

TECHNICAL COMMUNICATION

UNIT 1 Fundamentals of Technical Communication:

Technical Communication: Features; Distinction between General and Technical Communication; Language as a tool of Communication; Dimensions of Communication: Reading & comprehension; Technical writing: sentences; Paragraph; Technical style: Definition, types & Methods; The flow of Communication: Downward; upward, Lateral or Horizontal; Barriers to Communication.

TECHNICAL COMMUNICATION DEFINED :

The English word 'communicate' is derived from the Latin word 'communicare' which means 'to share. It is in turn derived from the Latin word 'communis' which means 'common'.

“All the information which is organized, presented and communicated in a specific format for a specific purpose and to specific audience is called Technical Communication”. For e.g. business plan, business letter, agenda, advertisement, action plans, audit report, brochure, catalogue, contract, data book, memo etc.”

It encompasses :

HE TEAM

H : Happenings E : Experience T : Technology E : Events A : Actions M : Meanings

Happenings can be a day to day / frequent or rare. Eg. Gathering in a society / family

Experience may be a message given earlier is able to develop a feeling later or vice versa and you are able to strike a relation.

Technology or media like radio, FM, internet, print, mobile DTH etc.

Events / activity are the happenings specifically official like meeting, lectures, presentations, conferences even a procession.

Actions succeeds/precedes any activity like report writing, letter drafting, preparing minutes / agenda of the meeting etc.

Meanings is the interpretation or reaching conclusion after discussions.

Communication can be defined in a number of ways as under :

- “Communication is the process of passing information and understanding from one person to another. It is the process of imparting ideas and making oneself understood by others.”
-**Thed Haiman**
- “Communication is the two way process of exchanging ideas and information.”
-**Murphy-et-al**
- “Communication is the process of passing information and understanding from one person to another.”
– **Keith Davis**
- “Communication is any behaviour that results in an exchange of meaning.” – **AMA**
- “Communication may be broadly defined as the process of the meaningful interactions among human beings. More specifically, it is the process by which meanings are perceived and understandings are reached among human beings.”
–**D E McFarland**
- “Communication is the process by which the information is passed between individuals and/or organizations by means of previously agreed symbols.” –
Peter Little
- “Communication is the ability of the various functional groups within the enterprise understand each other and each other's functions and concerns” -
Peter Drucker
- “Effective communication is one of the most important functions of management”.-
Molloy

So we define *the process of communications as transmitting the information, emotions, ideas, skills, knowledge by the way of symbols, words, pictures, figures, graphs, illustrations etc.*

In business terms

Technical communication is written and oral communication for and about business and industry. Technical communication focuses on products and services—how to manufacture them, market them, manage them, deliver them, and use them.

Technical communication is composed primarily in the work environment for supervisors, colleagues, subordinates, vendors, and customers. As either a professional technical

communicator, an employee at a company, or a consumer, you can expect to write the following types of correspondence for the following reasons (and many more).

- As a computer information systems (CIS) employee, you work at a 1-800 hotline helpdesk. A call comes from a concerned customer. Your job is to answer that client's questions and follow up with a *one-page e-mail* documenting the problem and your responses.
- You are a technical communicator, working in engineering, biomedical equipment manufacturing, the automotive industry, computer software development, or a variety of other job areas. Your job is to write *user manuals* to explain the steps for building a piece of equipment, performing preventative maintenance, or for shipping and handling procedures.
- As a trust officer in a bank, one of your jobs is to make proposals to potential clients. To do so, you must write a *20- to 30-page proposal* about your bank's services.
- You are a customer. You ordered an automotive part from a national manufacturer. Unfortunately, the part was shipped to you five days later than promised, it arrived broken, and you were charged more than the agreed-upon price. You need to write a *letter of complaint*.
- As the manager of a medical records reporting department, one of your major responsibilities is ensuring that your staff's training is up to date. After all, insurance rules and regulations keep changing. To document your department's compliance, you must write a monthly *progress report* to upper-level management.
- You are a webmaster. Your job is creating a corporate *Web site*, complete with *online help screens*. The Web site gives clients information about your locations, pricing, products and services, mission statement, and job openings. The dropdown help screens provide easy-to-access answers for both customer and employee questions.

- As an entrepreneur, you are opening your own computer-maintenance service (or services for HVAC repair, deck rebuilding, home construction, lawn care, or automotive maintenance). To market your company, you will need to write *fliers*, *brochures*, or *sales letters*.
- You have just graduated from college (or, you have just been laid off). It's time to get a job. You need to write a *resume* and a *letter of application* to show corporations what assets you will bring to their company.

MAJOR FEATURES OF TECHNICAL COMMUNICATION :



Fig 1 : Features of technical communication .

Apart from these features following features are also notable :

- **Audience :** The audience are specific in the process. If executives are not communicated that they intend to attend a meeting at pre specified venue / date / time the objective of the meeting will not be met. This can be done via memo / agenda / circular etc. The writer of the document should know the profiles of the audience like technical (engineers / scientist/doctors) or semi technical (clerks / administrators / secretaries) or non-technical (clients / patients / customers).
- **Language:** The language should be plain, clutter free and reasonable, which can be clearly interpreted correctly by the audience.

- **Format:** The presentation style of the technical document should give the information at a glance and intended reader is able to assimilate it. e.g. Lab report, service record, operating manual/ instructions, letters/memos/emails, interview etc.
- **Style:** The technical document should be rich in words which are functional, exact and clear. If the document contains some technical terms, it may be difficult for non-technical or semi technical audience to understand. In that case the terms should be explained properly in the simple language. The document should have a number of paragraphs each focussing on one idea only with clear demarcations, headings and sub headings with numbered graphics, figures, tables, examples and illustrations.
- **Visual aids:** Technical documents include visual aids specifically to make the audience understand the technical message intended unlike in the case of essays, novels etc.

DIFFERENCE BETWEEN TECHNICAL WRITING & GENERAL WRITING

POINT OF DIFFERENCE	TECHNICAL WRITING	GENERAL WRITING
Content	Preplanned	Spontaneous
Diction	Simple & effective	Complex & long sentences but clarity is there.
Format	Strict & well defined	Not predefined
Function	Instructs, informs & persuade	Amuses, inspires, entertains & educates
Language	Simple, to the point, straight forward, rational, objective & scientific	Elegant, creative, poetic, ornamental, literary, generic.
Profession	Pertains to profession	Relates to the society
Skills	Acquired by practice	Creative & innovative in born talent
Styles	Familiar, simple, clear, precise, everlasting value.	Poetic, elegance, carries the stamp of individuality.

Document type	All professional scientific & specialist documents like reports letters, drafts theses etc.	Poem, story, novel, operas, newspapers, magazines etc.
Words	Technical (with explanation)	Descriptive & literary composition.

SIGNIFICANCE / IMPORTANCE OF TECHNICAL COMMUNICATION :

- **Complex organization:** Large organizations with diversified employees with variety of culture, religion, faiths, and values knitted together in a complex multi-layered hierarchy.
- **Global environment:** Many companies are having set ups in a number of countries making the things to be managed decisively specially managing the diversified teams. So there is the requirement for a common format for communication.
- **Technological advancement:** This is the age of information you win, if you are able to organise, present & transmit information with clarity, coherence & precision. This needs the skill. Effective communication helps management to overcome employee' resistance.
- **MIS:** MIS or the Management Information System ensures collection & dissemination of the right information to the right person at the right time. The success of any organisation depends on how responsive & accurate the MIS is?
- **Stakeholder Relationship Management:** Successful running of any company interests stake holders like employees, investors, suppliers, customers etc. They all need transparency, accuracy & time bounded information.

ROLES OF COMMUNICATION:

- It increases interaction in a giant organization.
- It helps in operating in global business organization.

- Many companies operate in the international level.
- This requires dealing with people of different language and culture.
- Timely information.
- To keep pace with a changing environment.
- Better decision making.
- Better human relations.
- Achieving organizational goals.
- Better public relations.
- Generations of better ideas.
- Helpful as a motivational force.

COMMUNICATION CHANNELS:

Technical communication takes many different forms. Not only will you communicate both orally and in writing, but also you will rely on various types of correspondence and technology, dependent upon the audience, purpose, and situation. To communicate successfully in the workplace, you must adapt to many different channels of communication.

Table below gives you examples of different communication channels, both oral and written.

WRITTEN CHANNELS	ORAL CHANNELS
E mail	Meetings
Memos	Interviews
Reports	Sales / marketing calls
Proposals	Training sessions
Fliers	Customer / technical support
Brochures	Presentations / conferences
Fax	Workshops/ seminars / webinars/ conferences
Inter / intra net website	Performance reviews

The table below gives you some examples of communication channels, audience & purpose.

Writer/Speaker	Channel(s)	Purpose	Internal / External
HR & Training	Instructions (hard copy / on line)	Performance & appraisal of the employees.	Internal
Marketing	Brochures, sales letter, blogs, calls, mails.	Promotion of the product / services	External
Customers	Inquiry, complaints, calls, mails	Troubles in operation & rectification of products	External
QA	Investigative/ progress reports	Compliance & reporting to the regulating unit(s)	External
Vendors	Newsletters, calls, mails	Updating the clients	External

PROCESS OF COMMUNICATION:

- Communication is process which involves sender of a message and receiver.
- Communication is complete only when the receiver is able to interpret a message as desired by the sender and responds to it.

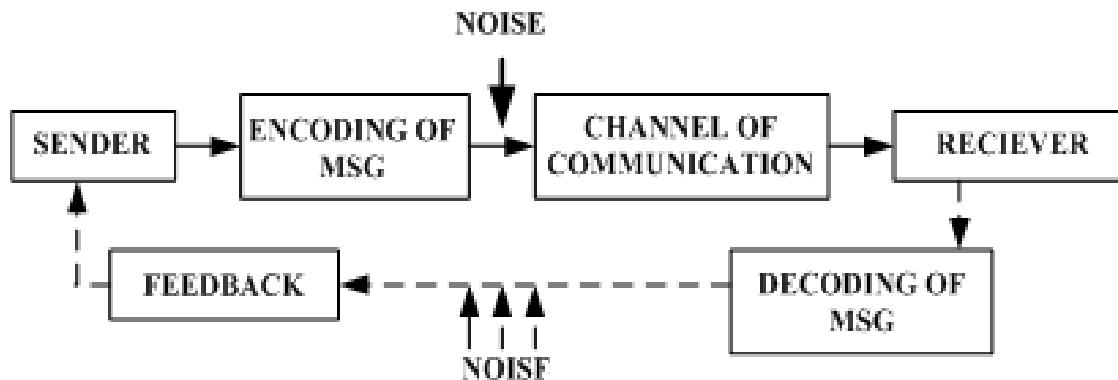


Fig 2 : Communication process.

ELEMENTS OF COMMUNICATION:

- **Sender:** The person who feeds the needs to express certain ideas and thoughts is known as sender or communicator. It initiates the message.
- **Message:** Message is the fact idea, meaningful content or piece of information that sender wants to convey and send to the receiver.
- **Encoding of Message:** Encoding is the process by which the sender translates his thoughts, ideas into a series of symbols (words, signs) or any medium that is shared between the sender and receiver. It is for safety purpose.
- **Communication Channel:** Communication channel is the medium through which the message passes. It may be formal channel (ex-member, presentation, reports) or informal medium (ex personal letters).

- **Receivers:** The person who receives the message and provides feedback is called Receivers.
- **Decoding:** Decoding is the process of comprehending meaning and all the sense of the message so that the receiver understands it.
- **Feedback:** Feedback is the receiver's response to the message sent by the sender. Feedback confirms the receipt of message by the receiver.

The figure gives you the communication cycle

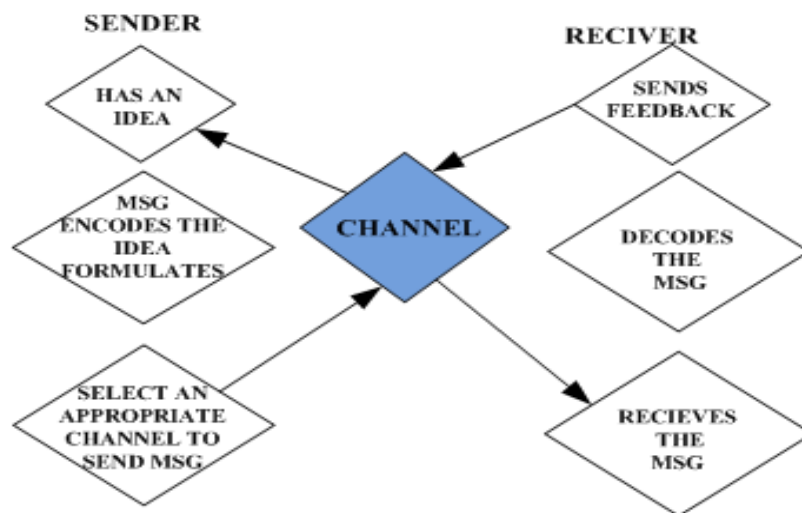


Fig 3 : Communication cycle.

LANGUAGE AS A TOOL FOR THE COMMUNICATION :

Language employs the combination of words to communicate the ideas in a meaningful ways. To communicate it is not essential to be the master of any language prelim knowledge of the grammar will do.

Eminent linguists Noam Chomsky & Ferdinand de Saussure opine that language is (AAACRRR).

A: Abstract, arbitrary & artificial.

C : Creative

R: Recursive, repetitive & restricted.

Abstractness in the language makes generalisation & categorisation possible.

E.g. T shirts, trousers, shirts etc. all can be labelled as clothing.

Regret, mourn, depress, disappointment dismay, tearful all can bring a feeling of sadness.

Arbitrariness in language means that there is a cultural system of agreement in the evolution of the language. e.g. every year new words are added to the English language & find the place in the Oxford dictionary. Each word has been agreed upon to mean something or a group of something.

Artificiality in the language attaching particular symbol / word to a thought / thing. It is also called the referent. e.g. UNESCO was attached to United Nations Educational Scientific & Cultural Organisation after the WW II.

Creativity of the language indicates the adaption to the rapidly changing social, cultural & technological environment. Addition of new words is one way to define the creativity. e.g. telephone, mobile, I pod, internet etc. were not there 200 years back.

Recursive means the presence of basic templates in the grammar of any language which can be used for a variety of expressions or sentences. e.g. self-conscious, inferior, guilty, confused, ashamed, isolated, lonely, pathetic all can be expressed as embarrassment.

Repetitive means redundancy. e.g. In any language many plurals can be used in a single sentence without creating a clutter in some cases. While in other cases this repetition is redundant or useless or wordiness.

Correct There are **many boys** seated on the **chairs**.

Wordiness **Together** meet me **all** of you in the camping area on Sunday.

Restriction means some feelings are hard to be expressed through the words. Eg You run in a race & You run for a post. Thus the word run has 74 meanings.

CLASSIFICATION OF ORGANIZATIONAL COMMUNICATION:

- **Internal Communication:** When people within the organization communicate with each other, it is called internal communication. It could be individual to individual, individual to group, group to individual and department to department. Modes Of Internal Communication: Memos (it can be exchanged within the department), reports, official orders, circulars, staff letters, email, fax, notices.
- **External Communication:** When people in the organization communicate with anyone outside the organization. E.g. clients, customers, dealers, government, distributors and media.

7 C'S OF COMMUNICATION:

- **Completeness:** Every communication must be complete and adequate. Incomplete messages keep the receiver guessing, create misunderstanding and delay action. Every person should therefore, be provided with all the required facts and figures. E.g. when the factory supervisor instructs workers to produce, he must specify the exact size, shape, quality and cost of the product.
- **Conciseness:** It means that in business communication you should be brief and be able to say whatever you have to say in fewest possible words.
- **Clarity:** The message must be put in simple terms to ensure clarity. Words must mean the same thing to the receiver as they do to the sender.
- **Correctness:** The term correctness as applied to business messages means bright level of language and accuracy of facts, figures and words. If the information is not correctly conveyed the sender will lose credibility.
- **Consideration:** Consideration means preparing the message with the intended receiver in the mind. In order to communicate effectively, the sender should think

and look from the receiver's angle, i.e. adopting a humane approach and understanding the emotions and sentiments of the receiver.

- **Concreteness:** It means be specific, definite and vivid (clear) rather than vague (not clear) and general. In oral communication, we can't draw the tables, diagrams and graphs to make our statement vivid which is relevant with facts and figures.
- **Courtesy:** Courtesy and politeness stems from a sincere youth attitude. It is not merely politeness with mechanical insertions of please and thank you. Although applying socially accepted manner. Rather, it is politeness that grows out of respect and concern for other.

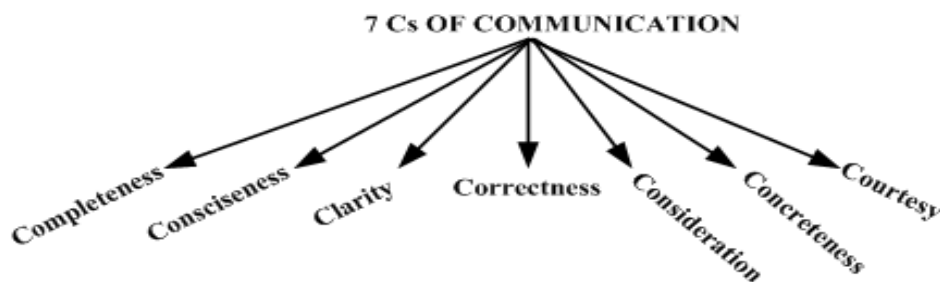


Fig 4 : 7 C's of communication.

GATEWAY TO EFFECTIVE COMMUNICATION:

Secrecy	Safety	Two way	Mutual trust
Clarity	Consistency	Timeliness	Good relations
Feedback	Flexibility	Empathy	Accuracy

BARRIERS TO COMMUNICATION:

‘Any obstacle or problem in the process of Communication which hinders/obstructs the process of Communication is called Barrier.’

Barriers are part of process of Communication. Whenever we are communicating we encode and decode. We use various channels for passing messages. At any level or at any moment or stage there can be problems in communication process. Sometimes the sender may not use proper language that the receiver will understand. Receiver may not be able to Decode properly. There can be lot of noise in the surrounding which can disturb us. It rarely happens that barriers do not arise in the communication process. Many times barriers

arise in the minds of the sender and receiver. The intended messages are not sent to the receivers.

We face many barriers while communicating. These barriers can create obstacles in the communication process. These barriers are classified into the following types.

1. Physical or Environmental Barriers: The Barriers in the surrounding or in the environment are the physical barriers. Many barriers arise in the surroundings or our environment. These barriers create problems or confusion in communication.

- a. **Noise:** Traffic Noise or noise of machines in factory create disturbances in communication. Noise pollution is biggest contributor of environment pollution in India
- b. **Time and Distance:** Physical distances between people can create major problems in communication. Time zones around the world are not same. Due to differences in timings between countries we have to adjust with the time difference of that country.
- c. **Defects in Communication Systems:** Many times the instruments or machines used in communication such as Telephones, Fax or Computer can develop problems. The network of Internet can fail or the Mike or Microphone used in the programmes can create loud noise. Due to excess rains or natural calamity it becomes difficult to use the instruments properly. The failure of Electronic power also results into communication loss or messages are not sent properly.
- d. **Wrong Selection of Medium:** Medium means the objects used in communication e.g. Emails, Mobile Phones or Telephones etc. The correct medium is necessary. The improper use of some machines such as Emails can delay the messages.
- e. **High Temperature and Humidity:** Excess Temperature or heat or cold Temperature create difficulties in communication Many times human physical defects such as stammering ,bad hearing, failure of communication

channels and bad handwriting also create misunderstanding in learning the message

2. Language/Semantic or Linguistic Barriers: Barriers arising due to the different language or differences in language can create problems in communication. Semantic Barriers means the problems arising because of the different meanings of the words. Barriers arising due to differences in languages, words meaning or pronunciation can create confusion among the people. Linguistic means related to the language. Semantic means the meaning of the words. Following are some of the examples of language barriers.

- a. **Different Languages** or lack of Common Language can create obstacles in Communication. A person who does not understand the native language or even foreign language cannot communicate well. This becomes very difficult situation.
- b. **Multiplicity of words:** words can have different meanings. Word power is gift to human beings but at the same times multiple meaning or spellings of the words can create the problems in communication.
- c. Words with **similar pronunciation but different meaning** [Homophones] also create problems in communication. E.g. Except-accept, fair-fare, council-counsel, principal principle [etc.].
- d. **Jargon words** [Technical words] used by professionals such as Engineers/Doctors or any other professionals. Many times, jargon words are used unintentionally. But common people or those who do not understand the meaning of these words face problems.
- e. **By-passed Instructions:** Means many times short cuts are used while passing the messages. e.g. A : Manager ordered the newly appointed secretary to go and burn the C.D. She literally burned it. He meant to copy the C.D.

3. Psychological Barriers: Barriers or problems arising due to the stress or psychological problems are psychological barriers. It is difficult to accept and overcome these barriers. : Psyche means mind. Psychological barriers arise in the minds. Human mind is a very complex thing to understand. We face many times some conflicts due to situations or

surrounding events. So these barriers are bound to arise. But the real problem is that people do not accept that these barriers exist in their minds. Due to status, old age and ego problems many times psychological barriers are created. These are difficult to overcome. Because people do not accept that they face barriers or they lack proper understanding to face the world. The following are situations or examples of psychological barriers.

- a. **Ego: 'I' Attitude** means I am great feeling can create barrier in mind. Ego barriers create conflict in human relations.
- b. **Prejudice:** bias [wrong opinion] about people on the basis of community, caste, religions or on personal basis is very negative for communication. Prejudice can hamper the communication.
- c. **Emotions and feelings:** Emotional Disturbances of the sender or receiver can distort [change] the communication.
- d. **Halo Effect:** like or dislike about a person can create halo or horn effect. This can affect communication.
- e. **Self-Image:** Positive or Negative image about self is the way of looking at the world. Negative self-image can destroy or hamper communication. Such people always think negatively and do not look at the things or events properly.
- f. **Filtering in Messages:** Messages are filtered [changed] intentionally. We always try to defend ourselves or protect ourselves during some problems so that many times messages are changed by the inferiors
- g. **Closed Mind:** Most of the time our minds are closed or not able to learn new things. With old age or change in attitude this problem is observed. This is also a very barrier in communication.
- h. **Status:** Status create barriers in the employees. Higher or lower status create obstacles in thinking or mixing with people. People keep distance while communicating due to status barriers.
- i. **Perceptions:** The way we look at the world or attitude determines our Communication strategy. Wrong or negative perceptions can create difficulty in communication. People who have negative perceptions or think negatively look at everything or event negatively.

- j. Poor Retention:** ability to retain the message or remember is important. But if it is poor then communication becomes difficult.
- k. Interest and Attitudes:** Interests and Attitudes of people determines communication strategy. Lack of interest or wrong attitude can lead improper communication.
- l. Day-Dreaming:** Many students have habits of dreaming or thinking about something else when some lecture is going on or talk is going on. This obstructs the communication and messages are not reached properly.

4. Socio-Cultural Barriers: Due to differences in social status or cultural barriers many times we face differences in communication. These are socio-cultural barriers. Culture is way of life, values or principles. Cultural differences between people can create barriers. Different religious practices are followed around the world. Due to many time differences in the culture can create misunderstanding in communication. Due to globalization and liberalized policies in business, people around the world are travelling and working in multinational corporates or companies. This led to mixing or intermingling between people. But due to differences in language, religious practices, dressing styles, food habits many times people get confused and are not able to understand each other properly. This led to communication failure. The following are examples of socio-cultural barriers.

- a. Concept of Time:** The time is not perceived similarly across the cultures. In Western culture Time is important. In Asian culture Time is taken leisurely. The concept of punctuality differs in cultures.
- b. Assumptions about social strata or caste system.** Caste system is observed in India. But in every culture some kind of differences in the society in the form of religion, community differences or sects or class division is observed. We should not always assume someone superior or inferior because of caste or class system.
- c. Etiquettes and Mannerisms:** In every society or cultures different types of mannerisms are observed. This includes rule of behaviours or how to follow certain code of conduct. Different forms of address and salutation or different methods of dressing [formal or informal wearing] are observed. This can be confusing sometimes. Food preparation method or serving

methods are not the same. There are certain expected norms of eating food in meeting. These are called dining etiquettes.

- d. **Body Language** [Non Verbal Behaviour] methods around the world are not same. There can be misunderstandings because of this.
- e. **Proximity** [Concept of Space] differs from culture to culture. In some culture close distance between people is not approved. In some culture close distance is accepted.
- f. **Value system** is not same across the cultures. Values or good behaviour or ethical principles guide in our life. But the methods of these value system is not same around the world.

5. Organizational Barrier:

- a. **Status Relationship:** Organizational structure creates a number of status levels in the organization (e.g. CEO and supervisor). If the upper and higher level/state does not share a good relationship communication between them will be obstructed.
- b. **One way flow:** When sender and receiver both in the organization don't participate in communication, it will not be effective.
- c. **Complex Organizational Structure:** that is several layers of supervision long communication lines organizational distance between workers and top managers These many formalities may create problems in communication
- d. **Rigid rules and regulations:** Lots of Do's and Don'ts obstruct the communication flow.
- e. **Distance Barriers:** If the receiver is too far in an organizational structure, sender avoids communicating.

6. Personal Barriers:

- a. **Attitude of superiors:** If the attitude of superiors is fine, there is no problem in communication but if the attitude is unfavourable, there is a greater possibility that messages would not flow adequately from/or to superior.
- b. **Lack of confidence in subordinates:** When the subordinates are less competent or less confident they don't flow information upwards.

- c. **Insistence of proper channel:** That means when superiors do not like by passing any information in order to prove their own importance, it obstructs communication.
- d. **Ignoring Communication:** Sometimes even superiors do not like to communicate properly with subordinates as to maintain status quo, it creates problems.
- e. **Filtering of Information:** Sometimes the sender intentionally screens the information for passing only such information which will look favourable to the receiver.
- f. **Shortage of time:** “No time”, “lack of time” etc. phrases are used by superiors and they do not communicate properly.
- g. **Barriers in Subordinates:** They dislike showing mistakes. People generally resist new ideas. Unwillingness to communicate upward a message on personal grounds. Lack of incentives and encouragement. They suppress information relating to their failure.
- h. **Miscellaneous Barriers:** Sometimes sheer fear and distrust may effective communication flow badly. Sometimes the sender may fear of the consequence of passing the information by making a preconception and it acts like a barrier.

HOW TO OVERCOME THE BARRIERS?

- **Physical Barriers:** By overcoming defects in communication system, by controlling noise, physical distance Physical Barriers can be overcome to some extent. Though we can't overcome some physical barriers such as time, distance or defects in machine, we can control Physical barriers to some extent. Efforts are required by all people to overcome physical barriers.
- **Language Barrier:** Lot of efforts are required to overcome Language Barriers. There should be respect for any language before learning new language. It requires many efforts to learn foreign language. So learning the correct pronunciation and accent and improving vocabulary [word power] we can master a language. We have to improve listening skills and then only language can be understood properly.

- **Psychological Barriers:** It is true that psychological barriers are difficult to overcome or solve. There must be acceptance of one's mistakes or limitations. This will lead to understanding of human life. People do not accept their faults or limitations. This leads to many problems. We have to be humble and respectful towards other people. Many times the sender and the receiver are not in proper frame of mind. So this creates problems in Communication. Misunderstanding, lack of interests, mental and physical disturbance can cause problems because of that. Efforts should be taken by superiors and all reporting people to overcome the problems.
- **Socio –Cultural Barriers:** These Barriers can be overcome by proper study of other cultures. It is very much essential to learn new cultural values and observing people and accepting their cultures. We have to develop open mindedness in this regard. We have to understand the mannerisms of other people.

TYPES OF COMMUNICATION:

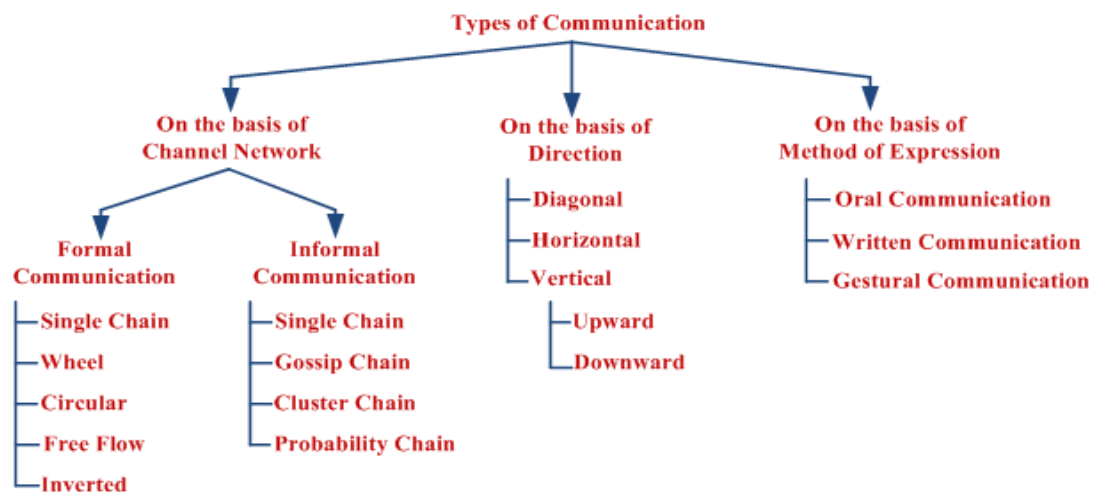


Fig 5: Types of communication.

ON THE BASIS OF CHANNEL NETWORK

1). Formal Communication: It refers to the official communication which takes place following the chain of command in the organization.

The organization structure reflecting superior subordinate relationship determines the flow of formal communication.

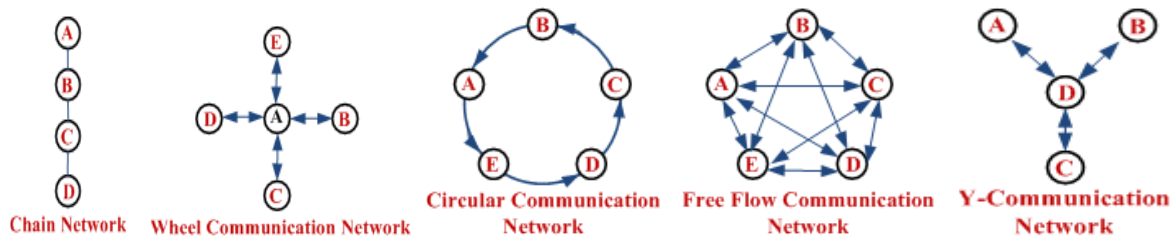


Fig 6: Formal Communication.

- a. **Single Strand or chain Network:** As shown in figure, here one person communicates with one person only. It can flow from top to bottom or bottom to top in a line.
- b. **Wheel Communication Network:** As shown in figure, the wheel network represents the communication pattern under which the subordinates can communicate with and through one manager.
- c. **Circular Communication Network:** In case of circular network, the message moves in circle. Each person can communicate with his two neighboring colleagues only.
- d. **Free Flow Communication Network:** In such an communication network, everyone is free to communicate with anyone or everyone in the organization.
- e. **Y Communication Network:** This network is centralized with information flows along the pre-determined paths. Such networks may be appropriate for simple operations requiring little interaction among the members of the group.

2). Informal Communication (Grapevine): Communication between individuals and groups which are not officially recognized are known as informal communication. It consists of ideas and information resulting from social interaction among the members of an organization.

Types of Grapevine Chain:

- a. **Single Strand Chain:** Communicating with another individual through the interviewing.
- b. **Gossip Network** The individual communicates with every one without any particular selection.

- c. **Probability Chain:** The individuals communicate randomly with others according to the law of probability.
- d. **Cluster Chain:** Here the individual communicates with only those individuals whom he trusts.

ON THE BASIS OF METHODS OF EXPRESSION:

- **Oral Communication:** It involves the exchange of messages with the help of spoken words. Oral communication may take place by two means:
 - a. **By face to face contacts:** E.g. oral orders, personal interviews, lectures, group discussions, social gatherings, etc.
 - b. **Through mechanical devices:** E.g. signals, telephones, intercom systems, mobile phones, fax, emails, etc.
- **Written Communication:** written communication is transmitted by written words in the form of letters, memos, circulars, bulletins, reports, instruction cards, manuals, magazines, handbooks, etc.
- **Gestural Communication:** Communication through gestures or postures is often used as a means to supplement verbal communication.

DIFFERENCE BETWEEN ORAL AND WRITTEN COMMUNICATION:

Oral Communication		Written Communication	
1.	It is expressed through spoken words.	1.	Communication is expressed in writing.
2.	It takes less time.	2.	It takes more time.
3.	It may not be precise.	3.	It can be very precise.
4.	It may not be complete.	4.	It is generally complete.
5.	It is generally informal in nature.	5.	It is generally formal in nature.
6.	Oral message may be taken casually.	6.	It is generally taken seriously.
7.	Oral message may not be verifiable.	7.	Written message is verifiable from the records.

DISTINCTION IN GENERAL & TECHNICAL COMMUNICATIONS

General Communication		Technical Communication	
1.	General Communication includes day to day gossips, casual talks among peers.	1.	All communication, written or oral, done in the professional arena to a specific audience for specific purpose.
2.	It is done without reference to any specialized techniques, terminology and format.	2.	It is specifically in a proper format.
3.	It doesn't need any boundaries and rules.	3.	It is for specific audience only.
4.	It could be vague, suggestive, equivocal, and very plain. It hasn't a set pattern of communication.	4.	The writing is concise, clear and accurate. It conveys technical, complex or specialized information.
5.	It is elegant and creative and can be poetic, literary or generic.	5.	It is strictly technical and organized in a way that is easy for a non-technical reader to understand.

REQUISITES OF TECHNICAL COMMUNICATION:

- **Proficiency in Subject:** The command on subject is the backbone of an effective technical communication.
- **Proficiency in Language:** Proficiency in language is must. Language error in technical writing is never entertained.
- **Proficiency in Structuring:** To synchronize the thoughts and information in a logical order and to ensure coherence is the main intention of technical communication.



Fig 7: Requisites of technical communication.

ELEMENTS OF TECHNICAL WRITING:

- **Simple Diction:** “Diction means words”. And style determines the choice of words. Diction is the art of speaking clearly so that each word is clearly heard and understood. Usage of familiar words is encouraged for clarity.
- **Short Sentences:** Vague and ambiguous states are not appreciated in technical communication. It should be straight, to the point and clear.
- **Order:** Sequence of idea makes big difference, Ideas placed in correct sequence brings clarity and avoid confusion. Hence it should be logically arranged.
- **Punctuation:** It can suggest the right tone, stress pause, emotions to the written passage.
- **Objectivity:** One must use an objective tone rather than subjective. Technical communication should be expressed in plain objective language which can be understood easily.

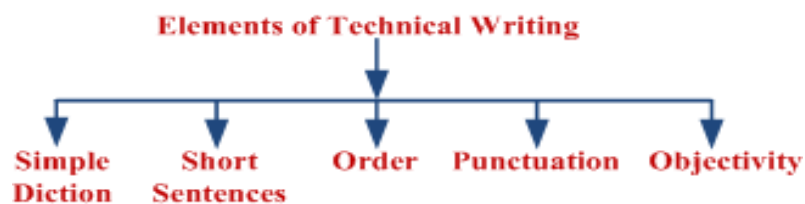


Fig 8: Elements of technical writing.

FEATURES OF TECHNICAL COMMUNICATION:

1). Plain language and Relevant Content:

- a. Purpose of technical communication is to inform, instruct or persuade a reader.
- b. Language need to be plain, straight forward with an easy understandable terminology.

- c. A good technical document doesn't encourage unusual or unreasonable content and loquacious phrases. Unnecessary words or content has to be avoided.

2). **Specific Style:**

- a. Technical documents have a set style based on specific format that straight away reach purpose of writing.
- b. Paragraphs are short, focusing on only one idea and clearly demarcated with headings and sub headings, tables and examples.
- c. Intention of technical communication or writing is to inform rather than to entertain its style. Personal pronoun should not be used. For instance: "I/We took measurements." Rather than using this statement we should write "Measurements were taken".

3). **Specific Format:** Technical document enables the reader to assimilate information at a glance. Technical document could be in the format of various letters, report, technical, manual, memorandums, emails, fax or any presentation. For instance: Various journals and government documents require specified:

- Font
- Line and paragraph spacing
- Margins
- Number of words
- Figures and graphics
- Division of section, etc.

4). **Analysing Audience:** In technical communication, the analysis of audience is a must. The communicator must keep in notice whether the audience is Technical (Engineers, Scientist, Doctors, etc.) or Semi Technical (Staff of admin, clerk, secretary, etc.) or Non-Technical (General public with a combination of technical, semi technical, non-technical, customers, clients, patients, etc.).

The document must be designed such a way so as to meet the needs of its specific readers in terms of subject matter, vocabulary, level details and writing style.

Perceptible Aids or Visuals Aids:

Perceptible aids enhance the effectiveness of technical presentation. It said that a picture is worth a thousand words.

People learn and retain information better that is presented to them visually than that which is provided verbally.

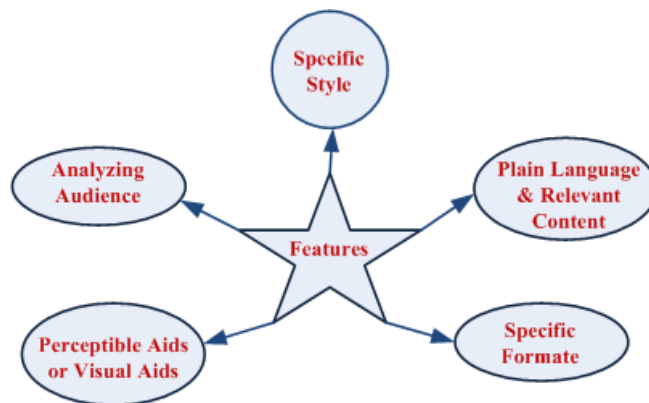


Fig 9 : Features of communication

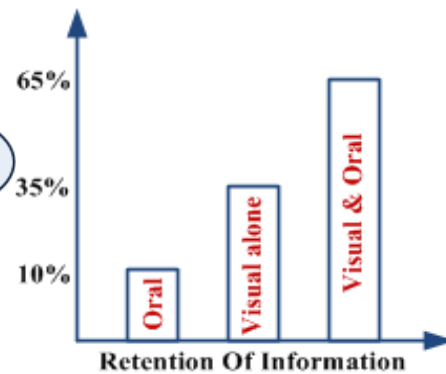


Fig 10 : Retention of information

OBJECTIVES / PURPOSE OF COMMUNICATION:

- **Advice:** Managers often give advice to their subordinates and colleague on both personal and official matters.
- **Counselling:** When the subordinate is in difficulty or under stress, e.g. an employee with family problem, not able to do his job properly, in such situation psychological counselling can help a lot in modifying his behaviour under stress and overcoming his problem.
- **Persuasion:** To get favourable response and influence people's behaviours and attitude.

E.g. 1).When dues have to be collected from an unwilling customer.

2).When goods have to be sold despite competition. 3).When employees have to be convinced of the need for greater efforts.

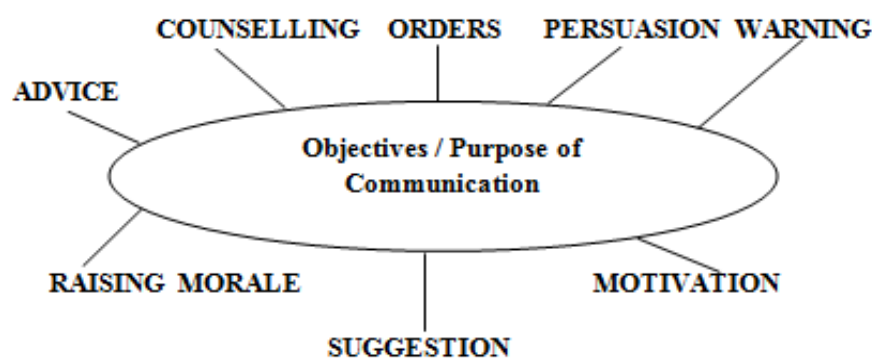


Fig 11 : Objectives of communication

- **Suggestion:** Very mild and subtle form of communication both upward and downward.
- **Motivation:** Suggestion schemes, joint consultation praise for outstanding efforts, etc. help motivation. Process of inducing people to work hard for achieving organization goals.
- **Raising Morale:** By creating an atmosphere of mutual trust, feeling of reassurance.
- **Warning:** To ask the employees to abide by the rules and regulations and work with dedication. E.g. no smoking, outsiders are not allowed.
- **Orders:** It is an authoritative communication. The downward flow of communication is dominated by orders.

ORAL COMMUNICATION: Oral communication involves exchange of message with the help of spoken words.

Methods of Oral Communication:

- **By face to face contacts:** Face to face conversation is the most natural way of transmitting the message. E.g. oral orders, face to face interviews, lectures, group discussion, social gatherings, etc. It is frequently used in our daily life.

Advantages: 1). Better listener's attention. 2). More forceful effect through facial expressions. **Disadvantages:** 1). Inattentive listening. 2). Difficulty arranging personal contacts at distant place. 3). Unproductive in unhealthy relations.

- **Through mechanical devices** (e.g. telephone, teleconferencing, intercom system, cellular phones).

Two Types of Oral Communication:

- **Listening:** Any discussion of oral communication is incomplete without considering listening as an important tool to communication. Speaking and listening, listening and speaking go hand in hand. No oral communication can be effective without proper listening.
- **Presenting:** Along with listening skills, ability presents ones viewpoint is also important for effective oral communication. In order to be a good presenter, one should present facts and not opinions, keep it to the point, keep the listener's interest in mind, ask for feedback and answer questions honestly.

GOALS OF ORAL COMMUNICATION:

- To inform the listener
- To persuade the listener
- To build good will.

ADVANTAGES OF ORAL COMMUNICATION:

- Oral communication is more effective because of direct contact between the communicator and one who is being communicated.
- Oral communication helps in getting quick response from the receivers.
- Oral communication particularly face to face contacts can be made more effective by supporting them with gestures and demonstrations.
- Oral communication is faster as compared to written communication.
- Verbal communication provides for greater flexibility since no record of verbal communication is kept.
- Verbal communication is relatively less expensive.
- Spontaneous.
- Midway correction is possible.

LIMITATIONS OF ORAL COMMUNICATION:

- Oral communication may not be effective when the communicator and communicate are talking from a long distance with the help of a mechanical device.
- Oral communication is not feasible when the information to be conveyed is very lengthy because the listener will not be able to understand the whole information.
- Oral communication is not possible when parties to communication are at distant places and no means of communication is possible.
- Oral communication cannot serve as an authentic piece of record until the conversation is audio or video recorded.
- Oral communication may give rise to conflicts in certain situations because of immediate response from listener.
- Oral communication in the form of face to face meeting may prove to be time consuming and costly.

PRINCIPLES OF SUCCESSFUL ORAL COMMUNICATION:

- **Clarity of expression:** Pronunciation and accent of the speaker are important in oral communication. The speaker should speak clearly and slowly.

- **Be precise:** In oral communication, the words should mean what they should.
- **Choice of words:** Sometimes words carry shades of meaning and as such the speaker may use them in one sense while the listeners may understand them differently. E.g. The speaker says what a clever idea” meaning “stupid idea” while the listener may take it as a “clever idea”.
- **Avoid Hackneyed phrases:** Hackneyed phrases are those which have been used so often that they have lost their impact and have become dull. E.g. “so then”, “You see”, “You know”.
- **Avoid communication overload:** The messages are likely to be lost if the speaker speaks for a long time. Hence, it is said – *Kill your speech before it dies*.
- **Listener’s Interest:** A speaker should also consider the listener’s point of view, the type of audience, its culture, education and level of intelligence.
- **Sequence:** The speaker should make his speech effective and forceful by arranging various ideas in a logical sequence.
- **Strong Conviction:** The speaker should think carefully, speak sincerely, and plan intelligently in order to make his speech effective.

NON VERBAL COMMUNICATION:

By non-verbal communication, we mean all communication that involved neither written nor spoken words but occurs without the use of words.

Types of Non Verbal Communication:

- **Kinesics (Body Language):** Kinesics means the study of the body language i.e. the study of the role of body movements such as winking struggling etc. in communication.

E.g. nodding head up and down conveys agreement, while shaking head from side to side shows disagreement.

Elements of Body language: Personal appearance, facial expressions, posture or body positions, eye contacts.

- Facial expressions & eye contacts** are mirror to our feelings. Sadness, happiness, hope, despair, anxiety, helplessness, anger, etc. can be exhibited through the facial expressions and eye movements. Some examples are :
 - Sparkle, wide eyes & smile means happiness.
 - Wrinkled forehead with pulled eyebrows signifies anger.

- Gazing at something for a long time shows interest.
 - Short period eye contact means timidity, nervousness shyness etc.
 - Avoiding gaze during the conversation means no interest in the matter.
 - Dilated pupils & raised eyebrows means surprise / amazement.
- b. Personal appearance:** It creates the first impression. One cannot move to office dressed shabbily or attending a party. A smart active look is more acceptable while casual looks means informal or carelessness. Clothing couples it the demography can be determined through it like age, interest, hobby etc.
- c. Gestures:** The movement of other body parts apart from head / shoulders also convey some meaning. e.g. pounding on desk means anger, pointing finger means threatening/ accusing, thumbs up means all is ok.
- d. Body postures:** The way one walks, sit or move tells the physical and emotional state. e.g.
- Aggressive fast walk may be interpreted as anger.
 - Walking lethargic / loosely / dragging feet indicates sickness / tiredness / weakness / unwillingness.
 - Walking with straight & firm steps, holding head straight with straight spine means confidence.
 - Walking with dropped shoulders means lack of interest / confidence.
 - Standing cross armed or with the support (chair) means defensive.
 - Standing with the hands on the hip means aggressiveness.
 - Sitting with shaking legs / rubbing hands (standing too) / pressing fingers shows the state of confusion / nervousness / anxiety.

- **Proxemics (Space Language):** It is the space language which deals with the way people use physical space to communicate.

Edward T Hall has described human relationships in terms of four kinds of distances.

- a. Intimate:** Physical contact to 18 inches
- b. Personal:** 18 inches to 4 feet
- c. Social:** 4 feet to 12 feet

- d. **Public:** 12 feet to the range of eye sight and hearing.

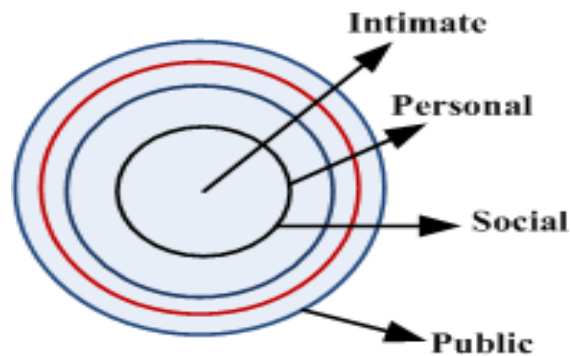


Fig 12 : Hall's description of human relationships

- **Chronemics (Time language):** It involves the meaning given to time dimension when we are communicating it to someone.

E.g. Completion of task within a specific time period communicates sincerity, hard work and loyalty, reliability whereas frequent late coming and absenteeism may communicate unreliability laziness and disinterestedness of person.

- **Haptics (Touch Language):** It is a study of low physical contact or touch s used to communicate the ideas and feelings.

Modes: Stroking, hitting, patting, shaking hands, etc. E.g. A gentle touch of a friendly hand on the shoulders can communicate encouragement; a limp shake hand indicates lack of interest or friendship for them.

- **Para Language (Like Language):** Paralanguage is the study that how the speaker verbalizes. It shows as how the words are spoken or uttered, voice and word stress. Vocal tones indicate meaning to others such as that we are sad, happy, excited, and nervous and so on.

Para Language can be studied under two heads:

- **Voice:** It refers to the quality of voice.
 - a. **Pitch Variation:** Rise and fall in pitch is also a way of non-verbal communication, expressing one's anxiety, excitement, etc.
 - b. **Speed:** The speed of articulating words carries meaning in oral presentation. E.g. if too much fast speed or too much low speed, it irritates the listener.
 - c. **Pronunciation:** Mispronunciation leads to the bad effect on one's speech.

- **Word Stress:** Meaning conveyed by the verbal utterance very much depends on the word on which the speaker brings about a change in pitch pattern, i.e. which word is stressed.

FEATURES OF PARA LANGUAGE:

- Para language is a mid-path between verbal and non-verbal communication.
- Para language uses various signs and signals to communicate between people.
- Para language is not a language but like a language.
- Para language tells the communicators on “how to communicate” and not “what to communicate”.

ASSIGNMENT NO 1

1. Communication is the process of sending & receiving information. Explain the communication process in the light of this statement. Draw the communication cycle.
2. How is feedback important in communication? Give two examples of delayed feedback.
3. What do you understand by the term technical communication? Explain its importance giving suitable examples.
4. How general purpose (writing) communication differs from technical communication (writing).
5. How do kinesics enhance your verbal communication? Explain giving examples.
6. Do you think that you can manage any situation by only non-verbal cues? Give examples.
7. Proxemics play a prominent role in communication. Justify
8. Write the possible solution to overcome these barriers:
 - a. Dealing a talkative customer
 - b. Dealing with the employees working in isolation
 - c. Working in noisy surrounding
 - d. Dealing with a frustrated & angry client
9. Describe how the whole process of communication gets disturbed if any of the elements is changed or tampered?
10. Describe how language is the integral part of the communication process?

TUTORIAL

1. Identify the barriers that lead to the miscommunication in the following scene.
What the manager should do to overcome these barriers.



2. Identify the barrier that describes each of the following situations (explain):
 - a. 'Every time I have a meeting with Mr. Srivastava I end up disagreeing with him about a particular issue.'
 - b. *Manager*: 'Rimpaa where is the report which I asked you to submit on the academic matters of the institute.'
Rimpaa: 'I do not remember you asking me to submit any report.'
 - c. 'The room is horrible to work in. I am able to hear everyone around, and there is no scope for privacy'
 - d. 'If you want some more information from me, ask only the specific questions and do not waste my precious time! '
 - e. 'It is quite tedious to manually work on the student's records, but I fear using the computer as it might corrupt all our data '
 - f. *Teacher*: 'Students, where is the report which I asked you to submit fortnightly.'
Students: 'But you asked us to submit it once a month!'
3. Give at least two situations (each) for the barriers mentioned below :
 - a. Physical barrier
 - b. Negative tendencies
 - c. Wrong inferences
 - d. Cultural / ethnical / linguistic differences

SOURCES

1. Buzan, T. with Buzan, B. (1995) The Mind Map Book, revised edition. London: BBC Books.
2. Cairncross, F. (1997) The Death of Distance: How the Communications Revolution will Change Our Lives. London: Orion.
3. Cameron, D. (1995) Verbal Hygiene. London: Routledge.
4. Cameron, D. (2000) Good to Talk. London: Sage
5. Burgoon, J.K., Buller, D.B. and Woodall, W.G. (1996) Nonverbal Communication: The Unspoken
6. Dialogue, 2nd edition. New York: McGraw-Hill.
7. Dwyer, J. (1997) The Business Communication Handbook, 4th edition. Sydney: Prentice Hall.
8. Hartley, P & Bruckmann, Clive G, (2007) Business Communication, revised edition. New York, Taylor & Francis e Library.
9. Technical Communication – Principles and Practices by Meenakshi Raman & Sangeeta Sharma, Oxford Univ. Press, 2007, New Delhi.
10. Personality Development and Soft Skills by Barun K. Mitra, OUP, 2012, New Delhi.
11. Spoken English- A Manual of Speech and Phonetics by R.K.Bansal & J.B.Harrison, Orient Blackswan, 2013, New Delhi.
12. Business Correspondence and Report Writing by Prof. R.C. Sharma & Krishna Mohan, Tata McGraw Hill & Co. Ltd., 2001, New Delhi.
13. Practical Communication: Process and Practice by L.U.B. Pandey; A.I.T.B.S. Publications India Ltd.; Krishan Nagar, 2014, Delhi.
14. Modern Technical Writing by Sherman, Theodore A (et.al); Apprentice Hall; New Jersey; U.S.
15. A Text Book of Scientific and Technical Writing by S.D. Sharma; Vikas Publication, Delhi.
16. Skills for Effective Business Communication by Michael Murphy, Harward University, U.S.
17. Business Communication for Managers by Payal Mehra, Pearson Publication, Delhi.
18. wps.prenhall.com/wps/media/objects/5547/5681092/pdfs/

