accomplish an objective and directs the organization in a way that makes it more cohesive and coherent.

Leadership is a combination of 4 abilities:

1. Ability to use power effectively and in a respectable manner
2. Ability to comprehend that human beings have different motivational forces at different times/situations
3. Ability to inspire
4. Ability to develop a climate conducive to responding to and arousing motivations.

Effective leader shall:

- Inculcate work culture; motivating each member to work for the goals
- Harmonizing goals of the personnel with those of the organization
- A reporting relationship to a single superior
- Understanding personal preferences and integrating them with the job
- Clear and consistent communication
- Use of appropriate informal organizations

Why are leaders important?

1. Average human beings have an inherent dislike for work and avoid it if they can. They avoid responsibility, have little ambition; but need security.
2. Because of this people must be forced, controlled, directed and threatened with punishment to make efforts for the organizational objectives.
3. Commitment to objectives are in proportion with the size of rewards.
4. The potentialities of individuals are under-utilized.
5. The capacity to exercise imagination, creativity, resourcefulness etc is distributed among the population.
6. Human beings not only accept responsibility; but also seek responsibility.
7. There are people with self-direction and self-control among the population.

Leaders carry out this process by applying their leadership attributes, such as beliefs, values, ethics, character, knowledge, and skills. Although your position as a manager, supervisor, lead, etc. gives you the authority to accomplish certain tasks and objectives in the organization, this power does not make you a leader, it simply makes you the boss. Leadership differs in that it makes the followers want to achieve high goals, rather than simply bossing people around.

Good leaders are made; not born. If you have the desire and will-power, you can become an effective leader. Good leaders develop through a never-ending process of self-study, education,

training, and experience. To inspire our workers into higher levels of teamwork, there are certain things which we must be, know, and do. These do not come naturally, but are acquired through continual work and study. Good leaders are continually working and studying to improve their leadership skills; they are NOT resting on their laurels.

Bass' theory (1989 & 1990) of leadership states that there are three basic ways to explain how people become leaders. The first two explain the leadership development for a small number of people. These theories are:

Some personality traits may lead people naturally into leadership roles. This is **the Trait Theory**.

A crisis or important event may cause a person to rise to the occasion, which brings out extraordinary leadership qualities in an ordinary person. This is **the Great Events Theory**.

People can be chosen to become leaders. People can learn leadership skills. **This is the Transformational Leadership Theory**. It is the most widely accepted theory today.

Qualities of a Good Leader

Here are some of the qualities which can make an individual a good leader:

- A leader should be commendable and exemplary. A good leader should be trustworthy so that people can follow him. He should live his life with honesty and integrity. He should live a life such that nobody can question his character.
- A good leader is always enthusiastic about the cause of the people. He must have the capability to see what is good or bad for the people in the long run. He approaches a problem in a holistic manner and never believes himself different from his people and subject.
- A leader believes in discipline. He follows an orderly manner and routine; but still he is tolerant. He takes decisions, keeping emotions and personal matters aside.
- A leader has excellent logical and analytical skills. He looks at each and every aspect of the situation before arriving at any decision and never loses his temper in difficult situations. He should think positively in each and every situation.
- A leader should always focus towards his goals, what he has envisioned for and promised to his people. He should take each and every decision keeping in mind the people and his subject.
- A great leader is proactive and committed to excellence. He always maintains a high standard and acts as an idol for his followers. His personal and public life both are remarkable and stain-free.
- A leader inspires his team to achieve targets and lead them to success. He brings best out of them in the time of crisis also.
- A good leader is the one who can give people voice and direction.
- A leader should be tolerant of uncertainty and should always remain tranquil, composed and persistent to his goals.
- A good leader always keeps a cool head in times of crises and finds solutions to get everybody out of any difficult situation.

Types of Leader or Leadership Style

Leadership style is the manner and approach of providing direction, implementing plans, and motivating people. Kurt Lewin (1939) led a group of researchers to identify different styles of leadership. This early study has been very influential and established three major leadership styles. The three major styles of leadership are (U.S. Army Handbook, 1973):

1. Authoritarian or autocratic

2. Participative or democratic
3. Delegative or Free Reign

Although good leaders use all three styles, with one of them normally dominant; bad leaders tend to stick with one style.

1. Authoritarian (Autocratic)

This style is used when leaders tell their employees what they want and how they want it accomplished, without getting the advice of their followers. Some of the appropriate conditions to use it are when you have all the information to solve the problem, you are short on time, and your employees are well motivated. Some people tend to think of this style as a vehicle for yelling, using demeaning language, and leading by threats and abusing their power. This is not the authoritarian style; rather it is an abusive, unprofessional style called **bossing people around**. It has no place in a leader's repertoire. The authoritarian style should normally only be used on rare occasions. If you have the time and want to gain more commitment and motivation from your employees, then you should use the participative style.

2. Participative (Democratic)

This style involves the leader including one or more employees in the decision-making process (determining what to do and how to do it). However, the leader maintains the final decision-making authority. Using this style is not a sign of weakness; rather it is a sign of strength that your employees will respect. This is normally used when you have part of the information, and your employees have other parts. Note that a leader is not expected to know everything. This is why you employ knowledgeable and skillful employees. Using this style is of mutual benefit; it allows them to become part of the team and allows you to make better decisions.

3. Delegative or laissez faire (free reign)

In this style, the leader allows the employees to make the decisions. However, the leader is still responsible for the decisions that are made. This is used when employees are able to analyse the situation and determine what needs to be done and how to do it. You cannot do everything. You must set priorities and delegate certain tasks. This is not a style to use so that you can blame others when things go wrong, rather this is a style to be used when you fully trust and confidence in the people below you. Do not be afraid to use it, however, use it **wisely**.

MODULE 17. Rural Leadership

Rural Leadership is the process of influencing rural people so that they will strive willingly and enthusiastically towards attainment of the organization and group goals.

Importance of Rural Leadership

- The utilization of rural leaders is essential because of the following reasons:
- Extension has a long tradition of using leaders in extension work. Extension workers as an outsider may not have complete knowledge about different aspects of village community nor they are supposed to have similar perceptions and feelings about village problems as local people may have. Thus, there are good reasons to use such people who belong to the community.
- Leaders by virtue of their influences can convey messages of development more convincingly in the people's language. They can use arguments and styles of presentation most appropriate for the target population. They can also help to get social sanction for development. Besides, they can also serve as mouthpieces of people before extension workers; they can explain elaborately the needs and aspirations of people.
- Number of extension workers is proportionately far less than required. Thus use of leaders can help to multiply effects of extension work conveniently and convincingly.
- Leaders can help in enlisting participation of people in programmes of their own development. It is possible to organize people around concrete problems. Leaders can use their influence and skills to bring people together and empower them to take action for their development.
- Villages in India are still haunted by deep rooted beliefs, customs, superstitions and ignorance which influence development negatively. It calls for different types of efforts to overcome social barriers. Leaders, if positively inclined, can play prominent roles in master minding development in the right way.

Qualities of Rural Leadership

Potential leaders can be selected on the basis of their attribute. Leaders for extension work must possess a blend of following qualities.

Volunteer: The incumbent must come out on his/her own to work for the cause of the community. In every society there are people with altruistic tendencies.

Secular: People with partisan interest cannot serve for the cause of the whole village.

Democratic: Basic belief in individual supremacy and need for equal involvement of one and all in development programmes is a must.

Honesty: Sense of honesty and reliability builds trust for the leader in a group.

Positive Enthusiasm: An abounding sense of joy and natural interest in development work sustains involvement of a leader in hours of stress.

Friendliness: Good leader feels deeply for those with whom he works. Friendly attitude inspires others to seek his contact.

Scientific Outlook: Development work demands appreciation for breaking away from shackles of traditional beliefs and systems of living.

A number of other attributes have been mentioned by various experts such as intelligence, tact, patience, poise, sense of humour, health, fairness, dependability, originality, sincerity, loyalty, integrity, vision, ethics, perseverance, impartiality, decisiveness, etc. However, it is for a potential leader to be an experienced farmer himself to be able to command natural influence.

How to identify and select potential leaders?

There are many ways to locate people with desirable qualities and potential to play leadership role, as given below:

Discussion Method: An opportunity for discussion on real issues gets people in action giving expression to their knowledge, group skill and power of conviction. This is said to be a live laboratory to see displays of power and influence in natural condition.

The workshop method: Through this method, where the large group breaks up into smaller units, leadership emerges, in each group over a period of time; the extension worker can spot certain leaders who come to the fore in taking responsibilities. The extension worker or professional leader in the workshop has the position of consultant observer, discussion group leader etc.

Participative observation: Even though observation is part of both discussion and workshop methods, leaders can be selected through close observation in the community by the observer being a part of the scene for a period of time. This provides him enough data regarding conditions of the community opportunities of leadership and skills.

Socio-metric Technique: The term 'Sociometry' refers to the pattern of attraction among members of a group. Sociometric technique is meant for determining the extent to which individuals are accepted in a group. This helps in revealing the relationship structure within a group. The technique can be applied if all the members of the group know each other well. In order to seek preference for leader the specific content is explained to each member and he is asked to give a number of preferences (say 1st, 2nd and 3rd,) along with rating. Thus-people are given a situation narrating whom do you consult from your village if you have problems regarding cultivation, name three persons from the community in order of preference.

Sociometric score is calculated by multiplying the number of incoming choices for each person and total of scores obtained in terms of preferences. Thus-individuals are ranked on the basis of sociometric score.

Key-informants method: A community or its members may be asked to indicate opinion leaders in that area. This is cost saving and time saving when compared to the sociometric method.

Self-designating Techniques: It consists of asking a respondent a series of questions to determine the degree to which he perceives himself to be an opinion leader.

Training of village leaders

The task of developing villages cannot be achieved without trained democratic leaders with secular and social outlook. While potential leaders should be selected from the village communities concerned, they would require training to play an enabling role. Training of potential leaders is essential for strengthening local initiative for development. This will accelerate implementation of on-going efforts.

Training however should not be thought of as a one-stroke affair. It would rather be a continuous process although various levels of training may be designed. However, to start with; the goal of training would be as below:

- To motivate local leaders to commit themselves for the cause of development

- To create general awareness in them about the problems of villages, current approaches of development, national policy, organization etc.
- To inculcate in them basic skills of communication and group work
- To provide them knowledge and skills in technical subject matter area relevant to the programme

Content Area of Leader's training

Content of the programme should be problem centered. Theoretical information should always be related at every step to practical situations. The subject matter should be in the nature of problems encountered by the local leaders in their respective area. The subject includes principles of rural development, community principles, group thinking, planning and action; co-operatives, local government, central–state government services etc.

Essential Features of Leaders training

- 1) The training to fulfil the above-mentioned objectives must adopt an approach essential for bringing desired impact.
- 2) The leaders must be trained through a process of dialogue or group interaction rather than traditional lectures and notes, in order to inculcate right skills for facilitating participative leadership.
- 3) The training should create an open and participative atmosphere. There should be enough opportunity to reach decisions through critical discussion among trainers and trainees with open mind and not take anything for granted.
- 4) The training should help in acquiring and reinforcing values like justice, equality, honesty, solidarity through day-to-day working.
- 5) The discussion and analysis should be based on the realities expressed by the participants in their life and work. They should begin with the known and lead to the unknown.
- 6) The training venue and set-up should be realistic, closer to the village life so that they can relate with their own situation.
- 7) Practical involvement in workshop site visit, role playing and cultural programmes should be used more frequently.
- 8) The period of training may vary from a day to a few weeks depending upon the intent. In the beginning intensive training of long duration may be desirable for preparing adequately in the techniques of organizations, group working and practical vocational skills. However, the training for development of leadership would be a continuous affair to be imparted from time to time, though in varying forms.

MODULE 18. Conceptual orientation

ATMA

The concept of ATMA (Agricultural Technology Management Agency) was introduced by Government of India in 1999 as an autonomous organization under the National Agricultural Technology Project (NATP) by providing flexible working environment, with an objective of integrating research, extension and all other stakeholders at the district level (Group Approach) to support the farmer's needs and interests through an integrated approach of strategic plan. ATMA is a society of key stakeholders involved in agricultural activities for sustainable agricultural development in the district.

Involvement of farmers can be achieved at the village level through farmer's interest groups (FIG), at the block level as a member of farmer advisory committee (FAC) and at district level as the member of ATMA Governing Board. As a registered society ATMA is responsible for technology dissemination at the district level. The concept of ATMA envisages paradigm shift from "top down" to "bottom up" in planning and implementation of agriculture development programmes.

ATIC

ATIC (Agricultural Technology Information Centre) is a newly established extension agency in Agricultural Universities to provide information on agriculture and allied fields. Functions of ATIC are multifaceted like technology services, advisory services, information services etc. It is a unique facility aimed at the sale of seeds, plants, processed products, bio-pesticides, equipment and publications to farmers. It also empowers farmers through direct access to information and knowledge. It is a "single window" support system linking the various units of a research institution with intermediary users and end users (farmers) in decision making and problem solving exercise.

TAR – IVLP

Through the IVLP (Institute Village Link Programme) approach, efforts were made to bridge the gap between research, extension and farmers. Under this approach, an intermediary function of TAR (Technology Assessment and Refinement) was done for technology integration through farmer participatory methods for rapid generation and dissemination of appropriate technology. Client oriented research and technology development to improve productivity; sustainability and equity are the fundamentals of TAR-IVLP. It has given a new dimension to extension strategies. The stakeholders are also partners in the technology development and assessment process. Under this programme, a large number of technologies suitable for different micro farming situations have been assessed and some of them refined with the active participation of the farmers.

PTD

PTD is "participatory technology development", which can be defined as an approach that links participatory research with extension. It bases on the promotion of internal capacity of rural communities to find out innovations in agriculture and natural resources management to meet the desires of farmers and suit the strengths and weaknesses of households and communities.

PTD can be understood as a participatory approach in which farmers, researchers and extension agents cooperate to experiment innovative technologies that suit farmers' conditions. Farmers play a vital role in PTD, while the researchers support technically to the farmers' experiments. The extension agent's role is to facilitate the experiment process and the interaction between farmers and researchers.

PRA

Participatory Rural Appraisal (PRA) describes a family of approaches and methods for enabling local people to share, enhance and analyse their knowledge of life and conditions, to plan and to act. Participatory methods include mapping and modelling, transect walks, matrix scoring, seasonal calendars, trend and change analysis, wealth ranking and grouping, and analytical diagramming. PRA applications include natural resources management, agriculture, poverty and social programs, health and food security.

RRA

RRA (Rapid Rural Appraisal) is more commonly described as a systematic but semi-structured activity out in the field by a multidisciplinary team and is designed to obtain new information and to formulate new hypotheses about rural life. A central characteristic of RRA is that its research teams are multidisciplinary. RRA essentially consists of the following:

- An activity carried out by a group of people from different professional fields or disciplines which usually aims to learn about a particular topic, area, situation, group of people or whatever else is of concern to those organizing the RRA.
- It usually involves collecting information by talking directly to people “on the ground”. □ It uses a set of guidelines on how to approach the collection of information, learning from that information and the involvement of local people in its interpretation and presentation.
- It uses a set of tools - these consist of exercises and techniques for collecting information, means of organizing that information so that it is easily understood by a wide range of people, techniques for stimulating interaction with community members and methods for quickly analyzing and reporting findings and suggesting appropriate action.

ESTD

Differences between PRA and RRA

2015

PRA responds to the needs of communities and target groups; while RRA responds to the needs of development workers and agencies.

Emphasis of PRA is on flexibility to adapt to the time frame of community; while in RRA, emphasis is on efficient use of time and achievement of objectives.

Communication and learning tools are used to help local people analyze their own conditions and communicate with outsiders in PRA; while the same is used to help outsiders, analyze conditions and understand local people in RRA.

Focus of PRA is decided by communities; while it is decided by outsiders in RRA.

End product is used by the community in PRA; while in RRA, end users are developmental agencies.

PRA is closely linked to action or intervention and requires immediate availability of support for decisions and conclusions reached by communities. RRA can be used purely for “research” purposes without necessarily linking to subsequent action or intervention.

MODULE 19. Dairy and Animal Husbandry Development programmes in India

Dairy Development during **British Era**

- Military Dairy Farm – Allahabad - 1889 (First)
- **Imperial Dairy Expert – 1920 – to organize Indian dairying**
- Imperial Institute of Animal Husbandry and Dairying – Bangalore (1923) – Later NDRI
- **Diploma in Dairying – Bangalore and Allahabad (1923)**
- Royal Commission on Agriculture - 1928
- **Dr. N.C Wright (Director, Hannah Research Institute, Scotland) Report – 1937**
- Expert Cattle Committee (Government of Bombay) -1938
- **National Planning Committee – (Chairman: Sri. Jawaharlal Nehru) – 1938**

Based on the reports, various projects were taken up to increase milk production like improvement of cooperatives, supply of bulls, farm mechanization etc.

Rural Development Programmes **Before Independence**

Srinikethan Experiment: 1914 – Sri. Ravindranath Tagore in Bengal. Also called 'Light through Learning'. Started dispensary, schools, farm, youth movement and rural welfare department with the following objectives:

- **To create interest among village people in rural development**
- **To analyse the rural problems and execute possible solutions**
- **To develop the natural resources of rural people**
- **To develop cooperation among rural people**

Gurgaon Project: 1920 – Mr. F.L.Brayne (Deputy Commissioner of Gurgaon district)

- The aim of the project was to make people aware that development is possible by changing their behaviour with the adoption of new agricultural practices improving their health standard, women education and home developmental work.

Sevagram Project: 1936 – Mahatma Gandhi – Based on 'truth and non-violence' with following objectives:

- Economic development of the country
- Hindu-Muslim Unity
- Basic education through learning by doing and earning while learning

He said that all Extension workers should follow three principles of Self-purification, Self-reliance and Self-exemplary conduct (setting example for others)

Marthandam Project: 1928 – Dr. Spencer Hatch. Also called YMCA Movement in Kerala.

- According to him, any type of developmental planning should comprise of mental, physical, spiritual, social and economical development; and insisted on self-help of the people for the same.

Grow More Food Campaign: 1943 – After Bengal famine with following objectives:

- All India basis for increasing food production by utilizing new techniques in farming
- Trained field men, fertilizers and seeds were used to raise production

Firka Development Scheme: 1946 – Government Sponsored Scheme – T. Prakasham (Chief Minister of Madras Presidency) - Based on the Gandhian ideal of Grama Swaraj in Madras State in 34 backward Firkas (local revenue subdivision of a district) with following objectives.

- To tackle the rural problem as a whole.

- Preparation of short-term plans for the development of rural communication, water supply etc.
- Formation of panchayats and organization of cooperatives.
- Long term plan to make the area self-sufficient through agricultural, irrigational and livestock improvements.
- Development of Khadi and Cottage Industries.

It was later merged with Community Development Programme and National Extension Service after independence.

Model Village in Sundarbans - Bengal – (Rural Reconstruction Scheme):

1903 - Sir. Daniel Hamilton

- Objective was to create model villages in Bengal on cooperative principles.
- He organized a cooperative credit society and a central cooperative bank in 1915 and started the work of rural up-liftment in Madras.
- He also established a Rural Reconstruction Institute in 1934, which provided training facilities in cottage and subsidiary industries.

Rural Development Programmes After Independence

Etawah Pilot Project (UP): 1948 – Mr. Albert Mayer of USA. He developed the following development concepts:

- A programme should be based on the need of the people
- Conducting demonstration and evaluation work should be part of the programme
- Development of cottage industries for subsidiary occupation
- Programme should be well planned and organized
- Programme should cover overall development of rural people

Emphasis was on increasing agricultural production by use of green manure, better seeds, implements, fertilizers, adult education and reclamation of saline soils. Extension worker kept personal contact with farmers.

Sarvodaya programme: 1948 – Acharya Vinoba Bhave - Village Upliftment Programme

- It was a Gandhian concept and evoked great enthusiasm.
- The main features were simplicity, non-violence, sanctity of labour and reconstruction of human values.
- It aimed in raising the standard of living, scientific development of agriculture, promotion of cottage industries, spread of literacy, medical and health facilities and the development of village panchayats.
- Bhudan and Gramdan were part of the project to distribute land among landless people

Nilohkheri Experiment: 1948 – Sri. S.K. Dey (First Union Cabinet Minister for Cooperation and Panchayats) – Rehabilitate displaced people from Pakistan

- Established 100 villages in 1100 acres of swampy land in the midst of Karnal and Kurukshetra (Haryana).
- Established Vocational Training Centre.
- Started the scheme 'Mazdoor Manzil' – with the principle 'he who will not work, shall not eat'.
- Various activities including dairy, agriculture and industries were set up in the colony.
- In 1959, an Extension Education Institute was established at Nilohkheri by Government of India

Community Development Project: 1952 – Government of India – Based on the Grow More Food Enquiry Report and success of Etawah Project – started 15 Pilot Projects initially funded by Ford Foundation and 55 new ones with the support of Govt. of USA. The objectives are as given below:

- To increase agricultural production by all possible means
- To tackle the problems of unemployment
- To improve housing and village communications
- To foster primary education, public health and recreation
- To promote indigenous handicrafts and small-scale industries
- In short, the programme aimed at achieving all-round socio-economic transformation of the rural people

Each Project had 300 villages, covering 400-500 square miles and having a population of about 2 lakh. One project had 3 development blocks comprising of 10-15 villages and Multi-level Extension Workers.

National Extension Service: 1953 – Government of India

- Designed to provide the essential basic staff and a small fund for the people to start the development work on the basis of self-help.
- The operational unit of this service comprised of about 100 villages and 60,000 - 70,000 people.
- **The N.E.S. blocks were later converted into community development blocks.**
- In this new set-up, all the government departments were brought together; and in order to ensure co-ordination at the block level, a new post of a **Block Development Officer (BDO)** was created.
- BDO is supported by Extension Officers drawn from the development departments, from the fields of agriculture, animal husbandry, co-operative, panchayat, rural industry, rural development, social education and welfare of women & children. Each block was provided with 10 village level workers and two-gram sevaks/sevikas.

Under this new set-up, the block is treated as an administrative unit for all the development departments, and the village-level worker is the contact person between these departments and the people

Key Village Scheme: 1952 – Government of India

- Launched in August 1952 was the first systematic attempt to improve the quality and productivity of cattle and buffaloes in the country.
- Proposed with a view to promote intensive cattle development in compact areas by utilizing the limited quantity of high-quality breeding stock.
- Basic objective of the scheme was the **rapid multiplication of crossbred cattle** for meeting the acute shortage of high-quality animals by grading-up of the indigenous cattle population.
- Gradually it embraced all the major aspects of cattle development such as superior breeding, castration of scrub bulls, fodder development, control of diseases, maintenance of records, milk recording and marketing of livestock and livestock products.

Intensive Cattle Development Project (1963-64)

Government of India

- The objectives of the project were the same as the Key Village Scheme, but was much wider in scope.
- It envisaged provision of a **package of improved practices** to the cattle owners to effect a breakthrough in milk production (National Commission of Agriculture, 1976).
- The package included Cattle Breeding, Castration of scrub bulls, Veterinary aid and Disease control, Milk Recording, Introduction of high yielding milch cattle, Subsidies and Incentives for milk production, Feed and Fodder development including demonstration, Distribution of Fodder seeds, Silage making and Popularization of chaff cutters and Dairy Extension
- The programme was launched in the milk-shed areas of major dairy plants to ensure the increased and steady flow of milk to these plants.
- ICDP did help in increasing milk production in milch animals in the country to a great extent.

Intensive Agricultural District Programme (1960) – Government of India

- Intended on increasing productivity and production; IADP was launched in July 1960
- Initially launched in 7 selected districts of various states in first phase and later extended to another 9 districts more in second phase during 1963-64
- Aimed at integrated and intensive approach to solve the problems of agricultural production through adoption of package of improved practices.
- The achievements accomplished through this programme were tremendous and it really made a dent into the rural poverty for its eradication through agriculture. This programme was popularly known as **Package Programme**.

Operation flood (1970)

National Dairy Development Board

- One of the largest of its kind, the programme objective was to create a Nationwide Milk Grid.
- It resulted in making India the largest producer of milk & milk products, and hence is also called the **White Revolution of India**.
- It also helped reduce exploitation and malpractices by milk traders and merchants.
 - This revolution followed the Indian Green Revolution and helped in alleviating poverty and famine levels from dangerous proportions in India during the era.
 - **Dr. Verghese Kurien is called the Father of White Revolution.**
 - The Operation Flood was implemented in three phases.

Phase I (1970-1980)

Phase II (1981-1985)

Phase III (1985-1996)

Training and visit (T&V) system (1974)

Government of India

- The brain child of Dr. Daniel Benor (World Bank Consultant)
- Introduced Observation, Training and Technology Transfer to the farmers and extension workers.
- Introduced at first in two states viz., Rajasthan and West Bengal and then spread to another 16 states of the country.
- Aimed at building a professional extension system in India capable of assisting farmers in raising production, increasing incomes and providing appropriate support for agricultural development.
- Features of this system included professionalism, a single line of command, concentration of efforts, time bound work, field and farmer orientation, regular and continuous training and close linkages with research.
- **Resulted in the creation of a dynamic link between farmers, professional extension workers and researchers through the training and visit system.**
- India gained a lot in increasing its food production with scientific means coupled with effective technology transfer system through this programme.

Integrated Rural Development Programme (1978)

Government of India

- Extended throughout India by 1980.
- A self-employment programme intended to raise the income-generation capacity of target groups among the poor; largely of small and marginal farmers, agricultural laborers and rural artisans living below the poverty line.
- The pattern of subsidy was 25% for small farmers, 33% for marginal farmers, agricultural laborers and rural artisans; and 50% for Scheduled Castes/Scheduled Tribes families and physically handicapped persons.

- The assets which could be in primary, secondary or tertiary sector were provided through financial assistance in the form of subsidy by the government and term credit advanced by financial institutions.
- The programme was implemented in all the blocks in the country as a centrally sponsored scheme funded on 50:50 basis by the Centre and State.
- The Scheme was merged with another Scheme named *Swarnjayanti Gram Swarozgar Yojana* (SGSY) since 1999.

Rural Development Programmes

- Five Year Plans
- Panchayathi Raj and Democratic Decentralization
- High Yield Variety Programme
- NREGA – National Rural Employment Guarantee Act
- Drought Prone Areas Programme
- Watershed Development Programme
- RKVY – Rashtiyra Krishi Vikas Yojana
- National Horticulture Mission
- National Food Security Mission
- TRYSEM – Training of Rural Youth for Self-Employment
- DWCRA – Development of Women and Children in Rural Areas
- SFDA – Small Farmers Development Agency
- CADA – Command Area Development Programme
- FWP - Food for Work Programme
- NRLM - National Rural Livelihood Mission
- Antyodaya Anna Yojana
- PURA – Provision for Urban Amenities in Rural Areas

Dairy and Animal Husbandry Development Programmes

- National Programme for Bovine Breeding and Development
- National Livestock Mission
- Rashtriya Gokul Mission
- National Programme for Dairy Development
- Dairy Infrastructure Development Fund
- Animal Husbandry Infrastructure Development Fund
- Supporting Dairy Cooperatives and Farmer Producer Organizations engaged in dairy activities
- Livestock Census and Integrated Sample Survey
- National Animal Disease Control Programme

Programmes by Other Organizations

- Dairy Entrepreneurship Development Scheme (NABARD)
- Operation Flood (NDDB)
- National Dairy Plan (NDDB)
- National Demonstration Project (ICAR)
- Operation Research Project (ICAR)
- Lab to Land Programme (ICAR)
- Krishi Vigyan Kendra (ICAR)
- National Agricultural Innovation Project (ICAR)
- National Agricultural Technology Project (ICAR)
- TAR-IVLP – Technology Assessment and Refinement (ICAR)

MODULE 20. Format for citing a Reference Newspaper or Magazine Article

1. Author's name
2. Title of the article
3. Title of the periodical
4. Date of publication
5. Inclusive page numbers of the article or the initial page number followed by a plus sign, as appropriate.

Example: Shea, Christopher. 'The Limits of Free Speech'. Chronicle of Higher Education, 1 Dec. 1993: A37-38.

Feder, Barnaby J. 'For Job Seekers, a Toll-Free Gift of Expert Advice'. New York Times, 30 Dec. 1993, late ed.: D1+.

For a book, check the author's name, title, subtitle (if any), edition (if relevant), editor or translator (if there is one), volume number and number of volumes, series name (if the book is part of a series), and city of publications, publisher, and year of publication. (This information normally appears on the title and copyright pages of the book).

For an article in a periodical, check the author's name, title of the article, title of the periodical, date of publication, and, as appropriate, inclusive page numbers or initial page number. If the periodical is a scholarly journal, check the volume number (and, if needed, issue number) as well, (Volume numbers and dates of publication normally appear on the title page of journals).

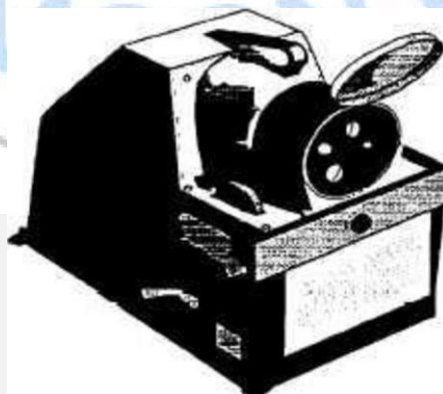
MODULE 21. Projectors

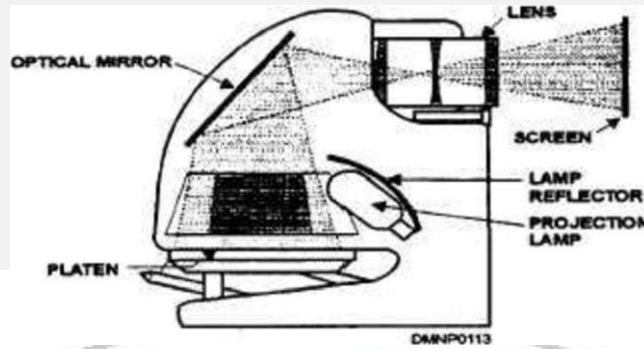
A projector or image projector is an optical device that projects an image (or moving images) onto a surface, commonly a projection screen. Most projectors create an image by shining a light through a small transparent lens, but some newer types of projectors can project the image directly, by using lasers. Different types of projectors are

1. Opaque projector
2. Over Head Projector
3. Slide Projector
4. Film/Movie Projector
5. Digital Projector
6. Video Projector
7. Retinal Projectors

Opaque Projector

They are also called epidiastope/ episcope displays opaque materials by shining a bright lamp into the object from above. A system of mirrors, prisms and/or imaging lenses is used to focus an image of the material onto a viewing screen. The light, which is incredibly bright and very hot, reflects light off the object. This reflected light goes right up into a lens, which focuses it through mirrors and out of another lens that projects that image onto a screen in front of the projector. Because they must project the reflected light, opaque projectors require brighter bulbs and larger lenses. Care must be taken that the materials are not damaged by the heat generated by the light source. Opaque projectors are typically used to project images of book pages, drawings, mineral specimens, leaves, etc.

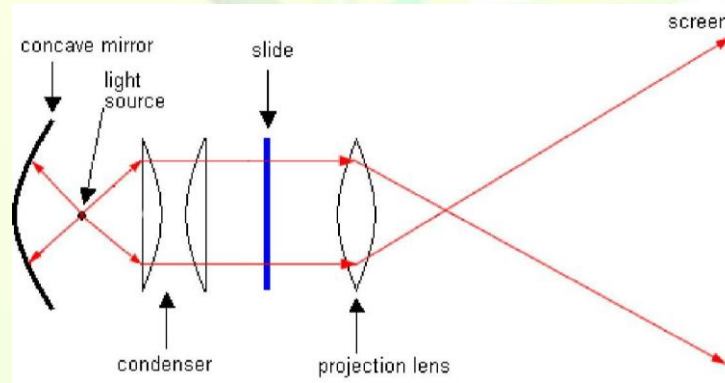




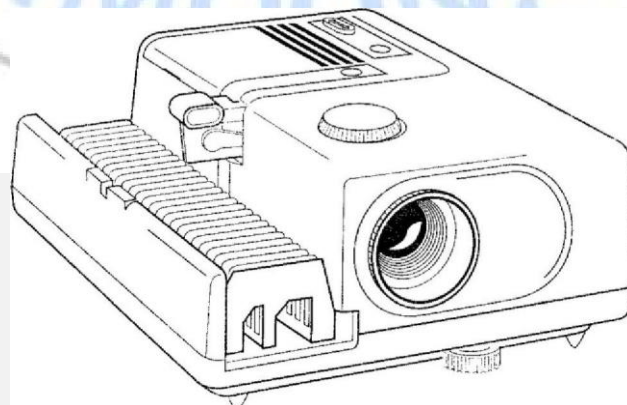
Slide Projector

A slide projector is an opto-mechanical device for showing photographic slides. It was very popular during 1950s. A projector has four main elements:

- electric incandescent light bulb or other light source (usually fan-cooled)
- reflector and "condensing" lens to direct the light to the slide
- slide holder
- focusing lens



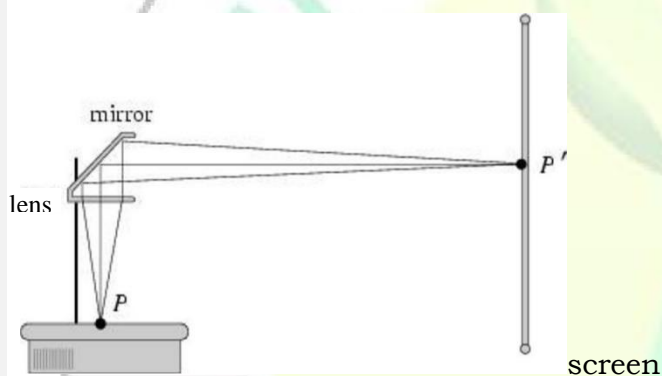
The function of the concave mirror is to reflect and focus light that shines on it to the direction of the condenser. This is to increase the brightness of the image. The function of the condenser is to focus all the light that brightens the whole slide. It also acts as a heat insulator to stop heat from the bulb so it does not spoil the slide. The projector lens projects the image on the screen that is placed a few meters away. It can be adjusted to focus a sharp image.



Light passes through the transparent slide and lens, and the resulting image is enlarged and projected onto a perpendicular flat screen so the audience can view its reflection. This form of projection also avoids the audience interrupting the light stream by casting their shadows on the projection or by bumping into the projector.

Overhead Projector (OHP)

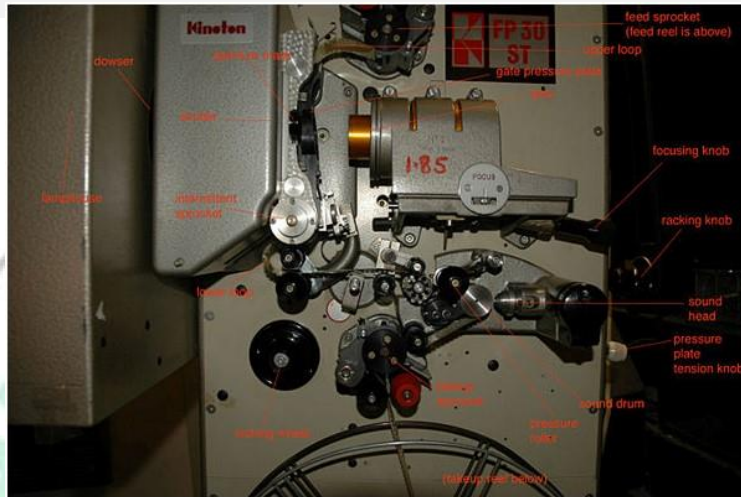
An overhead projector works on the same principle as a 35mm slide projector, in which a focusing lens projects light from an illuminated slide (transparency) onto a projection screen where image is formed. The projector includes a mirror just before or after the focusing lens to fold the optical system toward the horizontal. That mirror also accomplishes a reversal of the image in order that the image projected onto the screen corresponds to that of the slide as seen by the presenter looking down at it, rather than a mirror image thereof. Therefore the transparency is placed face up (toward the mirror and focusing lens), in contrast with a 35mm slide projector or film projector (which lack such a mirror) where the slide's image is non-reversed on the side opposite the focusing lens.



1	Front Surface Mirror
1A	Adhesive Tape
2	Condenser Lens
3	Knob & Pinion Gear
4	Stage Glass
5	Fresnel Lens
6	Pole Support
7	Post Assembly
8	Rack
9	Switch

Movie (Film) Projector

A movie projector is an opto-mechanical device for displaying motion picture film by projecting it onto a screen. Most of the optical and mechanical elements, except for the illumination and sound devices, are present in movie cameras. The Lumière brothers invented the first successful movie projector.



Digital Projector

Digital cinema refers to the use of digital technology to distribute or project motion pictures as opposed to the historical use of motion picture film. A movie can be distributed via hard drives, the Internet, satellite links or optical disks such as Blu ray Discs. Digital movies are projected using a digital projector instead of a conventional film projector. Digital Light Processing (DLP) system is used in Digital Projectors. A DLP (Digital Light Processing) projector uses mirrors to direct the light in an image, so it is considered to be "reflective".

Digital cinema is distinct from high-definition television and is not dependent on using television or high-definition video standards, aspect ratios, or frame rates. In digital cinema, resolutions are represented by the horizontal pixel count, usually 2K (2048×1080 or 2.2 megapixels) or 4K (4096×2160 or 8.8 megapixels).

As digital cinema technology has improved in the early 2010s, most of the theatres across the world have converted to digital.

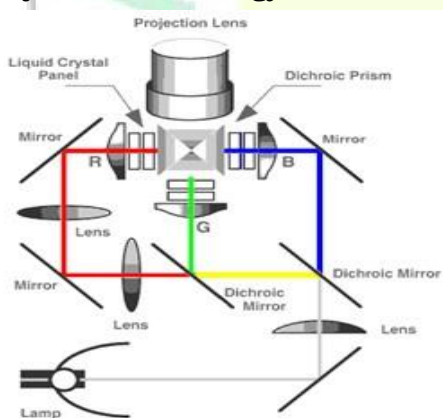


Video Projector

An LCD projector is a type of video projector for displaying video, images or computer data on a screen or other flat surface. It is a modern equivalent of the slide projector or overhead projector. To display images, LCD (liquid-crystal display) projectors typically send light from a metal-halide lamp through a prism or series of filters that separates light to three panels – one each for the red, green and blue components of the video signal. As polarized light passes through the panels (combination of polarizer, LCD panel and analyser), individual pixels can be opened to allow light to pass or closed to block the light. The combination of open and closed pixels can produce a wide range of colours and shades in the projected image. Metal-halide lamps are used because they output an ideal colour temperature and a broad spectrum of colour. These lamps also have the ability to produce an extremely large amount of light within a small area.

Because they use small lamps and the ability to project an image on any flat surface, LCD projectors tend to be smaller and more portable than some other types of projection systems. Even so, the best image quality is found using a blank white, grey, or black (which blocks reflected ambient light) surface.

The technology used in projectors can generally be broken down into two types: transmissive or reflective. Because LCD projectors pass light through the LCD panels rather than bouncing it away, they are considered a transmissive medium; DLP projectors are reflective. The third type of projector is an LED (Light Emitting Diode) projector, named for the light source, not the type of projection technology.



Retinal Projectors



A virtual retinal display (VRD), also known as a retinal scan display (RSD) or retinal projector (RP), is a display technology that draws a raster display (like a television) directly onto the retina of the eye. The user sees what appears to be a conventional display floating in space in front of them.

In a conventional display a real image is produced. The real image is either viewed directly or, as in the case with most head-mounted displays, projected through an optical system and the resulting virtual image is viewed. The projection moves the virtual image to a distance that allows the eye to focus comfortably. In a VRD no real image is ever produced. Rather, an image is formed directly on the retina of the user's eye.



MODULE 22. Organizing seminars & conferences

A seminar is a form of academic instruction, either at an academic institution or offered by a commercial or professional organization.

It has the function of bringing together small groups for recurring meetings, focusing each time on some particular subject, in which everyone present is requested to actively participate.

This is often accomplished through an ongoing inquiry and discussion with a seminar leader or instructor, or through a more formal presentation of research.

It is essentially a place where assigned readings are discussed, questions can be raised and debates can be conducted. It is relatively informal, at least compared to the lecture system of academic instruction.

A conference is a meeting of people who "confer" (make opinions/have discussion) about a topic. This is more of formal type

The popularity of conferences and seminars results from the distinct benefits they offer.

Attendees pre-qualify themselves as prospects; if they weren't interested in the issue being discussed, they wouldn't come.



MODULE 23. Script Writing

Script writing is as much a craft as interviewing, editing and mixing. Script is the framework for your story. It brings together the important elements and helps the audience understand the significance of the points you want to convey. Writing a script for radio and TV is different. A video script is defined as the pre-visualized description of the visual and aural element of the programme. It involves the writing out of a complete video programme in a suitable format, which enables each member of the production unit to understand the requirements of a video and contributes one's best to achieve the overall objective of the programme.

Writing for Radio

Radio script format can be a news report, talk, commentary, a conversation, audio postcard, interview, documentary, discussion, phone-in or drama. There can also be innovative formats with changes in time. Regardless of the format, radio journalism is like story telling. The script is a guide for the host or narrator of an audio piece and for the technician mixing the script to tape. Remember that it is spoken, immediate, person-to-person, heard once and represents the picture in words. There are also some basic principles to follow in language, grammar and punctuation.

- Write as you speak - Formal grammar and syntax are inappropriate
- Test your script as you write - Read your script aloud and make changes
- Use precise clear language - Unfold logically and easy to follow
- Write for one listener - Write as though you're speaking to a single person
- Write news thoughtfully - Slowly so that the listener can digest the news
- Think for the listener - Assess the script from the position of a listener
- Avoid abstractions - Be concrete to evoke imagination
- Do not overload - No too much information
- Avoid repetitions - Overused words and clichés
- Expand and elaborate - There are listeners who needs elaboration
- No abbreviations - Unless they are popular and well known
- No brackets and quotations - Because they are not audible
- Simply round the numbers - Say 5 lakh instead of 5,06,183
- Avoid adjectives and personal values - They are mostly irrelevant
- Avoid using pronouns - He, her, they etc are unimportant

- Avoid lists – The listener may lose interest
- Short sentences in active voice – I think you know it
- Use present tense as possible – The talk is at present
- Punctuate to suit the reading style – So that the narrator/listener is not confused
- Title goes before names – Prime Minister Modi and not Modi, the Prime Minister
- Keep it short and simple (KISS) – One to two points in a sentence
- Headline – Short and cute (‘Services to go online’)
- Introduction – Brief and to the point

Procedure for writing a Radio script (Drama)

1. Developing a concept – Keeping concept in mind, keeps the writer in track. Concept is the idea that holds the story together. A concept should identify setting (when and where?), the main characters (who?), conflict or problem (what?) and resolution of conflict (how?).
2. Write an initial summary; which is expanded later.
3. Divide the summary to scenes. Make a list of scenes.
4. Describe the scenes that tell the story – Detail the setting and characters
5. Write the dialog for each scene – Write and rewrite
6. Insert the sound effects and music in appropriate format
7. Make the rough draft
8. Read through the script and fix the problems
9. Make the final draft
10. Record and telecast

Writing for Television

Most of the rules of writing apply for both Radio and Television; only a few additional factors are important for Television. The basic difference is the involvement of sound and vision. Television always involves several people performing specialist tasks such as camera operating, script

writing, bulletin presenting, directing, studio managing, lighting and sound mixing. The stages of script writing involve research, treatment, outline, sequencing, special effects and animation, storyboard and review.

While preparing the script for a video lesson, keep in mind the following points:

- Lay down the objectives of the video lesson.
- Ensure that the video lesson does not exceed 15-16 minutes duration. If a topic requires more time, the video lesson can be in parts.
- It is preferable to deal with a subject in small segments in depth, than to have a video lesson on a vast subject treated superficially.
- It is important to plan many visual elements. Remember that a learner is able to grasp better by seeing than by just hearing. Also remember that, video is primarily a visual medium.
- Avoid long-winded sentences. Remember that the visual and aural elements are complementary to each other. Hence, use simple sentences that convey meaning directly.
- The audio text should also avoid the use of words like 'as follows', 'etc.', 'foregoing' etc. They may appear all right in a written text but sound odd in a video programme.

ESTD

2015

AGRIMOON.COM

Formats of Video scripts (Storyboard)

Shot	(Long/Medium/ Type of shot Close up)	Video	Audio	Duration	
Scene/ No.					
Shot No.	Time Segment	Video	Shot description	Audio	
				Voice	Music

ESTD

2015

AGRIMOON.COM

MODULE 24. Writing Skills

There are 2 types of writing – Technical writing and Creative writing.

Technical writing is a specialized branch of communication used in all fields of science, technology, engineering, agriculture and social sciences. Any branch of science which requires systematic study involves the use of scientific and technical writing for the purpose of recording and reporting information. It is objective in content and specific in form. It is precise and exact.

Technical writing is an art of recording information on specialized fields accurately and effectively and passing it out to those who have to use and process it.

Creative writing is written mainly to entertain and educate with the creativity of the mind. Such writing is written from one's own imagination without any specific rules. The writer expresses his feelings and emotions instead of just presenting the facts.

Importance of technical writing

Technical writing is important for students; particularly for those doing higher studies.

It is important for big as well as small organizations to communicate internal technical matters; particularly among the various sections/divisions. Efficiency of an organization increases with proper technical reporting.

It is very important for scientific organizations including research institutions. The main communication of a researcher is his writings and if he doesn't publish articles, he is bound to be idle and lazy. It also helps to judge the employee's work by the superiors.

Functions of technical writing

Functions are in Education/Research and Industry/Service sectors. Journals publish technical articles on specialized fields conforming to the rules of technical writing and they are circulated among the academic fraternity for understanding and continuing the research. Technical and popular articles, research papers, thesis etc are covered in technical writing.

Written words are important in industrial development. Industrial reports give the latest advances in industry. It provides information of the products coming from industry. Manuals, annual reports, articles are covered in this.

Format and structure of technical writing

Technical writing should be clearly planned and constructed. The objective is to make the communication as clear as possible, as brief as possible and as easy to understand as possible. It should be designed to the needs and understanding of the specific reader. The writing should interest the more knowledgeable reader and be intelligible to the reader who is less familiar with the subject. Some guidelines are:

1. **Contents:** The writer should be clear about the subject he is going to report. Basic question (5W – What, Why, Who, Where, When and one H -How) need to be answered satisfactorily before one sets to write a report.
2. **Framework of the parts:** The writing should start with a general statement about the nature and scope. Writing should start with background information or a problem that is motivated to select the topic, solutions to the problem, areas of implementation and at last should end with conclusion.
3. **Emphasis of the significant:** The important aspects should be specifically emphasized to create interest for the readers. Conscious planned effort is to be taken to keep the ideas uncovered.
4. **Prominent position:** The fundamental way of making an idea stand out is to put it in a prominent position. The prominent position is either at the beginning or at the end.
5. **Elimination of detail:** One way to stress important information is to remove unessential material. This is important to eliminate boredom to the reader and make the writing precise. Details can be separately shown in appendix leaving the main part of the article.
6. **Liberal use of subheads:** Subheads serve as convenient and efficient signposts. It can be included according to the need which helps the writer to categorize the subject into different sections and make the writing easy to understand. Also it helps the reader to locate subjects he wants to re-read when studying a long or complicated exposition.
7. **Repetition:** Repeated experience works not only on children, but also on sophisticated and highly educated scientists. If the idea should not fade; it should be repeated. But repetition should be in different ways such that the same matter can be expressed in different sentence forms in different parts of the article.
8. **Visual aids and tables:** Visual aids such as graphs, drawings, diagrams and photographs often present matter in a striking and efficient manner. They can be used to reinforce and emphasize key ideas. It also makes the writing attractive.
9. **Typography:** Capital letters, larger font size, italics, inverted commas etc are all effective means of emphasis. But it is important that they are not overused.
10. **Specific mention:** Statements regarding importance of a matter or portion can be mentioned. Such statements can be made along with the material.

Forms of technical/scientific writing

1. **Reports:** Reports are written to provide complete information of the project under study. There are Form report (Simple report of filing pro-forma – Shift report, progress report), Technical report (Technical articles with headings, subheadings, tables, figures, charts etc) and formal report (In the form of book like annual report, committee reports with chapters and sections)
2. **Articles:** Articles communicate knowledge on a particular subject for preservation and dissemination of ideas. They are of three types – Technical article, semi-technical article and popular article.
3. **Scientific/Research Papers:** Written based on original scientific experiment or research that is carried out. It should be published. It has a set pattern – Introduction, Review of literature, Materials and methods, Results and Discussion, Conclusion and References.
4. **Dissertations and theses:** Thesis is submitted by a scientist based on his research work whereas dissertation is submitted by a student as part of academic activity (M.Sc / Ph.D)

5. **Manuals:** It is a data book that gives an idea regarding the functions of a system, equipment etc. It is a functional form of technical writing. E.g.: Operation manual, Information brochure.
6. **Scientific Correspondence:** It is the communication between two persons/organizations or within organization; either between scientists or between scientists and laymen. E.g.: mails and letters. Also, there are websites like answers.com, medmedia.com, webmed.com etc.

Précis Writing and Summarizing

Both précis writing and summarizing are essential skills in effective communication and comprehension. While they share similarities, they serve different purposes and require different techniques.

Précis Writing

Definition: A précis is a concise summary of a longer text that captures its main ideas and arguments without personal interpretation or opinion.

Key Characteristics:

- **Brevity:** A précis is typically one-third the length of the original text.
- **Clarity:** It should be clear and coherent, reflecting the original text's ideas accurately.
- **Objectivity:** A précis must be free from personal opinions or interpretations.
- **Structure:** It should have a logical flow and organization, mirroring the structure of the original text.

Steps to Write a Précis:

1. Read the Original Text:

- Understand the overall message, tone, and arguments presented.

2. Identify Main Ideas:

- Highlight key points, arguments, and supporting details in the text.

3. Take Notes:

- Jot down the essential information in your own words.

4. **Draft the Précis:**

- Write a draft using clear and concise language. Aim for coherence and flow.
- Ensure that you use your own words and avoid copying phrases directly from the original text.

5. **Edit and Revise:**

- Review your précis for clarity, accuracy, and conciseness.
- Eliminate unnecessary words or redundancies.

6. **Check Against the Original:**

- Ensure that your précis accurately reflects the main ideas of the original text without losing meaning.

Example of Précis Writing

Original Passage: "In recent years, there has been a growing concern about the impact of social media on mental health. Studies have shown that excessive use of social media can lead to anxiety, depression, and other psychological issues. Experts recommend setting limits on social media usage to promote better mental health and well-being."

Précis: "Recent studies indicate that excessive social media use negatively impacts mental health, contributing to anxiety and depression. Experts suggest limiting usage to enhance well-being."

Summarizing

Definition: Summarizing is the process of distilling a text to its essential points, providing a broader overview of its content.

Key Characteristics:

- **Focus on Main Ideas:** A summary captures the core message and essential points of the original text.
- **Conciseness:** Summaries are shorter than the original text but can vary in length depending on the context.
- **Personal Interpretation:** While summaries should remain objective, they may include a slight interpretation of the text's main ideas.

Steps to Write a Summary:

1. Read the Original Text:

- Understand the main points, arguments, and purpose of the text.

2. Identify Key Elements:

- Look for the main idea, supporting points, and conclusions.

3. Take Notes:

- Write down essential details in your own words.

4. Draft the Summary:

- Start writing a summary that includes the main idea and supporting points, ensuring that it reflects the essence of the original text.

5. Edit and Revise:

- Review the summary for clarity, coherence, and accuracy.

- Remove unnecessary details and redundancies.

6. Check for Accuracy:

- Ensure that the summary accurately reflects the main ideas of the original text.

Example of Summarizing

Original Passage: "Climate change is one of the most pressing issues facing our planet today. The increase in greenhouse gas emissions has led to rising temperatures, melting ice caps, and severe weather events. Immediate action is required to mitigate its effects and transition to sustainable energy sources."

Summary: "Climate change poses a significant threat, driven by rising greenhouse gas emissions that result in global warming and extreme weather. Urgent action is needed to address its impacts and shift to sustainable energy."

abstracting; individual and group presentations, impromptu presentation

MODULE 25. Data Collection Methods

Data is a series of disconnected facts and observations. It is a symbol assigned to some discrete and objective facts about an event. Data is raw which simply exists and has no significance in itself beyond its existence. It can exist in any form, usable or not. These may be converted to information by analyzing, cross-referring, selecting, sorting, summarizing, or in some way organizing the data. Patterns of information, in turn, work up into a coherent body of knowledge. Data does not have meaning in itself. Say for example, you ask a farmer if he has adopted cross breeding. The answer you will get is Yes or No. You go on asking this question to 100 farmers and then you assign '2' for yes and '1' for no. These 2's or 1's are data. Information is derived from data by identifying relational connections and attaching meaning to data. In the above example if you find out the number of 1 and 2, this can be called as information. Say for example, if 70 farmers said yes and the remaining 30 farmers said no, then the information that we get is that 'Out of 100 farmers, 70 farmers have adopted cross breeding technology.' Farm, farmers, household, villages etc are the units of data collection. Unit is a distinct and identifiable element from which information required is ascertained. We use documents and records for data (secondary data) or field surveys and interviews to collect primary data. Data is collected from a sample of the population. Aggregate of all units is the population; while the fraction of the population selected in such a way it represents the whole population is called a sample. The data collected is tabulated, analyzed and expressed in the form of statistical tables. Common data collection methods are survey, observation, interview, case study etc. discussed below:

Survey method: Survey is a type of data collection, which is a systematic enquiry into the common activities and living conditions of a group of people. In the survey method, participants answer questions administered through interviews or questionnaires. After participants answer the questions, researchers describe the responses given. In order for the survey to be both reliable and valid, it is important that the questions be constructed properly. Questions should be framed so they are clear and easy to comprehend.

Case Study Method: Case study involves an in-depth study of an individual or group of individuals. Case studies often lead to testable hypotheses and allow us to study rare phenomena. Case studies cannot be used to determine cause and effect, and they have limited use for making accurate predictions.

Observational Method: Under this method, animal and human behavior are closely observed in natural or laboratory conditions, which are also called naturalistic observation and laboratory observation, respectively. Laboratory observations are usually under controlled conditions, less time-consuming and cheaper than naturalistic observations. However, both naturalistic and laboratory observations are important for the advancement of scientific knowledge.

Interview method: Interview is the verbal conversation between two people with the objective of collecting information. It is one of the best methods of data collection and is done face to face or through other methods. There are personal interviews, telephone interviews and focus group interviews. Interview is advantageous as there is opportunity for feedback, probing questions and flexibility in time. In-depth knowledge of field problems can be acquired through interviews.



MODULE 26. Presentation Skills

Great speakers aren't born; they are trained.

'All the great speakers were bad speaker at first' -Ralph Waldo Emerson.

Speech and Presentation

Presentation is a type of speech

- ❖ Speech is public in nature – political, dedication or tribute
- ❖ Presentation is private – business, technical, professional or scientific environment
- ❖ Speech needs no specialized audience; but audience is likely to be more specialized in presentation.

Phases in making a presentation

- Plan
- Practice
- Presentation

Planning the presentation

It takes one hour of preparation for each minute of presentation on time.' Planning of presentation revolves around 5 Ws and 1 H – Why?, When?, Whom?, What?, Where? and How?

Keep in mind...

Structure the content in line with the audience's needs o What do you want to tell the audience?
o What is your objective?

- Prepare keeping in mind the time allotted
- Anticipate the questions and prepare
- Collect material from a variety of sources
- Arrange points logically and sequentially
- Prepare handouts as well

Timing the presentation

- 2 to 2.5 mins --- opening/beginning
- 20 to 21 mins --- middle section
- 2 to 3 mins --- closing/end
- 5 mins --- questions

The beginning

- Should be carefully designed
- Get attention - shock, humor, question, story, facts & figures - well rehearsed yet natural
- Motivate audience to listen - listen to their needs

Structure of presentation

- Sequence should be logical & understandable
- Interim summaries- Recaps
- Value of visual aids -flip charts, handouts etc.

Prepare Closing

- Last 2 to 2.5 minutes are as critical as the first five minutes for a successful presentation
- Summarize- highlight important points
- Suggest action-
 - what to do and when,
 - where and how to do it
- Everyone has it
- Can be used constructively
- Key issue is not elimination of fear Instead channel the energy it generates, for an effective presentation

Effective Delivery

- Be active – move
- Be purposeful - controlled gestures
- Variations – vocal (pitch, volume, rate)
- Be natural
- Be direct – don't just talk in front of the audience talk to them

Handling Questions (???)

- Do not get confused
- You are not supposed to know everything

- Anticipate and keep answers ready
- Sometimes questions themselves give you a lead to highlight your point of view

Visual Aids

- While using a over-head projector face the audience while talking
- Point with a pen
- Appropriate lighting
- Watch the colours
- Ensure clear visibility
- 10 lines, 10 words per line

Practice and practice...then present

- 'If you fail to prepare; you are prepared to fail.'
 - Rehearsing could make the difference between a good and an average presentation.
 - A popular axiom says 'Tell' them what you are going to tell them, tell them and then tell them what you told them.'

What annoys about PowerPoint?

- Speaker reads slides 62%
- Text too small to read 47%
- Bad color choice 43%
- Full sentences; not bullet points 39%
- Moving/Flying texts or graphics 25%
- Overly complex diagrams and charts 22%

Individual and Group Presentations

Individual Presentations

Definition: An individual presentation involves one person presenting information, ideas, or arguments to an audience.

Key Elements:

1. **Preparation:** Research the topic thoroughly and organize your content.
2. **Structure:** Have a clear introduction, body, and conclusion.
3. **Delivery:** Use clear and confident speech, maintain eye contact, and employ appropriate body language.
4. **Visual Aids:** Use slides or other visual aids to enhance understanding.

Tips:

- **Practice:** Rehearse multiple times to build confidence and smooth out any issues.
- **Engage the Audience:** Use questions, anecdotes, or interactive elements to keep the audience interested.
- **Time Management:** Keep track of time to ensure you cover all points without rushing or exceeding the allotted time.

Group Presentations

Definition: A group presentation involves multiple people collaborating to present information, ideas, or arguments to an audience.

Key Elements:

1. **Collaboration:** Work together to research and organize the content.
2. **Division of Roles:** Assign specific sections or roles to each group member.
3. **Coordination:** Ensure a smooth transition between speakers and consistency in delivery.
4. **Rehearsal:** Practice together to ensure timing and coherence.

Tips:

- **Clear Communication:** Maintain open communication among group members to coordinate effectively.
- **Support Each Other:** Be prepared to assist and back up your group members during the presentation.

- **Consistency:** Ensure that all parts of the presentation align in style and content.

Impromptu Presentation

Definition: An impromptu presentation is delivered without prior preparation or planning, typically on a topic given to the speaker shortly before the presentation.

Key Elements:

1. **Quick Thinking:** Ability to organize thoughts quickly and coherently.
2. **Clarity:** Focus on clear and concise communication.
3. **Confidence:** Maintain confidence despite the lack of preparation.
4. **Structure:** Quickly formulate a basic structure (introduction, body, conclusion).

Tips:

- **Stay Calm:** Take a moment to gather your thoughts and breathe deeply.
- **Focus on Key Points:** Identify two or three main points to discuss.
- **Use Personal Experience:** Draw on your own knowledge and experiences to support your points.
- **Engage the Audience:** Maintain eye contact and use body language to keep the audience engaged.

Techniques for Impromptu Speaking:

- **PREP Method:** Point, Reason, Example, Point. State your main point, give a reason, provide an example, and restate the main point.
- **Cause and Effect:** Discuss the cause of a situation and its effects.
- **Problem and Solution:** Identify a problem and suggest possible solutions.

Example of Impromptu Presentation

Topic: The Importance of Time Management

Introduction: "Good morning, everyone. Today, I'd like to talk about the importance of time management in our daily lives."

Body:

- **Point 1:** "Time management helps increase productivity by allowing us to focus on essential tasks."
- **Example:** "For instance, when I started using a planner, I noticed a significant improvement in my ability to complete projects on time."
- **Point 2:** "It also reduces stress by providing a clear plan for accomplishing tasks."
- **Example:** "Knowing what needs to be done and when helps avoid last-minute rushes and the stress that comes with them."

public speaking; Group discussion. Organizing seminars and conferences. Key elements of communication

Public Speaking

Definition: Public speaking is the process of communicating information to an audience through spoken words. It involves delivering speeches, presentations, or talks to inform, persuade, or entertain.

Key Elements of Effective Public Speaking:

1. **Preparation:**

- **Research:** Gather and understand your material thoroughly.
- **Organize:** Structure your speech with a clear introduction, body, and conclusion.
- **Practice:** Rehearse your speech multiple times to build confidence and fluency.

2. **Delivery:**

- **Voice:** Use a clear, loud, and varied tone to keep the audience engaged.
- **Body Language:** Maintain eye contact, use gestures to emphasize points, and move naturally.

- **Pacing:** Control the speed of your speech; avoid speaking too fast or too slow.
- **Clarity:** Articulate your words clearly and avoid using filler words.

3. **Engagement:**

- **Connect with the Audience:** Relate your topic to the audience's interests and experiences.
- **Use Stories and Examples:** Make your points more relatable and memorable.
- **Ask Questions:** Involve the audience by asking rhetorical or direct questions.

4. **Confidence:**

- **Positive Body Language:** Stand upright and maintain a confident posture.
- **Preparation:** Knowing your material well boosts confidence.
- **Handling Nervousness:** Practice relaxation techniques and positive visualization.



MODULE 27. Group Discussion Technique

Group Discussion is that form of discourse, which occurs when two or more persons, recognizing a common problem, exchange and evaluate information and ideas, in an effort to solve that problem. Their effort is for a better understanding of the problem or towards the development of a programme of action relative to the problem. Discussion usually occurs in a face-to-face or co-acting situation, with the exchange in spoken form. When more than two people are involved, it usually occurs under the direction of a leader.

Purposes:

- To solve a problem (decision-making)
- To exchange information (improve understanding).
- To motivate
- To plan a programme of action
- To elect or select a person for a position etc.
- To entertain
- To hear and discuss a report
- To form attitudes
- To release tensions
- To train individuals

Procedure

Understand and adopt the proper technique. The technique of a problem – solving group discussion consists of the following six steps based on the “reflective thinking” pattern.

1. Recognition of the problem as such by the group
2. Definition of the problem, its situation and diagnosis
3. Listing of as many solutions as possible
4. Critical thinking and testing of these hypotheses to find the most appropriate and feasible solution/solutions
5. Acceptance or rejection of the solution/solutions by the group
6. Lastly, considering how to put the accepted solution into practice See that one of the group members takes up the role of the discussion leader (or chairperson). Extension workers should

avoid this role as far as possible, because in such a case, a situation is likely to develop where the group listens and the chairperson does all the talking. The size of the group should never exceed 30 persons

Advantages

- It is a democratic method, giving equal opportunity for every participant to have his say
- It appeals to the practical type of individuals
- It creates a high degree of interest
- The strength of group discussion lies in the fact that the discussants approach the problem with an open mind and suspended judgment in a spirit of enquiry
- It is a co-operative effort and not combative or persuasive in nature
- Combined and co-operative thinking (Pooling of wisdom) of several persons is likely to be superior to that of isolated individuals
- A small group can think together on a problem in an informal fashion and work out solutions better and faster by using this method than by following rigid parliamentary procedure. (Even parliament and legislatures recognize this when they appoint ad hoc committees)
- Develops group morale: When a group discusses a question and then comes to a decision, that is “our” decision for the group and they will see that our decision is carried out (Group action encouraged)
- It is a scientific method (employing the reflective thinking pattern)
- Participants need not be good speakers or debaters
- Continued experience with such group discussions improves one’s capacity for critical and analytical thinking.

Limitations

- Factions in villages may hinder the successful use of this method
- The ideal discussants with self-discipline (open mind and suspended judgment) are difficult to find. So also, it is difficult to find an ideal chairperson or leader for group discussion
- It is not suitable for dealing with topics to which discussants are new
- In large groups especially, and even in small groups to some extent, it is difficult to achieve group homogeneity or cohesion
- The size of the group has to be limited, because the success of the method is perhaps inversely proportional to the size of group when other factors being constant
- It is not a good method for factual problems
- It is not suitable for taking decisions in times of crisis or emergency, as it is a slow process

Due to its informal conversational style, the scope for orderly or coherent arrangement of ideas is limited

Posters



A good poster creates awareness and interest among the people.

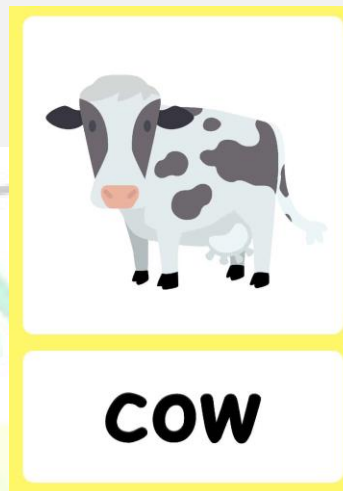
- It inspires and takes people towards action.
- It should announce the purpose or the approach, set out the conditions and recommends action.
- A poster should be bold enough to attract attention of the people and should communicate only one idea at a time.
- It should have simple letters which are clear and forceful.
- The size of a poster should not be less than 50 X 75 cm.
- ABC of poster is Accuracy, Brevity and Clarity.
- Thumb rule is to have 3-5 colours

Flannel graph



- Flannel graphs serve as a good teaching aid when a piece of sandpaper is fixed to the back of a picture, a photograph, a letter, etc.
- They can be made to adhere easily to a piece of thick flannel cloth, fixed on a board.
- They are used as an aid for group methods like informal talks or lectures.

Flash cards



- Flash cards are a set of small compact cards approximately 30 to 45 cm. in size.
- They are used to bring home an idea, such as the rearing of cross breed cows, product manufacturing and other practices.
- Pictures on the theme are drawn on these cards in a logical sequence, which are then flashed before the audience.
- Upon seeing them, the farmers are able to follow a story more easily.

Models



- Models create a sense of realisation in a person.

- They are mostly prepared for those people who are not in a position to see them in the actual form.
- Models are used to create interest, promote understanding and influence the people to adopt a certain practice.

Short Videos



- Slightest time
- Rewrite Script
- Quality Camera
- Plenty of light
- Clean background
- Simple editing
- Clear voice-over/music
- Avoid shaky footage
- Variety of angles.
- Plan and promote

Radio-Scripting/Radio Talk



- Target Audience
- Research
- Duration
- Format
- Depth of Voice
- Language
- KISS
- Being with the listener

Audio-Visual Aids – Others

- Photographs
- Cultural Programmes
- Bulletin Boards
- Projectors
- Public Address System
- Tape Recorders
- Diorama
- Translide
- Flip Chart

MODULE 28. Brainstorming Technique for Developing the Decision-Making Process

Definition: Brainstorming is a creative group activity designed to generate a large number of ideas for the solution to a problem. It encourages open thinking and the free flow of ideas.

Steps in the Brainstorming Process:

1. Define the Problem:

- Clearly state the problem or decision that needs to be addressed.

2. Set Ground Rules:

- Encourage free thinking and creativity.
- No criticism or judgment of ideas during the brainstorming session.
- Aim for quantity over quality initially.

3. Gather a Diverse Group:

- Include people with different backgrounds and perspectives to generate a variety of ideas.

4. Facilitator:

- Appoint a facilitator to guide the session and keep it focused and productive.

5. Idea Generation:

- Encourage participants to share as many ideas as possible, no matter how outlandish they may seem.
- Write down all ideas where everyone can see them (e.g., on a whiteboard or flip chart).

6. Categorize and Analyze:

- Group similar ideas together.
- Discuss the feasibility and potential impact of each idea.

- Evaluate and prioritize ideas based on criteria such as feasibility, cost, time, and resources.

7. **Select the Best Solution(s):**

- Choose the idea(s) that best address the problem and align with the decision criteria.

8. **Action Plan:**

- Develop a plan to implement the chosen solution(s).
- Assign responsibilities and set timelines for action.

Interview Techniques

1. Structured Interview:

- **Definition:** A structured interview follows a set list of questions, ensuring consistency and comparability across different candidates.
- **Advantages:**
 - Ensures all candidates are evaluated on the same criteria.
 - Easier to compare responses.
- **Disadvantages:**
 - May limit the exploration of unexpected but relevant topics.
- **Best Used For:** Roles where specific skills and experiences are critical.

2. Unstructured Interview:

- **Definition:** An unstructured interview is more conversational and allows the interviewer to explore topics in depth based on the candidate's responses.
- **Advantages:**
 - Flexibility to explore different areas of interest.
 - Can provide a deeper understanding of the candidate.

➤ **Disadvantages:**

- Harder to compare candidates consistently.
- May lead to biased or irrelevant questions.

➤ **Best Used For:** Roles where personality and cultural fit are important.

3. Behavioural Interview:

- **Definition:** A behavioural interview focuses on past experiences and how the candidate handled specific situations.
- **Technique:** Use the STAR method (Situation, Task, Action, Result) to structure questions and responses.
- **Example Question:** "Can you describe a time when you had to overcome a significant challenge at work?"

4. Panel Interview:

- **Definition:** Multiple interviewers (panel) interview the candidate simultaneously.

• **Advantages:**

- Provides multiple perspectives on the candidate.
- Reduces individual interviewer bias.

• **Disadvantages:**

- Can be intimidating for the candidate.
- Coordination among interviewers is required.

- **Best Used For:** High-stakes positions where a broad range of input is valuable.

5. Technical Interview:

- **Definition:** Focuses on assessing the candidate's technical skills and knowledge relevant to the job.

- **Techniques:**

- Problem-solving tasks.
- Coding challenges.
- Technical questions related to the field.

- **Example Question:** "How would you approach optimizing a slow-running SQL query?"

Preparing for Closing an Interview or Meeting

1. Summarize Key Points:

- Recap the main topics discussed.
- Highlight any agreements or decisions made.

2. Provide Next Steps:

- Outline the immediate actions to be taken.
- Assign responsibilities and set deadlines.
- Confirm the follow-up plan (e.g., next meeting, feedback timeline).

3. Address Outstanding Questions:

- Ensure all questions have been addressed.
- Invite final questions or comments.

4. Thank Participants:

- Express appreciation for their time and contributions.
- Reinforce the importance of their input.

5. Confirm Contact Information:

- Ensure that all participants have the necessary contact information for follow-up.

6. Formal Closure:

- Officially close the meeting or interview.
- Ensure a clear and professional conclusion.

Example of Closing an Interview or Meeting

Closing an Interview:

- **Summarize:** "Thank you for sharing your experiences today. To summarize, we've discussed your background in project management, your approach to team leadership, and specific examples of your problem-solving skills."
- **Next Steps:** "We will review all candidates over the next week and will get back to you by next Friday with our decision."
- **Questions:** "Do you have any final questions for us?"
- **Thanks:** "Thank you again for your time and interest in this position."

Closing a Meeting:

- **Summarize:** "Today we reviewed our quarterly sales performance, discussed new marketing strategies, and agreed on action items for the next quarter."
- **Next Steps:** "John will finalize the marketing plan by next Monday, and we will reconvene in two weeks to review the initial results."
- **Questions:** "Is there anything else we need to address before we close?"
- **Thanks:** "Thank you all for your valuable input. Let's work towards implementing these strategies effectively."

MODULE 29. Identification of Problems of Village Farmers through the Interview Method

Purpose: To identify and understand the problems faced by village farmers to develop solutions and provide necessary support.

Steps for Conducting Effective Interviews with Village Farmers:

1. Preparation:

- **Objective:** Clearly define the purpose of the interview. Identify the specific problems you want to explore (e.g., crop yield, access to resources, market access).
- **Background Research:** Gather preliminary information about the village, farming practices, and common challenges faced by farmers in the region.
- **Questionnaire Development:** Prepare a list of open-ended questions that will help uncover detailed information about the farmers' experiences and challenges.

2. Selection of Interviewees:

- **Representative Sample:** Select a diverse group of farmers, considering factors such as age, gender, farm size, crop type, and socio-economic status.
- **Random Sampling:** To avoid bias, choose farmers randomly within the identified categories.

3. Building Rapport:

- **Introduction:** Introduce yourself and explain the purpose of the interview clearly.
- **Trust Building:** Spend some time building rapport with the farmers to make them comfortable. Show genuine interest in their lives and work.

4. Conducting the Interview:

- **Setting:** Choose a comfortable and quiet location for the interview.
- **Open-Ended Questions:** Use open-ended questions to encourage detailed responses. Avoid leading questions that may bias their answers.

- **Active Listening:** Listen attentively to their responses without interrupting. Show empathy and understanding.
- **Follow-Up Questions:** Ask follow-up questions to clarify points and gather more detailed information.
- **Observations:** Take note of non-verbal cues and the surrounding environment, as they can provide additional context to the farmers' responses.

Sample Interview Questions:

- **General Background:**

- Can you tell me about your farming background and experience?
- How long have you been farming in this village?

- **Crop Production:**

- What crops do you grow, and why did you choose these crops?
- What challenges do you face in growing and harvesting your crops?

- **Resource Access:**

- Do you have access to quality seeds, fertilizers, and pesticides? If not, what are the difficulties?
- How is your access to water for irrigation?

- **Market Access:**

- How do you sell your produce? Do you face any challenges in reaching markets?
- Are there any middlemen involved in the selling process? If so, how do they affect your earnings?

- **Financial Issues:**

- Do you have access to credit or loans for your farming activities? If not, what are the barriers?

- What are your biggest financial challenges in farming?

- **Training and Knowledge:**

- Have you received any training or information on modern farming techniques? If so, from whom?

- What kind of training or information would be most helpful to you?

- **Support and Services:**

- Are there any government or non-governmental organizations supporting farmers in this area? How effective are they?

- What additional support or services do you need to improve your farming practices?

- **Future Aspirations:**

- What are your goals and aspirations for your farm in the future?

- What changes or improvements would help you achieve these goals?

5. **Recording and Analysis:**

- **Documentation:** Record the interviews (with permission) or take detailed notes.

- **Transcription:** Transcribe the interviews to ensure accurate data analysis.

- **Coding and Categorizing:** Identify common themes and categorize the data accordingly.

- **Analysis:** Analyse the data to identify key problems and their underlying causes.

6. **Reporting and Action:**

- **Report Preparation:** Summarize the findings in a comprehensive report highlighting the main problems and potential solutions.

- **Feedback to Farmers:** Share the findings with the farmers and involve them in the solution development process.

- **Action Plan:** Develop an action plan based on the identified problems, including short-term and long-term solutions.

Example Scenario

Objective: Identify the challenges related to crop yield and market access faced by farmers in Village X.

Preparation:

- Research common crops and farming practices in Village X.
- Prepare questions focusing on crop production, resource access, and market challenges.

Sample Interview:

- **Introduction:** "Hello, my name is [Your Name], and I am here to understand the challenges you face in farming to find ways to support you better."
- **Questions:**
 - "Can you tell me about the crops you grow and any difficulties you face in growing them?"
 - "How do you access water for your crops, and what challenges do you encounter?"
 - "What difficulties do you face in selling your produce?"
 - "Have you received any training on modern farming techniques? What more do you think you need?"

Analysis:

- Common themes: Water scarcity, lack of market access, inadequate training.
- Summarize and categorize responses to identify key issues.

Action:

- Develop a report summarizing findings.
- Share with local agricultural support organizations to develop training programs and improve market access.

References

Fundamental of Dairy animal husbandry Extension-----NDRI

Extension Education -----Dr. Ranjit Singh

Extension communication and management ----G.L. Ray

[Share & Discover Presentations | SlideShare](#)

