AGRICULTURE EXTENSION EDUCATION

COMMUNICATION IN AGRICULTURE

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Certainly in the context of rural development, nothing is more important than the transfer of useful ideas from one person to another. Indent in this process is the capability of improving the socio-economic condition of the villagers and uplifting them from illiteracy, poverty and diseases. The extension workers have the work of presenting useful ideas to the people for their upliftment, define those ideas and have them adopted. Therefore usually, the success of extension worker is determined by the efficiency of communicating the useful ideas to the people.

The word 'communication' comes from the Latin word communis, its meaning is common. It means that when we communicate, we are trying to establish community with someone through a message. 'Communication' then is a conscious attempt to establish community over some idea, fact, feelings and the like, with others. Consequently it is a process of getting a source and a receiver tuned together for a particular message or a series of messages.

For communicating the ideas, you have used a medium (common or talking) The other man has listened to your concept but before understanding the proper meaning he has done the decoding of that concept in his mind and he has made a decision in his mind for this concept, whether this concept should be used or not, this decision is called the effect of communication. As you are standing there you are observing the man's reactions and evaluating the "effectiveness of the communication." This evaluation is called "Feedback". We can explain this whole process in the following way :

Source → Encoding → Message → Channel → Receiver → Decoding → Effect

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└← ← ← ← **Feedback** ← ← ← ←┘
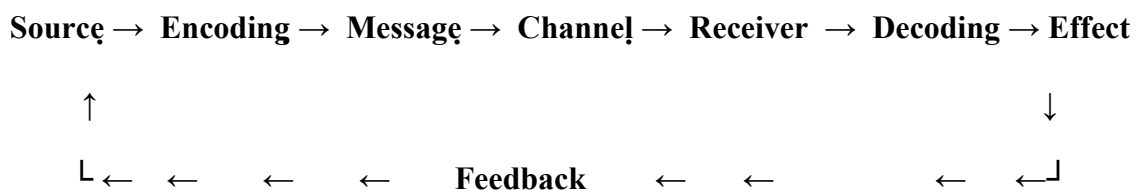
Definitions

Although there are many definitions of communication.. But some main definitions are given as under::

1.   Communication is a process by which two or more persons exchange ideas, facts, impressions in way that each gains a common understanding of the meaning, content and use of message. –**J. Paul Leagan** (1961)

2.   All educational and action programmes in agricultural are communication.–**Coleman & Marsh**

3.   All the procedure by which one mind can affect another. –**Shannan & Weaver (1949)**

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

5.   "Communication is the discriminatory response of an organism to stimulus". - **Stevens (1942)**

6.   "Communication is the arrangement of environmental stimulus to produce certain desired behavior on the part of the organism". - **Thayar (1967)**

7.   "Communication is the process by which messages are referred source to a receiver." "In Extension Education it refers to the process of transferring an idea, skill or attitude from one person to another accurately and satisfactorily." – **Supe**

8.   "Communication is all of the procedures, by which our mind can affect another". – **Weave (1966)**

9.   "Communication is the process by which two or more people exchange understands ideas, facts, feelings and impression".–**Waghmare**

10.   "Communication is any occurrence involving a minimum of four sequential ingredients: (i) a generator of a (ii) sign-symbol system which is (iii) projected to (iv) at least one receiver who assigns meaning". – **Robert Geyer (1967)**

11.   "Communication is a purposeful process, which involves sources, messages, channels, and receivers".– **Andersch et al. (1969)**

12.   "Communication may be defined as a process by which an individual-the communicator, transmits (usually verbal symbols) to modify the behavior of other individuals - communicates". – **Hovland (1964)**

13.   "Communication is the control of behavior through descriptive and reinforcing stimuli". – **Hortman (1966)**

14.   "Communication has as its central interest those behavioral situations in which a source transmits a message to a receiver(s) with conscious intent to affect the latter's behavior". – **Miller (1968)**

Importance of Communication in Agriculture

For each type of development such as social, economic, religious, political and educational, communication has its important place, similarly for the all round development of agriculture the communication process also deserves its significant role. Farming is an ancient occupation. If the farming may be recognised only as a factory of producing the food grains there is no difference between the ancient time and modern time farming. According to the economics, for other productions there are needed factors as land, labour, money and management which are still in the present and were in the past also. Now, what is the modern farming? The modern farming is that in which the person adopts the latest new methods of farming based on science for the agricultural production. Thus for the modern agriculture there is need of one more factor and this factor is the latest knowledge. Thus, in the modern agriculture for the agricultural production along with the four factors one more factor of the latest knowledge (fifth) has been added.

The question arises from where this new knowledge may be achieved? The first need is that to create the new knowledge and the second need is to send this latest knowledge to the farmers. Thus for the modern farming three tools are needed.

The production tool of Agril. Knowledge ⇔ Agriculture Extension and Information tool ⇔ Farmers tool

If the middle part or the Agriculture Extension and information tool may be replaced the latest knowledge cannot reach the farmers and its result will be obstacle in the progress of farming. Thus, we see that for the modernization of farming the communication process has its special contribution.
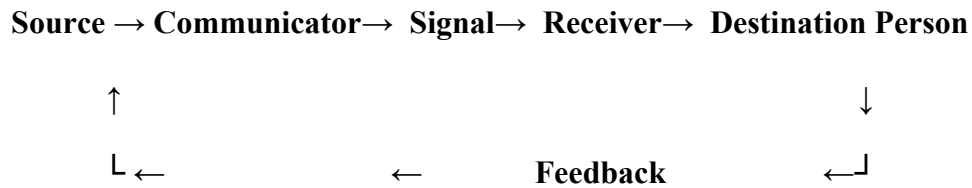
Scope of Agricultural Communication

There are following recent suggestions to strengthen agricultural communication:

(1)   In various fields, for the information related to the agricultural and rural development there should be regulations for giving more space in the newspapers and the government should provide some aid to these rural newspapers.

(2)   Booklets and leaflets should be published in which there should be description of solution to the problems and the working methods.

(3)   In the booklets, there should be details of agricultural equipment i.e., pump-sets, electrometers, tractor, engine, etc. things as well as the methods of their repairing.

(4)   The government should provide television set and a radio set to the village panchayat centre.

(5)   For bringing improvement in the one-way broadcasting of the Akashwani and Doordarshan, the farmers and women "characha mandals" should be organised at each village panchayat centre.

(6)   The programmes of rural/agricultural development should get much time on radio and television centre.

(7)   The small telefilm of the development should be made, which should be shown at each film theatre.

(8)   The film-producer should be urged that they should involve the plot of rural development in his dramas.

(9)   In the rural area, the exhibitions of rural and agricultural development should be organised in the fairs and festivals.

(10)   At each district, centre the Farmers Exhibition should be organised regularly once in a year.

Key Elements of Communication Process

From the different definitions it is clear that the communication process is called the interchange or the transfer of message, feelings and information between two persons or more than two persons. For completing this process some elements are necessary. But how many are these elements and which are these elements ? On this issue many scientists conflict among themselves. The great thinker and philosopher Aristotle has analysed these elements observing the common talking among them that there are three elements of communication– (i) Communicator, (ii) Message, (iii) Receiver or Audience. Verifying this point **Hareld Lasswell** has analysed these elements of communication process that *"Which person, what, to whom, by which channel, under what circumstance and how effectively speaks"*.

Lasswell has told two more factors–(i) Channel (ii) communication-effectiveness, along with the three elements. Considering it **Shannan C. & Weaver** (1949) have told that there are five elements. i.e.,

Source → Communicator→ Signal→ Receiver→ Destination Person

    ↑   ↓

   └ ←   ←   **Feedback**   ↩┘

In it, the source is that man who wants to send any message and the transmitters or communicator is the man who sends this message. Similarly the receiver is the man who receives those signals and the destination person is that to whom the source wants to send the message. For example if you want to send your message to your friend you are source and your friend is the destination person. The personnel of the telephone exchange sends the message through the signals so he is communicator while the man sitting in the other telephone exchange is the receiver of these signals. Perhaps Shannan and Weaver (1949)has analysed these elements keeping the scientific points of telecommunication in his mind. But its utility is in our daily-to-day life.

Schramm, W., (1954) has analysed 6 elements in the communication process on the basis of Shannan and Weaver's model.

Source→ Encoder→ Message→ Signal→ Decoder→ Receiver
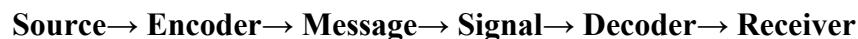
On the basis of thoughts of Schramm's model of communication, **Shannan and Weaver** (1949) has analysed elements i.e.,

Source→ Encoder→ Message→ Channel→ Decoder→ Receiver
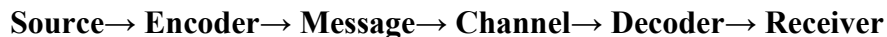
The extension scientist **J. Paul Leagans** (1961) has told the following elements for an effective communication process–

Communicator → Message → Channel → Treatment → Audience

    ↑   ↓

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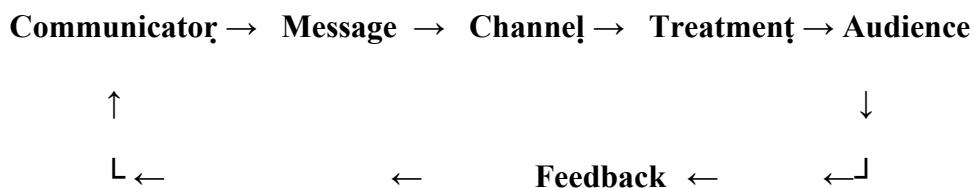
Audience Response

Except the last element all the other elements are the same as the other communication personalities have analysed. According to Leagans audience response is necessary in the selective communication process. If there is no response it cannot be known that the audience has received the message or not besides it the communicator can also bring appropriate change in his message according to the response of the audience. It is clear that the different writers have told various elements of the communication process. Although

there is similarity as well as some subtle nuances also. On this subject, Berlo's opinion is very famous and acceptable. According to him there are four main elements of communication process–Communication source, Message, Channel, Receiver and Audience.

Main elements of Communication Process

(1) Communication Source   (2) Message   (3) Channel   (4) Receiver or Audience

Communication Source

It is that person, institution or any other thing who initiates the process of communication. A person who starts the talking, is the communication source. When we walk on the road and on the crossing of roads any policeman or red light shows a signal to stop. All these are the sources of communication and we stop as we see it, thus we are receiver of the message.

Functions of communication source

(1)   Selection of the useful and appropriate ideas (message) based on the receiver's attitudes, needs and other conditions.

(2)   Encoding of the message should be clear and effective for the Receiver.

(3)   Get the information of all the other conditions belonging to the communication process and to arrange them in such as way so that communication process may be more effective.

(4)   Selection of correct communication channel and its proper utilization.

(5)   Correct evaluation of the response of communication process and on this basis re-communication.

Qualities of communication source

(1)   The communication source should have the ability to select the message and the proper encoding skill. From the point of extension education the communication skill also include an extension worker's ability to plan a communication strategy.

(2)   The communication source also should have the information about the receiver or audience and the ability to engage them.

(3)   The knowledge of communication process.

(4)   The selection of the communication channels and the knowledge of their use.

(5)   Knowledge of the purpose of communication.

(6)   The communication source should have the impartial knowledge of his skill as well as his weakness.

(7)   The ability of evaluating the response.

(8)   Need of patience to listen to the message of others.

(9)   The communication source should have the skill to find out the causes of communication loss and to minimize them.

(10)   Enough knowledge of the subject.

Message

Message relates to the information which is sent by the communication source to the receiver. Message is the main element of the communication process because without sending the message the communication process cannot be completed.

There is a difference between message and idea. The ideas are in the brain of man. So these are the inner qualities. These are sent by some signals (by uttering some words, writing, drawing and painting) to the receiver. Thus, message involves signals that conveys to the communicator or receiver. If we express our feelings by writing, it is a written message. Similarly the feelings are revealed by speaking, it is talking and by drawing painting the pictures become our signals of the message.

The following characteristics are necessary for a good message:

(1)   The message must be in line with the objectives to be achieved.

(2)   Clearly understandable by the audience.

(3)   Relate to the audience's intellectual, social, economical and physical capablity.

(4)   The message must be according to the traditions, needs and desires of the audience.

(5)   Expression style should be easy.

(6)   Scientifically the message should be clear, accurate and up to date.

(7)   Appropriate to the selected channel.

Communication Channel

It is that channel or the medium by which the Receiver gets the message. It may be anything which carries its message to the receiver. In Extension Education, generally, there are a number of communication channels such as radio, television, telephone, meetings, talking exhibition books, bulletins, posters, newspaper, leaflets, and postal-letters etc. Communication channel works as physical bridge between communication source (the sender) and receiver. According to Rogers and Shoemaker (1971), communication channel are the means by which messages travel from a source to a receiver. Usually due to lack of communication channel, the communication process cannot work.

There are several channels of communications available to the extension communicator. It is definite that a single channel cannot be effective or best for all situations. At the time of selecting the channels of communications, the following points must be remembered :

(1)   The value of the communication medium for example the particular channel should not be of such a high cost that there may be difficulty in using it.

(2)   Availability of the channel to the communicator i.e., it must available easily.

(3)   From the communication channels the maximum senses (hearing, taste, touch, sight and smell) of the person, may be utilized.

(4)   Suitability of the channel for audience and message.

(5)   Considering the main object of the message, the communication channel must be selected.

Treatment

The treatment of message is related to the procedures to be followed or the techniques that are considered to be essential in presenting the messages. The treatment of message, therefore, deals with the design of method for presenting the messages. It should be clear here that the process of designing the method for the treatment of messages does not at all relating to the formulation of the messages or selecting the channels, rather it refers to the technique employed with in the situation provided by a message and a channel.

Its basic purpose has been making the message clear, understandable and realistic to the receivers. It is the way of putting the messages across, within a channel that is what the audience actually sees, hears or does, for example showing of actual specimens of local and improved variety of maize to dramatize the differences between the two. It refers to the authority for the message. The message can be clear, readable and interesting or it can be vague, dull or boring. It can use big and technical words or it can use words the receivers understand. While conducting a meeting, an extension worker places much emphasis on such things as:

1. Making his audience feel at ease in the meeting.

2. Making them feel that they know something.

3. Breaking things down for clarity.

4. Things as his audience do empathy.

5. He treats his message so as to produce these effects and thereby creates a favorable climate for the attention and understanding.

Procedure of treating the message

The treatment of message can be varied in number of ways. Few of them are:

Matters of general organizations

1. Repetition of ideas.

2. Starting with strong arguments of ideas.

3. Don't leave them until the end of presentation.

4. Explicitly drawing conclusions in comparison to leaving conclusions implicit for the audience to draw.

Using the symbols and devices etc. for representing ideas

1. Word symbols – speech

2. Real objects

3. Specimens

4. Graphs

5. Models

6. Motion pictures

7. Slides

8. Charts

9. Photographs

10. Drama

11. Puppets

12. Songs

13. Flash cards etc.

Presenting the message through speaking and acting

1. Present only important ideas at one point of time. Many ideas of whatever importance may confuse. Keep in mind the allotted time.

2. Be clear rather than cleaver.

3. Present the facts – fuzziness means sure dearth to a message.

4. Avoid reading the speech. Communicator who is sure of his subject is liked more.

5. Keep in mind in the audience, which has its personality, try to be responsive to it.

6. Present the idea in the dramatic effect desired besides the content of messages, consider with "Showmanship." Effective treatment requires sincerity, smoothness, enthusiasm, warmth, flexibility and appropriateness of voice, gestures, movements and tempo.

7. Emphasize use of alternative communicators, wherever possible and appropriate for example, in-group discussion, panel, interviews etc.

Be brief, quit on time. Audience likes the communicator who stops immediately after finishing important ideas.

Receiver or Audience

That person or the group of people to whom the message is sent, is called audience or the receiver. In the communication process as the sender is necessary so as the receiver is also very important if there is not available any one of them, the communication process is not possible.

The receiver must have the keen desire, ambition and interest for adopting the new knowledge and also must have the confidence or belief in the communication sources. As well as he should have the capacity to watch and hear.

Other necessary Elements:

1. Encoding:

Any person expresses his ideas or feelings, he reveals it in any way through a signal or symbol etc. i.e., by speaking, writing, painting or the motions of hands and face. The formation of the feelings is called Encoding. Or to reveal the feelings and concepts in the form of signals is called the Encoding. Any person or a thing who/which does this work it is called transmitter. Now it is clear that when two persons are talking at that time the source or the transmitter is any one person while in the telephonic system there are two different persons. Signals are of various types i.e., by uttering or writing words by the motions of hand, face, legs, painting and by the behaviour, then in every signal two things are necessary :

(1) The signal which is capable to reveal the concept in the accurate form, and

(2) The receiver must understand the signal very well so that he may understand the right meaning of that signal.

There may be two or more than two meanings of a signal. First is the verbal or physical that is always written in dictionary or there is any physical thing from that name. Second is the mental or connotative or the meaning that we understand according to its utility and our mental attitude.

Now it is clear that the encoding is very important process and the success of the communication depends upon the selection and utility of the signals.

2. Decoding:

As the ideas and feelings are formed into the codes they are called encoding. Similarly to find out the sense of the coding is called decoding just as a source needs an encoder to translate its purpose into a message, to express purpose in a code, the receiver needs a decoder to retranslate, to decode the message and to put into a form that the receiver can use. At the crossing of roads seeing the red light we understand that the way is not clear and when the light is green we take the sense that now way is clear. Thus that man who works for decoding is called decoder. In common talking the decoder and the receiver is the same person while in the telephone exchange these are two persons.

The decoding has its importance in the communication. The decoder must have the capacity and skill of decoding otherwise wrong understanding may bring wrong results.

3. Interpretation:

To get the ideas or concepts from any message is called decoding but to understand the proper meaning from these achieved ideas is called interpretation. Thus the whole success of the interpretation depends upon the decoding.

4. Frame of Reference:

Here we should understand that the words are itself meaningless. Human beings contain the meaning of words in their brain. Different people can interpret the same word in different manner. People explain or interpret the words according to their own knowledge, experience, prejudice and attitudes. All these causes (knowledge, experience, opinions and attitudes etc.) or circumstances that are helpful in getting the meaning, are called the frame of reference.

5. Communication Loss:

When any receiver does not get the total message sent by the communication source, this condition is called communication loss. If you tell about ten things of wheat crop to the farmer and he learns only five points, then there is 50% communication loss. It is caused only due to communication obstacles, so, it is necessary that the communication obstacles should be minimised.

6. Communication noise:

Any physical or mental phenomenon which interferes in the way of communication is called communication noise. For example, if a reader reads a book and his mind is disturbed suddenly when he remembers some other incidence, he cannot concentrate his mind in reading the book, then this position is called communication noise. Communication noise is not due to physical causes, i.e., noise, scarsity of light, scarcity of sound etc. but also due to other mental phenomene which hinder in the way of study.

7. Response:

When any person receives any message its effect is left upon that person and so there is created inner or the external activity as to laugh while doing some task, to be sad suddenly or to think peacefully, to have a mental tension etc. These effects whether are external or

internal the receiver behaves after getting the message and it is called response. Each transmitter wants response of the message after the transmission of the message but sometimes he cannot get the desirable response. If he does not get any type of response then it means that the communication process is not successful and the message did not reach to the receiver.

Communication Model

Communication has been related to various subjects. Among them, there are psychology, sociology, journalism etc. Due to relation with the various subjects, scientists have presented the different models of the communication keeping in mind the situations of their own fields.

1. According to Caplan (1960)– "Word model shows any scientific theory by the signal and attitudes."

2. According to Sernland (1951) – "Model is a persuasive instrument. It provides the introduction of imagination and causes to identify the attitudes and variability.

So the model shows any process or the scientific theory by making graph. This means that the model is a map that shows the relationship to the related subjects of an event by signal which helps in understanding an event.

Types of Model :

1.   Structural Model–These are the models which are made to show any event or formal qualities of the subject. These reveal the sequence of number, size and shape in the process or the method.

2.   Process Oriented Model–These are the models which show their relationship and their actions with different elements.

Advantages:

(1)   Models are helpful in making the event structural.

(2)   Models are helpful in verifying the structure.

(3)   Models have the capacity to show different concepts in a structure.

(4)   Models are helpful to identify the units related to the event to show the data and to explain the acknowledgements.

Limitations:

(1)   The elements of the model can be recognised wrongly.

(2)   Model becomes the objective of the research instead of process.

Some useful models of the communication

1. Berlo's Model (1960)–Berlo has recognised the following elements in the communication process–

Communication Source → Encoder → Message → Channel → Decoder → Communication Receiver

2. Leagan's Model (1961)–Leagan has accepted the response as the main factor.

Communication → Message → Channel → Treatment → Audience → Audience Response

3. Litterer Model (1962)–Litterer has also added the communication noise.

Noise

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Selection → Encoder → Transmission → Channel → Decoder → Decoding → Selection

4. Westley & Mecleans Model (1968)–They have involved the "feedback" in their model. According to them the 'message' from the 'communication source' by the 'sender' reaches to 'receiver' and he feedbacks to the sender.

Sender → Encoder → Channel → Decoding → Receiver

↑   ↓

└ ←   ←   Feedback   ←   ←┘

5. Aristotle Model–In the subject of the communication, about two thousand years ago from Aristotle and Plato's time, the systematic work had been initiated. Aristotle told three elements. From this model there is achieved a basis to formulate the models.

Speaker → Speech → Audience

The Nature of Communication

The nature of communication is mentioned below:

The communication

1.   Is a process

2.   Employees many means

3.   Involves interdependence

4.   Comprises number of distinguishable parts:

a.   Expression;

b.	Interpretation; and

c.	Response

5.	Takes place with in participants

6.	Takes place at many levels; and its fidelity varies from one communication situation to another

Level of Communication

As per *Thayer (1968)* the four level of communication are:

1.	Intra-personal: Referring to communicate with ones self. It mostly occurs in face-to-face situations in which the participants can see, hear or even touch another person. It offers an opportunity for immediate feed back.

2.	Interpersonal: It may be viewed as an attempt on the part of at least one of the participants, to establish, maintain, exploit or after some relationship vis- a-vis the other, either by adapting himself to the other or by attempting to adapt the other to him in some way. However, the process of communication, which occurs within each participant, not by what, goes on between them, determines the immediate and ultimate consequences.

3.	Organizational communication: Organizational communication refers to all those data - flows that sub serve the organizations communication and inter communication processes in some way.

4.	Inter-organizational communication: It is the system developed by every organization for communicating with another organization. It should however, be understood that the organizations do not inter communicate as such but the people only do it.

Communication Need

The challenge of paramount importance for the change agents is to have needed new technology for their clientele clarifying them clearly to ensure their acceptance and finally motivating the people to secure adoption.

The success of an Extension agent is judged by the ability of effectively communicating innovations. It is to be clear for change agents that the main thrust is to help people to adopt the new technologies to work for them. It needs effective communication. When the basic elements in the communication process as well as their relation to the welfare of the clienteles are understood the change agent may confidently work undoubtedly on correct lines and may improve the communication skill well.

Credibility of Communication Source

There are number of sources now a day for those who need the latest technical knowledge. However, all the sources do not have the same credibility nor all the sources posses equal importance in transfer of the new technology. It is mostly the relative effectiveness of an

information source as perceived by the clientele that determines the communication source credibility.

Communication source credibility is finding out by the degree of trustworthiness and expertness with which a source has been viewed by a receiver.

Fidelity of Communication

The basic step in affecting change is the communication in any field. More the information is sought, more the adoption, and high the contacts of farmers with communication sources, higher is the adoption. The awareness manner is also related with adoption. Rate of adoption, extension agencies and use of extension teaching aids as primary source of information are better than community sources. Communication Fidelity-Amount of knowledge gained, kind of attitude formed; and extent of adoption depends positively on six variables:

1.   Compatability of language of change agent with receiver.

2.   Frequency of contact with the receiver.

3.   Usefulness of message.

4.   Different channels used and their use of frequency by extension agency.

5.   Socio-economic status of receiver.

6.   Past experience of the clientele with the message of extension agency.

All above relates to communications ability of change agent and his strategy of communication.

Need of skilled and effective communication for the rural development:

Rural development means to bring about a desirable change in the economic, social, political and cultural life style of the people living in the rural areas. It is a self-made development process in which the people are to involve in the self-implementation of this process, so that there can be improvement in their life style. So those people are the main basis of the rural development process which needs development and their commitment for participation in the development tasks, is the key to rural development. In India, in the context of rural development, after independence the programmes of poverty eradication is continuously going on but still half of the population is living a life under the poverty line. *The information related to the development programmes reach the rural areas but not to the targeted class.* On one side in the rural areas, there is lack of communication media as well as non-availability of the media for the poor. In the context of the rural development, the public communication media could not play a desirable role. Today, in the context of development it is more important to have the determination for this necessary task than the approach of the media and its availability to the aimed class. Radio, Television, written materials etc. things have become the means of recreation among the middle class. It is clear from the studies that in the context of development the public communication media can be helpful for the poor class only when the information may have coordination with the local and useful and

necessary services and also considering the effect of the local language and culture, must lay emphasis upon the real problems.

Mostly the poor and discarded people come from those castes that are under the social chain. The lack of employment creates a loss in the level of production and frustrates the ideas. Malnutrition reduces the mental and physical health and the self-confidence is also decreased and increases the dependence upon fatalism. Therefore in the present condition analysing these problems nobody can dare to take positive steps for tackling them. The prosperity, suppressing policies and moralistic attitude of the high, medium and ruling class in the society compel the poor people to depend upon their facts. All around there is gloomy, darkful and disappointing atmosphere. For the minimum needs they have to depend upon ruling class, high class and leaders. The nationwide suppression is increasing upon the bondage labourers, Harijans, tribal class and poor farmers (who are in majority under the poverty line) of which effect is seen in the rural areas as the naxalite movement. Therefore the rural development will remain uncompleted till the minimum needs of the poor people are not fulfilled without their self awareness, and participation ship etc.

Problems in Agriculture Communication

In the agricultural communication there may be the following problems:

(1)   Lack of training facility for the extension workers.

(2)   Effect of the local problems upon the communicator.

(3)   Lack of necessary equipment for the communication.

(4)   Lack of contact with Doordarshan and Akashwani.

(5)   No proper selection of the rural leaders.

(6)   Lack of efficient training of rural leaders.

(7)   Lack of telephonic facility.

(8)   No proper arrangement of education for the farmers.

(9)   Lack of response in communication.

(10)   Lack of mutual relationship between farmers and extension worker.

(11)   Unorganised (unplanned) efforts of the communication.

(12)   Lack of purity and correctness of the facts in the message.

(13)   The communicator has no knowledge of the social values and social organizations.

(14)   Not understand the importance of the communication.

(15)   Not operating properly the communication media.

(16)   Not proper selection of the communication media.

(17)   No consideration towards the physical hurdles in imparting the message in the communication.

(18)   Alternative use of improper media.

(19)   Lack of discretion in the message receivers towards the message.

(20)   Attitude of the message receiver towards the communicator.

(21)   Effect of technical disturbance in communicating the message.

(22)   No correct interpretation of the message in decoding the message.

(23)   Unable to affect properly the message receiver by the message.

(24)   The psychological problems (emotional hurdles and nervous diseases) of the message receiver.

(25)   The cultural problems (the people of different cultures understand differently the meaning of actions motions and examples) of the message receiver.

Suggestions to Strengthen Agricultural Communication:

There are following recent suggestions to strengthen agricultural communication:

(1)   In various fields, for the information related to the agricultural and rural development there should be regulations for giving more space in the newspapers and the government should provide some aid to these rural newspapers.

(2)   Booklets and leaflets should be published in which there should be description of solution to the problems and the working methods.

(3)   In the booklets, there should be details of agricultural equipment i.e., pump-sets, electrometers, tractor, engine, etc. things as well as the methods of their repairing.

(4)   The government should provide television set and a radio set to the village panchayat centre.

(5)   For bringing improvement in the one-way broadcasting of the Akashwani and Doordarshan, the farmers and women "characha mandals" should be organised at each village panchayat centre.

(6)   The programmes of rural/agricultural development should get much time on radio and television centre.

(7)   The small telefilm of the development should be made, which should be shown at each film theatre.

(8)   The film-producer should be urged that they should involve the plot of rural development in his dramas.

(9)   In the rural area, the exhibitions of rural and agricultural development should be organised in the fairs and festivals.

(10)   At each district centre the Farmers Exhibition should be organised regularly once in a year.

Methods of Communication

The meaning of Communication methods refers to those methods which are used for the message transmitting. Usually in the modern age, there are many methods of the communication yet this fact is also true that the success of the communication depends upon the communication methods.

Thayar (1968) has divided the administrative communication in four ways:

1.   Informative Communication–In it information of different types are exchanged.

2.   Inductive Communication–To send any instruction or order.

3.   Evaluative Communication–To use the communication for the evaluation.

4.   Motive Communication–To encourage their subordinates for doing the work.

Generally, the methods of the communication have been distributed into two classes. Their detailed description has been done in the chapter "Extension Methods". The brief description of these in the following way.

Official:

1. Radio,	2. Doordarshan,	3. Newspaper,
4. Exhibition,	5. Bulletins,	6. Tour,
7. Written Material,	8. Poster,	9. Meetings,
10. Telephone,	11. Local Authorities,	12. Business Agencies,

13. Books and Magazines etc.14. Student and Teachers and

15. Agriculture Universities and Degree-colleges,

Non-Official:

1. Common talking,   2. Members of the family,

3. Neighbours and friends,   4. Shopkeepers and   5. Rural leaders etc.
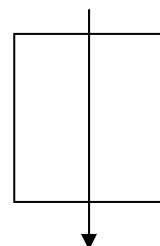
Types of Administrative Communication

The administrative communication is of three kinds:

1. Cross-Communication– This type of the communication is run through the agriculture and different types of agencies. It means that the communication should be of both sides e.g.- it is like the face to face talking. This type of communication is used by the communication managements in the meetings, assemblies, common talking etc. Through this medium, all of us interchange our ideas, thus the subject becomes easy for understanding and the necessary suggestions are also adopted. In this way the administrative system is reorganised and made more active. This cross-communication system also happens among the same level authorities when they are mutually exchanging the information.
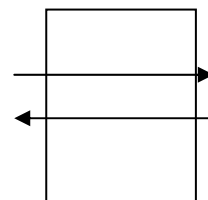
2. Downward Communication–It is common for that the high authorities to pass the information to the subordinates. Through the senior   officers to their subordinates, those orders, instructions and other common educational informations   are   passed.   This   very   process   is   called   downward communication. This message may be written or oral. In this type of communication, there is much possibility of communication loss. The information conveyed from the general director passed through a number of officers and when it comes to the real personnel for the execution (or performance) its quantity remains only 20-25 percentage.

3. Upward Communication– In the absence of upward communication, the downwardcommunication will be dull, incomplete and ineffective. For moving any administration, two-way channel of the communication is needed. In the democratic decentralization system, in the context of rural development, the upward communication has its important place but the disorder or disturbance of the communication system, the insulting behaviour of the senior officers towards subordinates and the seniors do not pay attention to the problems of juniors, etc. are the main causes, which affect Upward Communication.
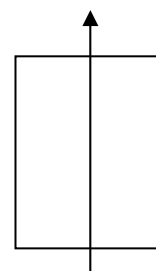
Upward communication is a method in which the subordinates or the extension personnels send the informations relating to the reports of the developments and the needs of the development at village level, it is called upward communication or the ascending communication.

For many people, the term "Communication" still suggests the use of the media, i.e. information dissemination activities by which printed material, radio or television programs, educational video, etc. are used to send messages. Researches and communication practitioners are often less familiar with the use of communication as an empowerment tool.

Here, we use the terminology participatory communication as the use of communication to facilitate community participation in a development initiative. In this context, it can be defined in the following way.

Participatory communication is a planned activity, based on the hand on participatory, processes and on the other hand on media and interpersonal, communication, which facilitates a dialogue among different stakeholders around a common development problem or goal, with the objective of developing and implementing a set of activities to contribute to its solution .

Here by stakeholders, we mean community members, active community groups, local and regional authorities, NGOs, government technical services or other institutions working at the community level, policy makers who are or should be involved with a given development initiative.

Participatory communication means moving from a focus of informing and persuading people to change their behaviour or attitudes, to a focus on facilitating exchanges between different stakeholders to address common problems. This could lead to common development imitative to experiment with possible solutions and to identify what is needed to support the initiative in terms of partnerships, knowledge and material conditions.

Promoting Community Participation

Today community participation has been seen as the central development concept. The concept of "Participation" is used in many ways and covers practices of all kinds. Sometimes it is used as a legitimisation of non-participatory approaches. In some cases, people will say "it is participatory because we did Participatory Rural Appraisal (PRA) with the community" when in fact they utilized a technique without an understanding of the underlying fundamentals.

So what is "participation" all about? We may say that a good indicator of participation is when people take responsibility for carrying out a development initiative. This means that people are not only taking part in the different activities, but also in the decision-making process and the planning of the development initiative.

Using Communication to Facilitate Participation

The success of communication activities is closely lined to the perception of the researcher or development practitioner's role as facilitating that process of community participation. To facilitate this participation, the researcher or development practitioner must be prepared to assume several different functions:

(i).   Facilitate dialogue and the exchange of ideas among different groups specific individuals: this presupposes a sound understanding of the local setting.

(ii).   Encouraging thinking about local development problems and possible solutions or about a common goal to achieve the desired results: this presupposes a thorough understanding of the subject or enlisting people who have such an understanding.

(iii)   Support of the identification and realization of a concrete set of actions for experimenting or implementing the solutions identified or for achieving an identified development goal by facilitating the different groups involved in those actions to share their views.

(iv).   Support efforts at awareness building, motivation learning and implementing the development action: by using communication strategies appropriate to each group of participants.

Implementing such a process demands many skills including the capacity to act at different levels. The following six areas are considered to be key skill areas for researchers and development practitioners.

1.   Developing a two-way communication process- The researcher or development communication practitioner must first learn to establish a dialogue with a community. You should be able to bring people to express their point by view and listen to others, and to build consensus around a course of action. This demands the ability to listen, to be aware of the participants' viewpoints and to be in a position to bring them to share information and views.

2.   Planning and developing a communication strategy-On the basis of that two way communication process with members of the local community, another function consists of planning and implementing a communication strategy while keeping in mind the ground realities and a participatory approach.

3.   Facilitating learning- Where the goal of the research of the development action involves acquiring knowledge and developing skills or know-how that will allow participants to implement a development initiative of their own choosing, communications must also facilitate the learning process.

4.   Moderating discussions- As a communication facilitator, you are also a moderator : you must listen to the various viewpoints expresses, create opportunities for interchange, encourage participants to state their views, resolve conflicts and be judicious in the use of time available, while keeping the discussion on track.

5.   Formatting and sharing information- Another function consists or making information accessible, in a form consistent with the characteristics of the participants in the communication process. Information on desertification prevention, for example, will not necessarily have the same meaning for nurses, peasant and by a prosperous educated farmer.

6.   Encouraging and organizing women participation- Finally, it is important that women should be encouraged to serve as communication facilities. In many countries, where the agents employed by development organizations and technical extension services or the members of research teams are mainly men, a real effort is needed to recruit female. Communication facilitators to take part in activities.

No doubt, communication provides support for local development initiatives and has a direct impact on community participation in local development. Even where communication activities are relatively weak, we often find that they are useful to rally local energies around a development problem and its solutions.

However, participation is not a panacea or a magic wand. It takes a lot of time and involvement. It can also generate frustration. Sometimes it may not be possible to achieve it. So, one must be aware of those limitations, knowing at the same time that sustainable development cannot happen with it.

Barriers to Communication

May be defined as any obstruction that comes between the source and receiver. That aids in altering by which the original meaning of the message is altered. There are several reasons of the emergence of noise. Some of them are failure:

(i)   Of a channel to reach the intended audience - usually no one channel reaches to the entire audience. For example, meeting all cannot attend, Radio - all don't have, written matter - all can't read.

(ii)   On the part of communicator to handle channels skillfully - for example, meeting if every one can't here.

(iii)   To select channels appropriate to the objective of a communicator. All channels are not equally useful in attaining a specific objective. For example, in method demonstration radio cannot serve.

(iv)   To use channels in accordance with the abilities of the audience. For example, written material cannot serve to illiterate effectively.

(v)   To avoid physical distraction - Example, in meeting people going in and out, loud noises in or out of the groups, unattractive exhibits.

(vi)   Of an audience to listen and look carefully.

(vii)   To use enough channels in parallel- 5-6 channel used in combination are best.

(viii) To use too many channels in a series, for example A.O., A.A.O., and Agriculture Supervisor, village leader-local cultivator.

Loss of information and its distortion are often referred to as "fall-off". Larger the number of layers, greeter is the "fall-off". When channels are used in series, chances of fall-off" are greater and when in parallel, chances of "fall-off" are lesser. Allport and Postman (1945) reported that as message travels, it tends to grow shorter, more concise, more easily grasped and told. In successive versions, fewer words are used fewer details are mentioned. The number of details declines most sharply at the beginning of the series of reproductions. The number continues to decline, more slowly, throughout the experiments.

Modern Communication technologies

21st century is the age of computer and due to this, Information Revolution has begun. In this age of Information Revolution a new image of "Cyber Space" came in light. Cyber Space is a virtual space which include computers and their feed up data and the transmission system of these data which is called Information Highway. New communication technologies such as

computer, microcomputers, cable TV, Teleconferencing, teletext and desktop publishing are all examples of advances in communication technology.

Computer

Computer is a wonderful contribution of the modern science. In the present times it is very necessary and useful in every field of life. In the field of science and technology no any invention is so much useful among the various inventions which has affected the human life to this extent as computer has influenced the life.

Along with the science and technology its use is being done commonly in the various fields of which relation is with the daily routine works of the common people as train, industry, commerce, transport, hospitals, banks, government and semi-government departments, electricity, telephone, various educational centres etc. For fulfilling all these works computer is playing an important role. Computer has two significant characteristics- (i) the capacity to collect the enormous data, (ii) the capacity to regain the selected data from the collected data of necessary information. On the basis of both characteristics, if computer is called the information manager rather than the mathematical machine, it will not be hyperbole.

What is Computer ?

(1)   Computer is an electronic machine of general use which is based upon the automatic technology and is capable for doing those works whose software is collected or stored in it.

(2)   Computer is a mechanical instrument.

(3)   The information are collected by the computer, stored in the determined process and then the results are presented.

(4)   Computer is a machine that collects the information, data and after modifying them, these data are presented in the definite process.

(5)   Computer is such an electronic machine in which the data is stored after the necessary change is done and there is capacity to regain them.

On the above basis there are the following characteristics in the computer:

(i)   It has more speed of doing works.

(ii)   There is more accuracy in the results.

(iii)   It has the capacity to revise the works.

(iv)   It has the ample capacity to store the data/information.

(v)   The computer has the capacity of doing the works automatically.

Types of Computer: Computer can be classified into three categories according to its functions.

(i)   Analog   computer: In these computers, similarities are established in the form of current or voltage signal. They operate by measuring an electrical signal produced analogous to the variable of physical system. An analog computer operates on data in the form of continuously varying quantities such as temperature or pressure. Example of analog device is computer used for measuring a patient's heart function, temperature and other vital signs.

(ii)   Digital computer : A computer which operate essentially on digits is known as digital computers. It manipulates discrete data and perform arithmetic and logic operations on these data. It uses information including letters and other symbols, in coded form represented by two state electric component. It can store different programs and can thus be used in numerous applications.

(iii)   Hybrid computer- Hybrid Computer is a combination of computer having desirable features of analog and digital computers. In such a computer, some calculations are done in analog portion and some are done in the digital portion of the same computer. These computers are used in most sophisticated areas such as space flights, dropping of bombs on the targets, monitoring the space activities etc.

In the modern times the computer is the main basis of all systems of the information. All systems are working effectively by the computer.

Micro-computer:

Computers are classified as mainframes, mini computer and micro computers based on their power, speed of executing a set of instructions and the amount of memory available to store data as well as the degree of inter connectivity the computers offer. Mainframe computers were large and costly. Mini computers are less powerful. Microcomputers are based on micro-chips technology. In India micro computers were introduced in 1978. There are many uses of micro computers as given below:

1. It can process all kinds of information and keep as record to be retrieved as and when needed. It can be a repository of various experiences, cases and research information on required topics, A training institution may keep all its record on training courses and trainees for evaluation and reporting. Such information can be used for monitoring purposes by headquarters.

2. It can publish information material at reasonable cost for extension purposes.

3. Micro-computers can communicate with each other if linked together. With the help of certain hardware i.e. micro-computer, modem (a device which translates computer signals into phone signals and vice-versa), a printer, telephone and microwave or satellite, computers can enable users to access the data from anywhere through micro-computer and phone.

What is networking?

A network is the means by which computers share and exchange information and resources across either short distances (Local Area Networks) or globally (wide Area Networks). Making the best use of networking technology is about optimum use of business resources, enhancing productivity and efficiency, reducing costs and gaining competitive advantage.

Networking enables every one in an organisation to communicate with and share resources with everyone else giving them access to data held in individual PC's, by remote office sites or external suppliers and giving users the ability to share printers, fax, CD ROM and modem etc. Networks can be designed for organisations of all sizes from the small office with between two and ten work stations to the largest international corporations linking thousands of work stations.

Internet

Internet is the wonderful chain of the information revolution in the modern times. With the development of Internet, the age of information revolution has begun. Today, while staying at home we can connect with the whole world, the information can be sent, received and mutual communication can take place. Internet is the brief name of Internet Work System. In it, there are connected a number of network systems (more than 50 thousands) of different types which can be used through Internet.

What is Internet?

Computer network is such a group of computers that is connected to each other in such a way that they exchange the information among themselves. All these computers are connected jointly with the telegram, telephone and satellite, etc. According to Leaner (1994), Internet is the network of an international networks i.e. a very big network in which there are connected 31000 network systems of about 100 nations and 20 million people belonging to diversified fields such as education, science, government and business. Internet has the capacity to exchange the information inside and outside of the organization.

An Intranet is a private system that uses hardware and software developed for the internet to provide communication, information management and information publishing services within an organisation'.

In the 1960's and 1970's computer network consisted more of large computers connected to their dedicated terminals. With the tremendous growth of personal computers in 1980's, Local Area Network (LAN) gained prominence. LAN is a group of desktop computers located relatively close to one another and connected through cabling system to enable them to share access to computing resources. LAN satisfies two fundamental requirements (a) sharing information and (b) sharing computer resources. A LAN typically consists of PC's on the same floor of a building or situated on different floors in the same building. It may even consist of computers which are within the factory area, but spread across various buildings like administrative block or production block or warehouse, etc.

LAN's consist of work stations which are connected to a central computer called file server (special purpose computers) (work stations are the nodal computers on which users do their work - like executing their own application programmes locally and sending request to the file server. All workstations on LAN would have a Network Interface). LAN's topologies are of 3 types (a) Star, (b) Ring and (c) Bus. LAN can be connected to larger networks including mainframe computers. This gives the users of LAN access to enormous computing power and excellent communication facilities. The distinctive feature of LAN is its inherent capability for distributed processing. LAN's use file servers to control and manage the Network resources, which are shared by the Network users. These file servers are used to perform (a)

control of the traffic of requests and messages on the network, (b) security requirements, (c) centralised hard disk storage and (d) control of peripherals like printers etc.

When computers are spread over a larger geographical area, like intercity, across country, etc., and still they are connected to one another in order to share information, the configuration is called Wide Area Network (WAN). WAN are extensions of LANs. Telephone lines and modems can connect two WANs. A Router (special purpose computer) and Network Operating System (NOS) is required to establish the connection. WAN, therefore, enables clients to take full advantage not only of resource sharing but also of new networking practices such as working from home, staying in closer contact with external distributors, and building links to remote branch and international offices.

Under L.A.N. system, all the computers are fitted in an office working group or a company. Under W.A.N, the computers are settled in different cities or countries.Thus the largest system of information is the Internet in which millions of computers are interchanging the information. Internet system is an effective media for all the people/groups which are taking interest in the education, science, business and religion. It was considered that the number of internet users   will reach about 30 corers in the world till 2005-06.

On Internet, the available information are being used in various forms. It is used in various activities such as agriculture, science, commerce, games, art, literature and medicines etc. The improved techniques of agriculture, fertilizers, and improved varieties of seeds, designing of spacecrafts and rockets, discovery of new planets and stars and a constellation of stars, medicines and medical technology, literature and literary attitudes of the whole world, shares of various companies and Share Index in the chief metropolitan cities along with all the other acknowledgements and data are available on the screen of computer through the medium of Internet which are useful for the mankind in all way.

The history of Internet is about three decade old, but in the early nineties, the Internet was not used for the business works. But when, in 1993, World Wide Web (W.W.W.) started, there came a sudden change in the situation. W.W.W. originally, was not a new technology but with it Archy, Gopher and WAIS etc. technologies had been associated. In these technologies there is the capacity of information storing and transmission. Thus there came new enlargement in the use of Internet.

Intranet

When computer is working on the L.A.N (Local Area Network), it is called Intranet and when it works on WAN (Wide Area Network) it is called Internet. As today Internet has become the best repository of information in the world, similarly the Intranet can also be made such a repository of information which can be used by all the people of the office. Today, in this competitive age, information is the source of energy. Without better arrangement of the information wave, nobody can stay in the competition. Intranet has become the effective source for better arrangement of the information in the office.

If the Intranet is to be defined on the technological basis, we can say that "In the corporate office, in place of propriety protocol and costly gate way software the use of internet standards and wave technology is the communicating process of Intranet". Those offices which have the facility of Intranet there can be the use of E-mail in place of paper instructions. Intranets connect people together with Internet technology using Web Browsers,

Web severs and Data warehouses in a single view. With an Intranet, access to all information, data and applications can be made available through the some browser. Instead of printing the books of new planning and distributing them in the office, the company can show its new acknowledgements on the LAN which can be seen by all the personnel according to their timings. The companies now have started to use the Intranet technology in their offices, because of its wide use. For establishing Intranet in their offices there is need of network of computer, LAN, Wave Bruiser and Wave Server. Generally, in the big companies network of computer and LAN are available. There will be the facility of intranet with the help of Web Browsers and Web Servers. Formally there was last technological difficulty of protocol which is used in the network system. The meaning of protocol is the technology to establish contact between two computers. Now it is also available.

Difference between Internet and Intranet

After studying the Internet and Intranet, there is a desire to know that with so many similarities between these two, why do they differ from each other. The main difference between them is the openness in Internet. On the web site of Internet the stored materials are available for everybody, while on the web site of Intranet the acknowledgements are limited only for the offices. Their web site are beyond reach of the outsiders. In Internet there is always lack of band widh (the maximum limit passing the information through the medium of joining one computer to the other computer) while on the intranet there is ample band width, so, those softwares which can work with satisfactory speed or rapidly, can work with more speed on Intranet. Contrary to this, those Softwares which are working well on Intranet, their speed is reduced itself on Internet due to the lack of band width. Which facility is available on the Internet, is also available on the E-mail and Intranet system.

Telnet

Through this system the individual, starting his computer by remote system also can work on other computer. Telnet is a protocol by which the errors of computers can be tackled and contact can be made soon and easily on other computers.

Electronic Mail (E-mail)

E-mail is the short form for Electronic Mail, which is based on the use of computers for the transmission of messages rather than through the postal system. E-mail connects the communication process through computer among the people. In it, an individual types his message in the computer and the information is sent to the other man via telephone. The other man himself opens your file and reads the message, in the same manner he transmits the message. In this system, the computer plays a role of post-office. Through E-mail you can correspond anywhere in the whole world. E-mail has the following advantages :

1. It connects two busy people. The sender may not know where the receiver is located. Sender may refer to user code address which the user may retrieve at convenience.

2. It is cheaper than sending message by telex or fax.

3. It makes communication faster as it eliminates time spent to type, edit, despatch and deliver.

Faci-mail

It is a device used for transmission of a written document, photographs, map (or) any other graphic material electronically. It is one of the variants of   E-Mail. For transmission, the original documents is placed in the facimail or fax machine which scans the document and converts the written or graphic information into electronic signals and establishes a link up with similar receiving fax machine at the receiving end. The main advantage of facimail like E-Mail is that it cuts the travel time, and cost.

Tele-Text

It is an electronic magazine that can be broadcasted on television at your home. It is a form of the newspaper in which we can read different types of the news. This facility is available on the high standard television sets in which the instruments are fitted to get the acknowledgements from the magazine. On the Tele-text, the information are transmitted to their members by different companies.

Video-Text

It is a two-sided pictorial system that is connected on one side to the sender of the information and on the other side to the receiver via computer. Microcomputers are connected to the telephone system which transmit the information. Through this medium also, the information can be relayed anywhere in the world.

Tele-Conferencing

The new integrated digital communication system is being used. This technique will add new dimensions of control, timing and flexibility to communication. Instead of travelling miles for a meeting, conference rooms will be wired and cameras will be used to carry images and visuals. The time and cost for traditional day-to-day communication will thus be reduced. It also paved way for international integration. Thus it supports to provide/exchange latest agricultural technologies available in different countries for the farming communities. Advancement in telecommunication and computer have made it possible to hold meetings without travelling to long distances. It is of two types.

(i)   Audio-conferencing-In this system through telephone the persons sitting at two places or more than two places, can talk with each other. High quality audio-reception and transmission can be achieved. Audio conferencing is linked by several sites through a common frequency on a satellite audio channel. Audio conferencing can be used for electronic meetings for project administration and planning, training field staff and distance education. During the programmed act (Audio Conference), the farmers can raise their questions and get their doubts cleared. It emphasis the direct audio contact, thereby it reduces/cuts the time and cost of travel.

(ii)   Video-conferencing- Video conferencing means adding video channels to an audio link between two (or) many groups. Experts sitting in the studios listen to the questions and answers live on television. The system reduces the need for travel and is of much help to the farming community of different products in remote areas.

Telephone and Mobile

Telephone is also one of strong way of communication. In India the teledensity- the number of telephone mainlines per 1000 peoples has significantly improved between 1997 and 2002.

Call Centres for Farmers in India

The union cabinet has now formally approved the floated plan for a call centre meant for the farmers. This is one of a kind in India for the farmers. The Call Centres are known by the name 'Kisan Call Centres' and answer queries in local languages. The Call Centres have been operated since 21st of January 2004. It is being operated through toll-free telephones bearing the number 1551 from eight selected locations covering all states and regional languages. These Call Centres are operated at three levels ; namely, the first tier would provide immediate replies to farmers' queries. Unanswered questions would be transferred to specialists at the second tier. The extension functionaries would refer questions that still remained unanswered to experts at the third tier for reply through phone, post or personal visit. The Mumbai, Kanpur Bangalore, Chennai, Hyderabad, Chandigarh, Delhi and Kolkata are the locations in India, where these Call Centres are situated at present. Moreover, each Call Centre is covering more than a state in India.

Global Village

The Global telecommunication network enables us to cross the boundary anywhere in the world. The capacity of exchange of information on a global basis has been made possible through a powerful communication tool - the satellite, which has shrunk the world into a global village.

Digital Library in Extension Training

A digital Library was designed and developed to provide extension service for Greek beekeepers. It was designed on the basis of a thorough analysis of information needs of beekeepers and system requirement.

The digital Library provides information on the five main areas on which the need for information has been expressed viz.:

   (i)   Bee biology and colony manipulation.

   (ii)   Bee keeping products.

   (iii)   Biological and environmental issues.

   (iv)   Financial and law issues.

   (v)   Management skills.

The information is globally accessible through the World Wide Web (WWW) and is easily extensible, as information can be added.

A central www server is used as an intermediary between the beekeepers and the five individual hyper bases (Hyper Media Digital Library). Using the www client software, the user can browse through the information stores in each of these five hyper bases or alternatively create and submit a query and co-operatively retrieve relevant information.

It is believed the hypermedia digital library could be part of a new approach in education, training and development process for Greek beekeepers as it facilitates immediate access to up-to-date information and faster and easy communication between beekeepers and information providers. Likewise, the same system can be used as local based in multiple ways.

Satellite Application

Satellite is an artificial flying machine and is used for disaster management and warning. Using the satellites service, NIC's satellite based computer communication network was started in the year 1988.

Opportunities and Challenges of Cyber Extension

Access to information and improved communication is a crucial requirement for sustainable agricultural development. Modern communication technologies when applied to conditions in rural areas can help to improve communication, increase participation, disseminate information and share knowledge and skills. It is being said that "Cyber Extension" would be the major form of technology dissemination in the near future. However, it is observed that the rural population still has difficulty in accessing crucial information in order to make timely decisions. It is essential that information availability is demand driven rather than supply driven. The challenge is not only to improve the accessibility of communication technology to the rural population but also to improve its relevance to local development. The world is rapidly shrinking to a 'global village', which some courageously even call a 'global family'. The merger of communication (audio and video) and computer technology has suddenly made this combination so powerful that no sector of human activity can afford to ignore it. However, it is observed that the rural population still has difficulty in accessing crucial information in forms they can understand in order to make timely decisions.

Cyber Space is the imaginary or Virtual space of computers connected with each other on Networks, across the globe. These computers can access information in form of Text, Graphics, audio, video and animation files. Software tools on networks provide facilities to interactively access the information from connected servers. The cyber space thus can be defined as the imaginary space behind the interconnected telecommunications and computer networks, the virtual world.

Cyber Extension thus can be defined as the Extension over Cyber Space. Cyber Extension means "using the power of online networks, computer communications and digital interactive multimedia to facilitate dissemination of agricultural technology". Cyber Extension include effective use of Information and Communication technology, national and international information Networks, Internet, Expert Systems, Multimedia Learning Systems and Computer based training systems to improve information access to the Farmers, Extension Workers, Research Scientists and Extension Managers. In the applied context, cyber extension may be defined as dissemination of information over the cyberspace for the well

being of extension's clients - the farmers, directly or through the established intermediary of extensionists.

Extension has a communication dimension. Certain unique features of communication in cyber space should, therefore, be noted:

(i)   access to the astounding store-house of information is free,

(ii)   the information is available instantaneously round the year and twenty four hours a day,

(iii)   communication can also be interactive (through e-mail, discussion groups, newsgroups),

(iv)   the information is available from any point on the globe (subject to availability of accessible technology like computer, modem, telephone line etc.), and

(v)   the communication is dynamic and ever growing.

The www can help the extension world wide in the following ways:

1·   Providing interaction among research scientists, extension workers, farmers and other rural people through e-mail;

2·   Providing up-to-date news and information services, such as market prices and weather conditions;

3·   A question and answer service where experts respond to queries on specialized subjects;

4·   Creation and maintenance of Statistical Databases on critical agricultural and rural development parameters that can be queried on demand;

5·   Providing the details of Poverty Alleviation Schemes on the Internet;

6·   Providing status of various Government Programmes and details about their implementation mechanism on demand basis;

7·   Hosting web sites by major institutions participating in agricultural extension, putting latest packages of practices (with more situation specific packages), for various agro-eco regions. These institutions, particularly the Project Directorates may also place the diagnostic and pre-emptive farm practices for the major crops particularly the commercial crops, well in advance of the concerned crop season. This can help the extension workers to access latest information on IPM (Integrated Pest Management), INM (Integrated Nutrient Management) and other such practices for high value important commercial crops. The institutions will also be able to get direct customer feedback for their packages.

8·   Launching online rural development and extension journals, newsletters etc. (with or without print version);

9·   Providing Internet access at district and block level agriculture and rural development offices. This service may also be open for rural communities on fixed days. This connectivity can also be used to download online publications on useful topics from any where in the world;

9·   Opening of cyber cafes to enable educated rural people and extension workers at village level to have direct access to world wide web for having market information etc.;

10·   Providing maps that display different features, such as population density, crops planted, etc.;

11·   Providing video clips to demonstrate complex procedures; and audio files to re-broadcast on local radio stations;

12·   Providing mechanism of user / beneficiary feed back for the Public Sector Schemes.

Audio-Cassette Technology (ACT)

Tape recorder is now very common medium in Indian home for listening to music. The technology has become cheap to run and accessible. Experiences in many developing countries suggest new possibilities for use in extension work.

Special Features of ACT

- It is easy to operate.

- Message of local relevance can be recorded and played.

- Audience may stop, rewind and listen at convenience.

- Local music, songs and people's opinion, talks can also be recorded.

- Battery operated portable sets are also available.

ACT gives audience the choice regarding content of message. Technical messages can be designed systematically keeping the features of audience in mind. Pre-recorded talks of technical experts may compensate for lack of expertise of grass root extension workers.

How to use ACT in Extension Work?

- The special features of ACT make them most amenable for application in extension field for passing information or conducting group discussion. ACT can be used both for individual and group listening. Individual listening is possible if the farmers own ACT or it is made available through extension agency. Besides, tape with standardised messages can be distributed to those owning ACT sets.

- Tapes can have recorded technical talks of technical experts on topics relevant to needs of audience. Local flavour can be given to the content by recording local music, songs and references of known farmers. Local talents like progressive farmers,

influential individuals and singers can be recorded to enhance element of interest in the programme. Tapes can use a variety of interesting formats like conversation, drama, question and answer, interview, etc. Slow pace, quick review of materials covered and short suggestive summaries can increase the effectiveness of communication.

Print Media

Print media is the most live and effective mode of writing in the modern times. In its initial form the journalism, representing the public interest strongly in the form of an effective weapon against the evils of administration. But today it has become an effective part of life. In the present times there are a lot of communication mediums. The newspaper/magazine has its own important place. This is the reason that today the newspaper/magazine is recognized as the single carrier of public-conscience.

Although it is also the fact that the journalists are suffered and the journalism is misused also. But it is not very common. The common factor of journalism is only to get advantage. Through this media the politics is running at national level as well as international level and the journalists reaching the most difficult places bring the latest news for their readers. In this way there is occurred communication in the structure of the society.

Meaning and Definitions of Journalism

It is very difficult to describe the common definition of the journalism. In general words it can be say, "Journalism is the result of the feeling to maintain its recognition and pride in the world and also including the keen desire of human liberal expression, and the advantages and sacrifice for the social ideals". Mahatma Gandhi recognised that human service is the aim of journalism."

(1)   It is written in New Webster's dictionary, "The occupation of conduction a news medium including publishing, editing, writing, or broadcasting is Journalism."

(2)   According to Chamber' dictionary, Journalism "The profession of conducting or writing for public Journalism."

(3)   According to David Ven Wright, "Journalism is communication. It is the events of the day instilled in to a few word sounds of pictures, processed by the mechanics of communication to satisfy the human curiosity of a word."

(4)   According to C.G. Muller, "Journalism is the business of timely knowledge. The business of obtaining the necessary facts, of evaluating them carefully and of presenting them fully and acting on them wisely".

(5)   According to the standard Hindi Dictionary, "Journalism is that method in which the works, duties and objectives of the Journalist are analysed wisely."

(6)   According to Scientific definition, "Journalism is the work of collecting, composing and publishing the articles and news etc. for the papers and magazine."

(7)   According to Bhanwar Khurana, "Journalism is that religion which relates that action of the Journalist so that he can present the most correct and impartial description of the current events and the problems before the readers."

(8)   According to C.S. Post, "Journalism is a challenge of which the necessary qualities are–responsibility, to maintain its freedom, to be above from all type of pressures, to reveal the truth, correctness, impartiality and gentle behaviour etc.

(9)   According to James Mac Donald–"Journalism is better than the battle-field. It is not only the business but it is superior to the business also, it is the life at all."

(10)   According to Prem Nath Chaturvedi, "Journalism presents the facts related to the particular country, time and situation in the context of abstract and indirect values."

(11)   According to Krishna Bihari, "That is written for its age or about its relation, is the Journalism".

(12)   According to Laxmikant Pandey, "Journalism is such type of transmitting media which is related in any way to the expressions of human feelings, actions, thoughts and finally to arrange these expressions systematically, is called Journalism."

What has been written in the above definitions in the context of Journalism, but in reality, it is very difficult to define it. Here, it is clear from these definitions that Journalism is a very important factor for the society and through this knowledge a man thinks himself as a true citizen.

"Journalism is such a transmitter media, its relation is any was linked with the expression of human feelings actions and thoughts."

Brief History of Journalism

An Englishman named James Augustan Hanky living in Calcutta, published a paper, "Bengal Advertisement and Calcutta General Advertiser" on 29 January, 1780. He had made this day very important day in the history of Journalism. It was a paper of such type that was published by a foreigner in a foreign language. It was paper of two pages; it consisted reading material less than the advertisements. On September 1766, a citizen of Holland named William Volt raised his voive publicly on the lack of press in India by sticking pamplets on the wall of Council House in Calcutta. The contemporary government had become angry at this behaviour of Volt and he was again sent to Holland by a ship. In this way, the first demand of press had been suppressed.

In 1785 "Madras Carrier" from Madras and in 1789 "Bombay Herald" from Bombay released. Indeed the initial Journalism was limited only to the cities. Its personnels were mostly Englishmen and their language was English.

The first newspaper published by an Indian was in English language (but later began to publish in its mother tongue in Bengali) as that was "Bengal Gazatt" published by Harichand Rao and edited by a teacher Gangadhara Bhattacharya in 1816. The first monthly paper was "Digdarshan" published (the first Journal in Indian language by any foreigner) in Hindi by Baptist Missionaries of Shrirampur in 1818.

Any Indian, in Indian language Hindi, the first newspaper "Udant Mortand" had publish in Calcutta on 30th May, 1826 by Shree Mugal Kishore Shukla of Kanpur (U.P.).

The development of Hindi newspapers began fastly after 1857, because till that time, voice for Freedom has been begun and Hindi Journalism published mainly the contemporary events and news etc. and reading these papers a number of people joined in this movement of freedom.

At the time completing the hundred years of Journalism, the number of newspapers had been increased to 102 because those people joined in this movement, they also began to publish their own newspapers. The newspapers published by them, were the following:

Shree Moti Lal Nehru (Independent), Netajee Subhash Chandra Bosh (Forward), Jawahar Lal Nehru (National Hearald), Lala Lajpat Rai (The Peoples), Manvendra Nath Ram (Weekly Indian India), T. Prakashan (Swarajya), Bal Gangadhar Tilaka (Kesari) had published. In 1926 Swami Shradha Nand released the daily Hindi newspaper 'Tej' and 'Arjun'. In 1938 Ram Singh tried firstly to publish the first picturesque weekly named 'Navyuvak'. This weekly was continuously published till 1949 and later it had been intermixed into "Dharmyuga". In 1955, Shachhidananda published the monthly papers named "Aggeya" and "Prateek". In 1964, Shyam Lal Sharma began to publish "Patrika" influenced by the English weekly "Thought" and later encouraged by Sahu Shanti Prasad he began to publish "Dinman". "Navneet" in Indian languages (Hindi, Gujarati and Marathi) released in 1952, was the first attempt same as the "Reader's Digest" of today. In 1960 the similar magazine "Kadambini" was published. After 1947, the period of English Weekly began. Its effect can be seen by the publication of Shankar Pille's "Shockers Weekly". After this, Arth Moore had realeased "Spectator" and "Thought". In 1949 Feerojand began "The Peoples". After 1974, the period of weekly magazines have been started again.

Later 1977, the reader began to take more interest in the politics and then the number of newspapers and magazines increased. Its popularity can be known through the increasing number of newspapers.

Present Status of Newspapers of India

The Registrars of News paper for India became effective from July 1, 1956. Its main work is to do registration of newspapers and to import the essential things for press as papers, machinery etc. things from foreign countries.

There are total number of newspapers, 43,828 till December 31, 1998, out of which there are 4890 daily papers, 331 papers, twice or thrice in a week, 15645 weekly, 12065 monthly, 5913 fortnights, 3127 quarterly, 383 Annual and 1474 half yearly. Those newspapers are published in the country which belongs to 100 languages. Mostly newspapers are published in Hindi.

The publication of the Newspapers is being done from in all the states of the country but the maximum news papers are being published from U.P. This state (U.P.) is also on the top in publishing the daily newspapers. Here 805 newspapers are printed daily. The oldest Newspaper of India is of Gujarat.

In 1998, the total circulations of all the newspapers are 12, 68, 49, 500 The circulation of "Anand Bazar" the Bengali paper, are 5, 86, 637 copies daily. It is the first paper of

circulating the maximum copies in India. The Second place in India is of English daily "The Times of India" published from Bombay which publish has 5, 66, 378 copies daily. On the third place, it is "The Hindustan Times" published from Delhi which publish 5, 55,911 copies daily.

From the point of multi edition, there are published six editions of 'The Times of India' of which the total number of the circulation is 13, 90,827. On the second place it is "Malayala Manoram" of which the total number of eight editions are published 11, 23,745 copies at all.

Types of Journalism

1.   Investigation Journalism–According to this type of journalism, the journalists find out the facts. The facts for the welfare of the public which the government or any institution wants to hide. In such condition the journalists of investigation disclose those facts before the public. Sometimes, such types of disclosure create the political agitation. Watergate scandal of America and Bofors scandal in India are the very strong examples of it.

2.   Rural Journalism–In this journalism, the newspapers are directly related to the news of rural areas. Its detailed description is described in the next chapter.

3.   Economic Journalism–This type of newspaper includes the news of economic field. Coins, markets, share-markets, banks, five-year-plans etc. are its subject matter.

4.   Journalism of Parliament–It includes the news about Rajya Sabha, Lok Shabha, State Assembly, Vidhan Parisad and Electoral Institution.

5.   Sports Journalism–There is description of different types of games whether these are local, state level and national level or of the international level games.

6.   Doordarshan Journalism–Those programmes which are to be telecast on Doordarshan, its description etc. include in the Doordarshan Journalism.

7.   Radio Journalism–The detailed description of the programmes broadcasting on Radio as the news, games news, political description, election description etc. include in Radio journalism.

8.   Photo Journalism–The importance of news is increased with photos of any incident. For this, there are many photographers of every newspaper who take the photos of the real situation and show in their newspapers. This journalism is called photo journalism.

9.   Commentary Journalism–Different programmes, games, fairs and cultural programmes are telecasted or broadcasted lively on T.V. or Radio. It is called commentary journalism.

10.   Development Journalism–There is the description of different programmes and policies of the development of nation. It is called development journalism.

11.   Interpretative Journalism–It includes the interpretation of the facts. The interpretative journalism is to discuss in detail the national policy and foreign policy of the government.

Importance of Journalism

Journalism is one of the four permanent pillars of democracy. So its importance is non-controversial. Various people use different ornamental words for the journalism. The Indian journalis Indra Vidya Vachaspati regards the journalism as the most effective weapon of present time and Satya Dev Vidyalankar calls it as "Fifth Ved". From these above ideas it is cleared that journalism has an important place. Journalism is wide and all accepted it.

Journalism is the source of motivation among the people for the solution of pervaded problems of them. Journalism acts as a spy. The concealing matters or facts are disclosed before the public to introduce them about the reality. The journalism has also the restrictions upon the administration. If journalism presents an ideal in relation of the policies of the government, it makes an atmosphere for the public opinion. The administration and the government both are careful that journalism may not make the opposite atmosphere for them. Therefore the government and administration both accept the restrictions of journalism. Today, the condition is of such type that the newspapers are easily approaching to the common people. And the daily routine of a man's life starts with reading newspaper. He reads the newspaper firstly and thus he gets full news of the country, foreign, or of the local incidents and he is entirely influenced by this news. Reading the news, he discusses the matter in the daytime. Today, if there happens any incident in any corner of the world; this information soon reaches up to the public. In this way we can know the importance of journalism.

Radio

Radio is the oldest IT tool and provides entertainment to masses to a great extent in recent past. Its reception facilities through local radio, regional broadcasting stations and FM transmitters have increased dramatically. When India attained Independence in 1947, AIR had a network of six stations and a complement of 18 transmitters. The coverage was 2.5% of the area and just 11% of the population. Rapid expansion of the network took place post Independence. AIR today has a network of 214 broadcasting centres with 143 medium frequency (MW), 54 high frequency (SW) and 139 FM transmitters. The coverage is 91.37% of the area, serving 99.13% of the people in the country. AIR covers 24 languages and 146 dialects in home services. In external services, it covers 27 languages, 17 national and 10 foreign languages. These have opened the new possibilities to bring area/regional specific technologies and consequently their development and refinement to provide conceptual or issue based information to the masses.

Special features of Radio:

- Radio is cheap.

- Radio is portable.

- Radio provides information entertainment and education.

- Radio can quickly transmit messages in most remote areas.

- Distance learning is possible through radio.

- Radio is helpful in forming public opinion.

- Radio can be listened even while the listener engaged in other activities.

Limitations

- Radio alone cannot bring change in listeners or society.

- There is no control of listeners on content or speed of message.

- It is difficult to broadcast complicated messages through radio.

Broadcasting in India

In 1947 there were only 6 broadcasting centers, 12 transmitters, and 2-2.5 lakh radio sets in our country. Our country had 185 Akashwani broadcasting centers till 31st March, 1996 out of which 177 centers were working properly with full facilities. There were 4 Broadcasting Centers-1 assistant centre and 3 completely "Vividh Bharati advertising centres. There were 148 medium wave, 51 short wave and 94 F.M. broadcasting centers in radio systems.

Akashwani has at present (2005) the 213 Radio Stations. These include 114 Regional Stations, 77 Local Radio Stations, 14 Relay Centres, 3 exclusive Vividh Bharati Centres and 5 Community Radio Stations. The broadcast coverage of air is 91.37 percent by Area and 99.13 percent by population. Akashwani also broadcasts a National Channel.

Use of satellite in broadcasting

At present time Akashwani is using Inset 1-D, and Inset 2-A for broadcasting the radio programmes in the whole country. Seven radio systems (RN) are carrying transmission from C and S Band of satellite inset 1-D. Those radio stations which are joined with these R.N. transmissions, are-(A) Delhi 4-channel, (B) Mumbai, Kolkata and Chennai, in each there is one channel.

Four R.N. Channels are linked with C and D Bands of satellite-2A from Delhi Centers and these programmes are broadcasting through the channels of Mumbai, Nagpur, Ahmedabad, Bhopal, Guwahati, Hyderabad, Rajkot, Chennai, Bangalore, Aligarh, Gorakhpur, Dharwad, Alappi and Cuttack centers.

News Service Division (N.S.D.) :

News Service Division prepares National News Bulletins. News Service Division also prepares the News bulletins of foreign concern but such type of news is broadcasted by Foreign Service Dept. The Director, News Service, is responsible for broadcasting of the news of the country, and works under the supervision of General Director (Akashwani). The local news bulletins are prepared and broadcasted by local centers.

Akashwani (2005) broadcasts 362 news bulletins daily from Delhi and its 45 Regional News Units apart from a number of news based programmes.

AFTER INDEPENDENCE THE DEVELOPMENT OF RADIO-BROADCASTING

S. No.	Five year plan	Broadcasting Centres			Broadcasting Coverage	
		Local	Primary	Total	Population %	Area %
1	First	-	26	26	46.00	31.00
2.	Second	-	30	30	55.00	37.00
3.	Third	-	54	54	70.00	42.00
4.	Fourth	-	71	71	80.03	67.05
5.	Fifth	-	84	84	89.03	77.06
6.	Sixth	01	87	88	90.03	79.08
7.	Seventh	05	95	100	94.9	83.8
8.	Eighth	64	111	175	97.1	89.7
9.	Ninth	-	-	-	-	-
10.	Tenth	-	-	-	99.13	91.37

Source: Annual report, Information and Broadcasting Ministry 1994-95.

Development of Radio Broadcasting in India at a Glance

1927   First Radio Station was started in Bombay and Calcutta that were private stations.
1930   This media was recognized by the government and Indian State Broadcasting Service (I.S.B.S.) was organized.
1935   "Rural Broadcast" was started for rural area.
1936   I.S.B.S. came to be called as All India Radio (AIR).
1939   The broadcasting of Radio Rural Forum started.
1952   The broadcasting of the All Indian Music Programme began.
1957   Broadcasting of Vividh Bharati started.
1957   The name of All India Radio was changed into Akashwani
1961   Akashwani Silver Jubilee Year was celebrated
1964   ''Chanda Committee'' was formed for reviewing the programmes of Akashwani
1965   All the centers of Akahswani began to broadcast the programmes for rural area
1965   'Krishi Prasaran' was initiated.
1966   Recommendation of autonomous corporation for Doordarshan and Radio.
1967   Akashwani became professional.
1969   Community Audience Planning was started.
1971   The broadcasting of 'Yugbani' started.
1977   First Election Broadcasting took place.
1977   Frequency Modulation Transmitter (FMT) in Madras started.
1979   'Prasar Bharati' Bill was presented in the parliament, but it was postponed and which was later passed and circulated in 1997.
1988   Broadcasting began through Inset-1A
1988   Inauguration of national channel.
1992   The broadcasting started through Inset 2-A.
2003   FM radio station at Raipur (CG) has been commissioned.
2004   FM radio Kashmir, Kupwara in J&K has been commissioned.
2005   The broadcast coverage of air is 91.37 % by Area and 99.13 % by population.

Role of Radio in Social Change

Even an ordinary person has become familiar with all comprehensiveness and the indispensability of radio. Radio unites people's ideas, their experiences and presents the

subject for discussion. Radio works as a motivator, catalyst and necessary factor in the life process of every man Radio is a live, contemporary and social effort. It fulfils the lack of its physical picture effect by touching the imaginations and the feelings of the people.

Radio has proved its great indispensability due to its capacity to approach the people as a medium of social change. Among the various mass media, only radio is such a medium that is accessible in every house because of its easy accessibility and is used by literate, illiterate, rich and poor. In the context of our country, all the evils which are prevalent in the society such as illiteracy, child-marriage, dowry system, superstitions, unsociability, poverty, communal feeling, child labour etc. can be eradicated to some extent by the radio. Public opinion towards these evils can be generated by the radio. Radio is playing an effective role to create a public movement for the social change. It keeps a check on the policies of the government. Society can lay pressure upon the government so that the government cannot go against public opinion. A positive change in the society can be brought through broadcasting educational, social, cultural and musical programmes by the radio. In the direction of development, radio has its important role. Many developmental programmes are being run by the government but due to lack of knowledge the society is unable to derive benefits from it. In such a condition radio performs the work of creating awareness in the society.

Use of Radio in Extension Work

How can radio be used in extension work apart from encouraging individual listening? One way tried in India and many other countries is called Charcha Mandal or Rural Radio Forum.

Charcha Mandal is local discussion group organised by development worker. Community listening and discussion are encouraged with the help of extension personal . Community radio sets are provided for group listening. Advance information is provided about programmes to be broadcast and the group discusses the programme. Farmers reaction on relevance of the topic, difficulties in listening, queries, etc. are recorded by the extension personal. Such feedback are sent to the radio station for modifications in programmes. Thus, the lack of sensation of the programmes are fed back to the radio station. Extension personal may also record useful programmes of existing importance on audio tape. This can be supported by extension literature of local significance. Audio tapes can be played with the village groups at suitable time and discussions can be organised.

Television

Being for communicating with audience with low literacy skills, an audio-visual medium, TV, has been more advantageous than any other medium. The large number of TV transmitters, Doordarshan and other channels cover the entire population. India started black and white Television broadcasting in 1959 and TV programme especially for agriculture extension started in 1975-76. At present, there are only two terrestrial TV Channels of Doordarshan (DD I and DD II) available in the country, though about 100 satellite Channels are being received in different parts of the country. The DD I is received in about 76.8% of area of the country covering about 89% of the population (2005).

History of Doordarshan Services in India:

The idea about doordarshan was contemplated since 1883, and German scientist Paulnipkau initiated the invention. In 1907 a Russian scientist transmitted the whole picture through

many micro points in a row and tried to achieve it by means of screen. Its practical form was given by John Logy Baird of England in 1923 and he obtained success in transmitting the photographs from the distance of 25 meters. Later on he did many improvements in it, and by splitting a picture into 240 lines, got the success in transmitting 25 scenes within one second. Consequently the scientist John logy Baird is recognized as the inventor of doordarshan. In 1931 the electric camera "Immitron" was used for this purpose. In foreign countries it was in use till that time.

In India, its advent has crossed about 50 years. For the first time it was seen in the industry exhibition in New Delhi in 1955. Doordarshan was set up experimentally on the Akashwani center of New Delhi with the help of instrument brought from this exhibition. In November 1956, the general seminar of UNESCO was shown on Doordarshan in New Delhi. In this seminar, Indian representatives recommended the establishment of a Doordarshan Kendra. Its aim was determined as educational and community development. Thus, in India, the first Doordarshan centre was established in New Delhi on 15th September, 1959. First President of India Late Dr. Rajendra Prasad inaugurated this centre. Later on Doordarshan Centers were established in Bombay in 1972, in Srinagar, Jalandhar and Amritsar in 1973, Calcutta and Madras in August 1975, and Lucknow in November 1975. Besides this, throughout the country the relay (sub) centers of Doordarshan were established.

In August 1976 Doordarshan centre was established in New Delhi for telecasting the programmes by satellite channel. In 1976, doordarshan department was separated from the Akashwani department. In India, in 1982 the second stage of Doordarshan service was started with the organization of the Asiad-82, a games-competition of Asian countries. For Asiad-82, there were started 20 transmitter centers of short-power in the main cities and the capitals. Thus, the number of Doordarshan telecasting centers had reached 41. On 15th August 1982, during Asiad-82, the coloured telecast was started on Doordarshan.

Doordarshan Extension:

The year 1983-84 was the important year and was the third stage of the Doordarshan expansion programme. Besides establishing the centers with the capacity of high power and low power, the contribution of multi-purpose satellite 1-B was also utilized in telecasting the programme of Doordarshan. On 15th August 1984 simultaneous telecasting of daily National Programmes in the entire country was inaugurated. On September 15, 1984 the Indian Doordarshan Service completed 25 years of its existence. On the occasion of its Silver Jubilee Year, a second channel for the expansion of Doordarshan services in New Delhi was established on 17th September 1984. In 1987, daily morning program was telecasted and since 26th January 1989, the regular afternoon programmes are also being telecasted. The commercial service of Doordarshan started since 1st January, 1976, later, it was relayed from all the centers.

Till 14th October 1997, there were 925 transmitter centers of Doordarhan operational throughout the country .Now about 89% of the population are seeing Doordarhan in 76.8% of the total geographical area of India. Presently 25 channels are functioning in the country (2005). The highest tower of Doordarshan (235 mt.) in Asian continent is built in Peetampura in New Delhi. The actual height of this tower is three times the height of the historical building Kutub-minar. It was inaugurated by the late Prime- Minister of India Shree Rajeev Gandhi on 7th November 1988. Recently, the highest Doordarshan tower of the World (610 mt.) is constructed at Quanjhao (Guantong State) in China in 2005.

Indian Doordarshan at a Glance:

1.   Inauguration of Doordarshan Service by the Indian President   15.09.59

2.   Inauguration of School Doordarshan Project 24.10.61

3.   Inauguration of the First Hindi news in New Delhi   15.08.65

4.   Inauguration of the programme of 'Krishi Darshan'. 26.01.67

5.   Inauguration of the First English News in New Delhi   03.12.71

6.   Establishment of Second Doordarshan centre in Bombay   02.10.72

7.   Inauguration of Education service on Doordarshan by Satellite.   01.08.75

8.   Inauguration of commerce service on Doordarshan. 01.01.76

9.   Separation of Doordarshan from Akashwani 01.04.76

10.   Inauguration of coloured telecasting 15.08.82

11.   Telecasting of Asiad-82   19.11.82

12.   Telecasting of Non-aligned Movement   07-12.3.83

13.   The use of Inset 1-B Started   15.10.83

14.   Telecasting of the Common wealth National Leader's Conference. 22-28.11.83

15.   Telecasting of the first serial "Hum Log"   05.07.84

16.   National Telecast (8.40 p.m. to 11.00 p.m.)   15.08.84

17.   Inauguration of the programmes for Higher education   15.08.84

18.   Function of Silver Jubilee Year of Doordarshan   17.09.84

19.   Inauguration of second channel of Delhi Doordarshan   17.09.84

20.   Inauguration of second channel of Bombay Doordarshan   01.05.85

21.   Telecast of Morning Assembly   15.08.87

22.   The highest (235 mt.) Doordarshan Tower of Asia at Peetambara in New Delhi. 07.11.88

23.   Telecast of Noon Session started   26.01.89

24.   Establishment of modern studio in New Delhi   Feb. 1989

25.   Telecast through five other channels in the country   15.08.93

26.   Inauguration of Regional telecasting service 02.10.93

27.   Inauguration of International channels of Doordarshan(Telecasting in 40 Asian countries)   14.03.95

28.   The channels of DD increased from 15 to 60.   01.04.95

29.   "Movie channel" started through the satellite.   07.04.95

30.   The total transmitters are 984 that is reaching 89% of   31.03.02

        population in 76.8 % geographical area of the country.

Importance of Television:

Doordarshan is playing an important role as a medium of communication among people. According to the annual report of the Information and Broadcasting Ministry (1981-82), — "Among the developing countries like India, the social tension affects the working capacity of the society, it affects not only the peace and order but it also affects the mental condition of the man. Akashwani, the unit of Doordarshan, increases the mental and physical capacity of the people and when the print media is forced to be partial, at that time this medium plays more important role." Among the other earlier studies especially in India as Mishra (1967), Singh (1971), Chauhan (1976) etc. have accepted that Doordarshan is an effective and important medium of communication which is playing an important role for adopting and telecasting the information's of agriculture.

Before it, in the foreign countries Whip and Squilor (1962), Wolve Hetch (1967), Wilson and Monk (1951) also proved through their research that the television-viewers are more influenced and acquire a lot of knowledge through the educational programmes of the Doordarshan. From it they learn more practical knowledge than from the face to face education. They also proved it through different studies that doordarshan programmes allow learning of high level knowledge especially in those places where the schools or other institutions are not available.

Sakram and his associates (1961) found after studying the effect of Doordarshan programmes upon the children, that in some conditions it has proved harmful, but in other conditions it has proved helpful for the children and in some conditions it has been found out that it is neither helpful nor harmful.

In the Indian context, where Doordarshan is a new medium of communication, the attraction for Doordarshan among the people is definitely appreciable yet, due to poverty every person cannot afford the television-set. It is obvious that at one hand the programmes of doordarshan entertain the viewers; on the other hand they give the necessary information's through television. As to how an effective utilization of this new information should take place, is a matter of considerable deliberation.

Doordarshan, broadly, has been found as a powerful audio-visual aid important for mass communication. It has the system of sound along with the pictures like the movies; still it has left that medium far behind due to its popularity and ability to reach maximum people in minimum time. Radio also has the similar capacity to reach the millions of people within few minutes. In its effect, Doordarhan is valuable and dangerous as it is like a dual edged sword. If doordarshan is used in a proper manner, it has the capacity of gaining success over the obstacles of distance, time and illiteracy and if it is used improperly, it is the most powerful and capable means that can harm the cultural, social, educational and religious activities. Thus doordarshan has both the capacities of challenge and opportunity.

Video:

Video is an important feature of advancement in communication technology. It provides the facility of audio-visual communication like film or television but with less difficulty and added advantages. This is the reason why video has spread all over the world with electrifying speed. It is now easily accessible in India. Government of India with the support of the World Bank has special plans to use video in agricultural extension work. Miniaturization of video equipment and easy availability in cities and villages alike make this small medium appropriate for extension work.

Video is unique medium for audio-visual communication. It is decentralized and thus useful to communicate local messages among groups with similar characteristics. The images are sharp unlike films. Videos have smaller viewing screen with its fixed height to width ratio of 3:4. It is a medium greatly dependent on close-ups unlike films, which have greater resolution (more picture elements per frame). Unlike television, video does not require large broadcasting equipments or infrastructure. Small screen of video, placed in quiet corner of home, provides many plus points. Audiences, comfortable in bed or seats, with eyes fixed on the small screens are more concentrated.

Advantages of Video:

1. It has high quality audio-visual recording system to portray reality within limited time and resource.

2. Instant playback facilities for pause and replay at any time allow viewers to review materials at will.

3. Audience can exercise control over content and time of viewing.

4. It is available in very light weight, battery-operated and highly portable form.

5. Ease in operation provides ready access to almost any one. Video equipments do not require sophisticated training to operate.

6. Local problems, scenes, real life situations, etc. can be shared to stimulate empathy and discussion.

7. Many unusual scenes, off season crops or cultivation, distant objects and minute operations can be easily projected.

8. Video can provide immediate feedback to learners on their performance as they display certain skills.

9. It is very effective in creating attitudes and emotions by use of various techniques and effects.

Disadvantages

1. Video script writing is difficult and time taking.

2. Video quality when transferred from one tape to another, gets degenerated.

3. Local availability of video-equipment, repairing services, spare parts etc. is essential to ensure smooth running.

4. Trained talents in production are not readily available.

Applications of Video

Video as an instructional medium can be most suitable if recognition or discrimination of relevant motion stimuli is required. It can teach rules, procedures and skills. It is useful to orient learners to places, objects, strange behaviours, etc. Moreover, video can be used easily with or without guide. Print support and can be followed by actual work to help model new behaviours. There are many opportunities in extension training where video can be easily used as described below:

Orientation: Farmers (viewers) can be introduced about to such things as the campus, the institution, the course details etc. by showing clippings.

Documentation: Many a time it is hard to recall the events of a training session for records, reporting or public relation purposes. The activities thus documented can act as resource for forthcoming training.

Evaluation of Performance: Video can very well be used to show the trainers' behaviour, trainees' performance, training processes, physical facilities etc. and provide a wealth of management data to help evaluate performance of training courses.

Feedback: During the skills practice sessions, the video taped materials can be shown, critiqued and kept for assessment.

Traditional Media

In every society there are various forms of communication among people. Some channels and forms of communication are deeply rooted in the culture and preserved traditionally from generation to generation. Such channels are called as traditional folk media. They serve various social needs of the community. They are direct, face to face and linked with emotions and values of people. Thus, they are quite powerful in raising consciousness of people. They are cheap and do not require external resources. Examples of traditional media may include various social gatherings like feasts, village meetings, spontaneous gathering at tea shops, festivals, fairs, story telling, magic shows, dances, songs, oral narrations, etc.

Folk Media

Folk media are indigenous equivalents of mass media. They are used largely for entertainment, but they can also promote educational values and help in cultural continuity. They include festivals, plays and puppet shows, song, dance, poetry, story telling, debates.

Special Features of Traditional Media :

1. They are precious source of traditional wisdom. Traditional forms contain valuable cultural knowledge on a variety of useful themes including vocations, natural resource, philosophy in understandable terms.

2. Traditional Media are capable of raising public consciousness. As traditional channels are popular and linked with the emotions and desires of people, they have great appeal to the masses. Messages of development can be effectively communicated in local idioms, proverbs and symbols. In past, messages of high yielding varieties were communicated to the people through folk songs in India.

3. Traditional Media have both entertainment and information value. They are already popular sources of entertainment. So they naturally attract attention and thus information is easily communicated to those who are otherwise not reached through modern media.

4. Traditional Media are people oriented. They involve people both as resource (talents) and audience. People have control over it.

5. Traditional Media are credible and culturally compatible. As people believe them and can understand them easily, they are acceptable in rural society.

6. Traditional Media are quite inexpensive and informal. As the indigenous channels do not require outside resources, they are economic without much formality.

Examples of Traditional Folk Media in India

Traditional Folk Theatre/Rural Drama : Burra Katha (Andhra Pradesh), Jatra (Bengal), Bidesia (Bihar), Ram Leela and Krshna leela(U.P)

Puppetry : Glove Puppets, Sutradharika (String puppet) ,Putalnautch (Road puppet) .Chhaya Putli (Shadow puppets) ,

Oral Literature-cum-Musical Forms: Alha (Bihar, U.P) , Baul (W.B) , Bhatialiali (W.B) , Bihu (Assam) , Gurba (Gujarat)

Fairs and Festivals : Social rituals, ceremonies, gatherings, etc. ,Ganpati Utsav, Rathyatra, Dussehra, Ram Navami

Folk Dances : Bhangra, Gidha, Garva

Traditional Youth Clubs : **Ghotul (Muiida), Gitiora (Munda), Rang Bhang (Bhotia), Dhum Kuri (Oraon) and Morang (Nagas).**

Rituals/Symbols/Motifs : **Rangoli, Alpna, Madhubani painting**

Use of Traditional Media in Extension

Traditional Media have attracted attention of social scientists as diffusion studies indicated importance of opinion leadership and inter-personal networks. Of late, studies have indicated how new varieties of agriculture were adopted by the farmers without help or deliberate efforts of extension workers. Peer group, village elders, youth groups, market place and ceremonial occasions may easily be used to disseminate useful information strategically. Experienced farmers can be used as trainees.

Multi-media

It refers to a video system which is a combination of computer and video. It uses multi-media approach i.e. text, stills, video, audio, slides, overheads, etc. The messages stored in various forms are retrieved by user according to choice. The users response to the system determine the path to be followed.

Advantages of multi-media:

There is no need for teacher.
It has self-paced learning.
It has powerful video and sound.
It has multi-media effect.
It allows for interactive learning.
Delivery cost of multi-media are greatly reduced.
It has 3-D graphic simulation, real life situation, etc.
It is long lasting.

PUBLIC SPEAKING IN EXTENSION EDUCATION:

It can be very easy, even for those who the thought of getting up before a group. An individual who is tense and uneasy, or feels inadequate in such a situation faces a few facts; the chore should be less frightening.

At the same time there are others who seem to have "tongues hung in the middle" or seem "to the manner born." They appear to be "natural" speakers, express their ideas easily and forcefully, have large working vocabularies at their instant command, possess an inherent sense of good timing, are endowed with good voices, have positive personalities and know-how to project them.

A careful analysis of such people will reveal that what appears to be native talent wasn't always "natural". Most of these people too have had an unusual and varied number of opportunities for using and developing these talents. They may have been at this business for years since early youth. They have perhaps seasoned by experience.

Anything done for the first time is likely to be difficult, especially if the first doing takes place after our formative years. If one had never lead a discussion, delivered a speech, presided at a meeting or makes an oral report during the first two decades of his lives, such a task looms large and is rather horrible to contemplate.

The ordeal is only slightly less distasteful if a long period of time elapses between such assignments.

Practice makes man perfect:

The continuous practice (or use) is essential to maintain proficiency in a public speaking. This is also like other skills such as sports, music, typing, shorthand or telegraphy. Giving a talk or conducting a meeting every week or two will soon transform the speech occasion from a rare into a routine act and remove much of the tension. Frequent and repeated use has the same effect on speech skills that sandpaper has on rough surfaces.

Do Communicate:

Extension workers have plenty of important things to say. They should all know their subject matter well. Most of them have been preparing and experimenting with ways to say these things for years. But almost all of them go about the job in different ways.

The best way for ONE to say it depends upon several things: the subject material, the type of audience, the kind of meeting, the physical surroundings at the meeting place, the purpose of the talk, and once own individual capacity and skill. In general there are four ways of speech.

Types of Speech:

Impromptu – Speech is done on the spur of the moment with little or no chance for preparation. This type of speech is often necessary, especially during business meetings, informal conferences, etc. But it is all too often used in programmes where a well-prepared extemporaneous talk would be much better. The press of other business or just plain laziness sometimes causes people to drift into the bad habit of letting good preparation slide and depending upon the inspiration of the moment to carry the talk through. Bad organization, sloppy presentation, and a general letdown often result. Ability with impromptu speaking is admirable but few except seasoned professional veterans are good at it.

Extempore - Extempore speech has been found most useful, forceful, as well as most effective for most extension people for almost every occasion. It is the type allowing the greatest flexibility. It is well prepared in advance and delivered with or without notes. Only the orderly succession of ideas is firmly planted in the speaker's mind. Sentences are constructed and words selected right on the spot before the audience. (Here is where a large working vocabulary pays big dividends).

Reading – Sometimes it is necessary to read a manuscript. When exact phraseology must be transmitted, when audio or visual aids are to be used in on certain phrases or words, or when rigid time limits must be adhered to as in radio and television, papers must be read. Rare is the person who can read a paper and make it sound like he was talking it. There are not many Charles Laugh tons in everyday life. Therefore, if it can be avoided, don't read. The

manuscript is a barrier between you and your audience. It will rob you of spontaneity and flexibility. If you must read, rehearse.

Memorized - Memorized speeches except when delivered by professional actors, sound like just what they are. Most people have to concentrate so hard on calling up the memorized words that they lose sight of the meaning of what they are saying. Consequently their delivery is usually expressionless and mechanical. Knowledge of one's subject won't help a speaker who forgets part of a memorized speech. Once he is off the track he is lost. This type of talk provides for no flexibility: no opportunity to take advantage of previous remarks, no chance to toss in new ideas picked up at that meeting, no chance to change. A person who depends upon this medium is running great risks, which the average person cannot afford to take. Jospeh Ulman, Jr., of M.I.T. says: "The extemporaneous speaker has almost every advantage over the reader or the reciter. Because he is thinking what he is saying, he can speak with expression, emphasizing the important ideas. He looks at his listeners, gauges their reactions to what he is saying, and adjusts his speed and his approach accordingly."

The audience must be kept in mind while delivering speech:

Tailor the remarks to fit each individual audience. Exactly the same formula simply can't be used on all audience.

It is futile and presumptuous to take the time of any group if the members of that group can't hear the speaker. Speak naturally and with expression, but project the voice. Lift it and push it out. Enunciate clearly. Don't run words together. Speak slower than usual. A properly planned speech won't need to be hurried. If robbed of time, cut something out.

Prepare and Plan: Every audience is composed of people primarily concerned with their own affairs. They have their minds on many matters. The first job of any speaker is to get all those minds on to the one subject he has to present.

Invite Attention: It is recommended some attention-getting device such as a startling statement. There is little value in a colourless statement for example, "it is much more effective to start with - "Seventeen thousand ten-ton trucks working around the clock every day this year would be needed to haul away the rich topsoil that's going to disappear from the farms in this country-from your farms—this year" than to start as I am going to talk tonight on soil conservation.

Step number two, why bring that up? Logically follows. But the speaker has to work to maintain the attention he has gained. He cannot suddenly turn dull.

Step number three, for instance, is based on the fact that all through their lives people like to hear stories. Once upon a time… for instance…John Jones did so and so…Many Myers found this and that. Illustrations and specific instances capture and hold attention.

Step number four, so what? Simply indicates a good conclusion… a caboose for the train.

Several authors have written over the subject. One handbook says:

1. Think through the subject material in terms of the character of your audience, your particular capabilities, and any special visual aids you can use advantageously.

2. Outline and number your main points. Do this early. Think, read, and talk. Improve the outline but follow it in delivery.

3. Talk the speech out to yourself from the outline. Critically analyze the material and its flow.

4. If feasible make the talk beforehand to a critical listener. With his or her comments as a guide, redirect your points for the greatest effectiveness.

5. Polish and time your delivery. Good speech tempo is generally slower than that of normal conversation. Remember to restate and emphasize your points.

One of the most gratifying speech experiences is the opportunity to give a talk on the same subject to several groups. After speaking to the first group a great many things will be learned about that talk. Items left out inadvertently, items to cut out because they did not "go over" very well, new items to add, reactions from listeners, and so on. The talk will then be revised and revitalized for the next audience. After five or six opportunities for such diversified presentation and alteration the talk begins to come to life and be fun to give.

Learn the Platform Manners & Mannerisms:

Few of them are given below:

1. *The Neatness:* Whether the meeting to be in a cornfield, a barn, a schoolhouse, a home or a church, the speaker should be neatly dressed and groomed. Whether work clothes, uniforms, or Sunday-best clothes are in order they can be neat. It is not suggested that the extension worker need be "dolled up" for every meeting.

2. *Waiting for the Silence :* Command respect before starting to speak.

3. *Starting to Speaking :* So everyone can hear. If in doubt ask those far away if they can hear comfortably.

4. *Real Names :* Pronounce them carefully so that even strangers can understand.

5. *Make purposeful movement :* Move to add variety but don't pace or wander. Space movement at irregular intervals to avoid monotones pattern.

6. *Use gestures* - to emphasize certain points if you feel a natural urge to do so. Just don't plant them artificially or they will look stiff.

7. *Be alive :* Rate, pitch, and volume should constantly change. Variety keeps them awake.

8. *Be positive and enthusiastic* - some extension workers are bashful and retiring; others are "dead pan"; still others studiously tone down their enthusiasm for various reasons. Such people need to be reminded that they must project enthusiasm, exaggerate it slightly in order to transmit it to others.

9. *Come to a climax and stop* - when finished, sit down. Avoid rambling anticlimaxes. If you think of something you left out. Let it go unless it is of vital importance.

Here is a partial list of some annoying mannerisms to guard against using. They often distract attention.

1. Hands jammed in pockets throughout talk.

2. Jingling coins and keys in pockets.

3. Putting on and taking off glasses. Use bifocals if possible, otherwise learn to look at a "fuzzy" audience at least once in a while. Most spectacle juggling is a never…. habit like coin jingling-it is done subconsciously.

4. Juggling chalk and shaking it like dice.

5. Uh—substituting sounds like uh and er for pauses. While thinking of the next word or point, pause silently. Don't fill the gaps with meaningless grunts and "uhz."

6. Apologizing – "Unaccustomed as I am, " "I'm not very good at this business, " "guess most of you know this but I'll say it anyway," "May be I better shut up and let somebody else get up here," etc.

7. Dragging in pointless jokes. Unless they apply, forget them.

8. "Foot-in-mouth" tactlessness, blundering,

9. Pulling at ears, scratching eye or nose needlessly. You must know what you are doing so that you can break a habit, which is detracting from your ideas.

The above list is long enough to remind us of other excessive uses of peculiar actions which we have observed in speakers. A close friend who is critical and observing should be willing to point out any such mannerisms which you may have, if asked to do so as a personal favor to you.

Use Visual Aids:

Visual aids should supplement many oral presentations. There is nothing new about visual aids. They are an effective aid to learning. They are an aid to teaching, but they are not the entire answer. The teacher-speaker still needs to be a good teacher with a good understanding of the subject matter. The wide differences among farm people and their problems demand a wide variety of teaching methods. It is imperative that visual aids be used in all of the teaching methods.

Most extension workers recognize the worth of visual aids. They realize that visual aids can increase many folds the number of people influenced by extension teaching. Not only do extension workers do a lot of extra work when they try to get along without visual aids, but they fail to present the information as effectively and interestingly as they can.

One can do much locally in producing simple aid-cut out letter posters, color slides, green boards or black boards, charts or graphs.

Let's consider for a moment a few of the aids that be used with oral presentation to help get across locally applicable and needed information.

Slide: Colour slides to illustrate topic.

Large photographs: A series to show progressive steps in a recommended procedure.

Movies: Method to develop and maintain interest.

Charts and Graphs: Statistical matter in any tabular form.

Models: An excellent method of securing interest.

Specimens: Grain in jars, insects under glass, is only two examples of ideas for specimens.

Black board or Green board talk: Speaker should write large, progressing slowly and as needed for discussion. Coloured chalk may be used to create interest.

Exhibits: A well-planned exhibit presents information quickly and convincingly.

Important Principles of Public Speaking:

Following are some of the important principles of Public Speaking as applicable in Extension Education:

1. Avoid stage fright.

2. Remember that public speaking is not utterly different from conversation.

3. Experience will develop confidence.

4. Use Audio-Visual Aid.

5. Kept the head up before starting to speak. The audience is eager to here you.

6. Handicaps of beginner are not greater than those faced by many successful speakers as beginners.

7. Thoroughly prepared in planned way.

8. Good gesture is related with good speaking

9. Keep contact with the audience.

10. Expression – give different shades by rising or lowering of voice.

11. Emphasize key factors by increasing volume of the sound.

12. Make use of illustrative stories, quotations and experiences.

13. Prepare well. Collect facts and arrange in logical orders.

14. Use friendly conversational style keeping in mind the audience.

15. Speak loud enough that those in the back can hear.

16. Follow ABC of writing – *Accuracy, Brevity, Clarity.*

17. Write out conclusions.

18. Practice before delivering speech.

19. Good speakers spend more time in preparing than delivering talk.

20. Speaking from memory is good than reading.

21. Speak main points first.

22. Rehearse talk a laud.

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