Chapter 1

Technical Communication

What is communication?

- The term 'communication 'refers to the exchange of human thoughts, message and information by various means such as speech, visual signs, writing or certain behaviors.

- Crystal(2003) defines communication as the transmission and reception of information or message between source and receiver using a signaling system.

- For any successful communication; there should be at least sender, message and recipient (receiver). Unless receiver is present in the communication, the whole process is not complete. It means the receiver must understand the message of the sender in a successful communication.

- We communicate not only through language of speech but also use body language, gesture, posture etc. as a means of communication.

- The word communication has been derived from the Latin word 'communis' which means common'.

# After comprehensive study of this chapter, you will be able to:

- Define communication
- List and discuss the concept of technical communication
- Create styles for readability
- Write technical documents with computers

- The interaction between two or more people, either verbal or non verbal , leads to an understanding that forms the basis of communication. Human behavior and social relationship are the outcomes of the communication.
- To involve in communication is an activity of conveying information through the exchange of thoughts , message or information by using various means of communications like speech, visuals, signals, writing and behaviours.

What is Technical Communication?

- Technical communication is the process of transmitting facts and information to defined audience for a specific purpose. Generally it is writing for understanding. Technical writing is known as written communication for and about business and industry.

- It focuses on product and services. It is primarily composed in the work environment for supervisors, colleagues, customers and general readers.

- Moreover technical writers present information in science, medicine and electronics, computers or other technical areas on a professional level , backed up by data and facts, so the information is complete and accurate.

Model of communication

Information source

Transmitter

Signal

Noise source

Receiver

Destination

Received signal
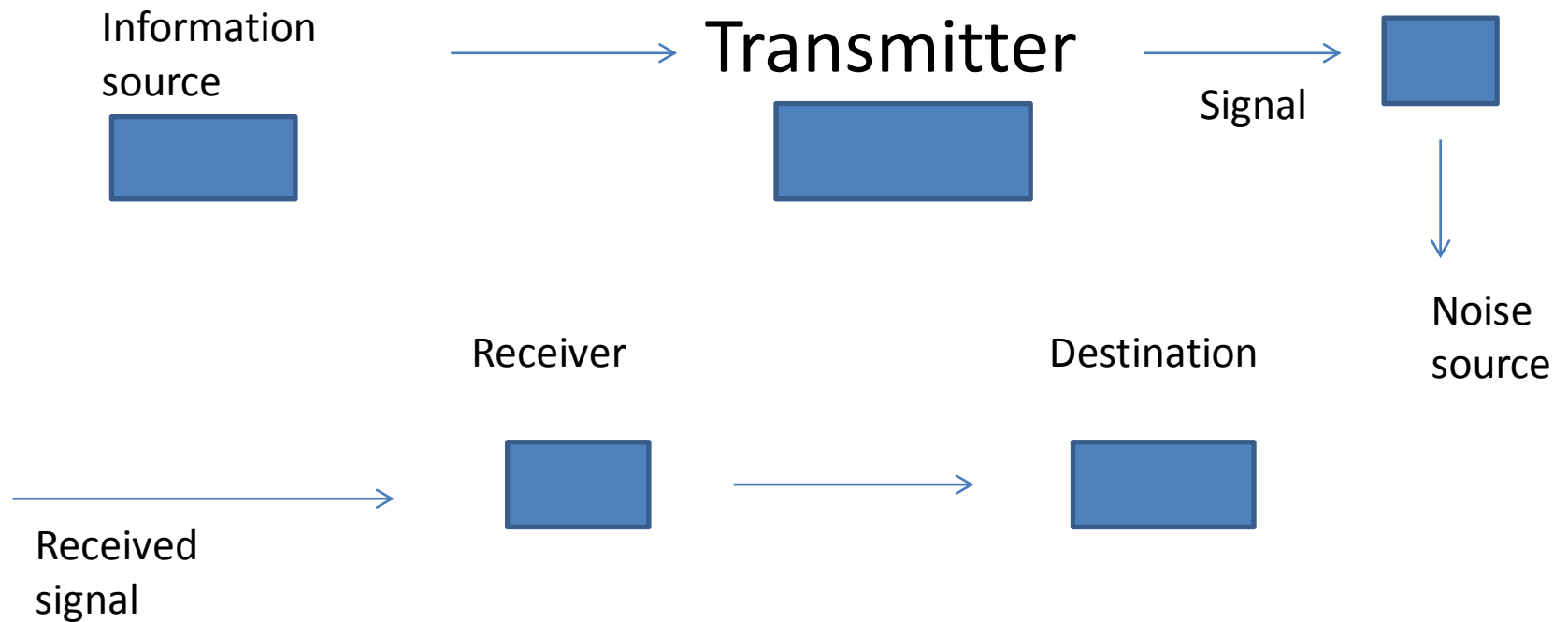
Elements of Communication

- **Source**: It is material or thing that provide information to people. Through the source, the communication starts. It may be people, radio, TV, etc.

- **Message**: The source provides message to the receivers.

- **Channel:** Messages can be provided from the source to the receiver through different channels. For example: messages may be broadcasted from TV, radio, e-mail, internet, etc.

- **Receiver:** It is the people who receive the information.

- **Noise:** Noise refers to the sound or disturbance caused during the transfer of message from source to receiver using different media.

- **Feedback:** It is the receiver's reaction or response to the sender's message.

The 7C's of Communication

- Effective communication is possible only when we follow the 7Cs of communication.

1. **Correctness(**grammar, mechanics, punctuation

2. **Completeness**(complete and required information)

3. **Conciseness**(fewest words/ short and simple)

4. **Clarity** (clear which can be understandable easily)

5. **Courtesy(** greeting, polite language, manners creates special tone in writing and speaking)

6. **Consideration:** consider receiver's interest

7. **Concreteness:** based on facts, figures and objectivity.

Major Forms of Communication

- Any communication must go through the linear chain of sender-message-Receiver or Speaker-spoken- Hearer or Writer-written-Reader. Communication in general, can be done by adapting our five sense organs through speaking, listening, looking, touching, smelling, testing and so on.
- These forms of communication are listed below:

These forms of communication are listed below:

Forms of communication	Sense organs	Functionas
Aural Communication	Ear	Hearing
Visual Communication	Eye	Seeing
Tactile Communication	Skin	Touching
Olfactory Communication	Nose	Smelling
Gustatory Communication	Tongue	tasting

- However for our purpose there are forms which are considered the major forms in terms of organizational communication. They are internal operational , external operational communication and personal communication as discussed below:

Internal Operational Communication: The communication that takes place within an organization, during the process of work is known as Internal Operational Communication. This kind of communication is structured communication. By structured, we mean that such communication falls under the operational plan of an organization.

External Operational communication: The work related communication that a person does with people and groups outside the organization is external operational communication. Like internal communication, this belongs the business communication with its public suppliers, service companies, customers, media and so on.

Personal Communication: Personal communication is not a component or part of an organization's plan of operation. It is all that incidental exchange of information and feelings which human beings engage in wherever they come together.

Dimensions Of communication

- Downward Communication: The communication that flows from superiors to subordinates is called downward communication. It carries messages like job instruction , procedures and practices, feedbacks ,etc.

- Upward Communication: Communication that flows from lower level to higher level in an organization is called upward communication. The subordinates use upward communication to convey their job related problems, fellow employees and their report to superiors.

- Horizontal Communication: The flow of messages across any functional areas of the same levels of an organization is called horizontal communication. The communication between peers, between managers, same level officers etc.

Questions

- Define communication and highlights its importance.

- Discuss the model of communication along with its elements briefly.

- What are the major forms of communication?

- What is communication? Explain the dimension of communication.

- What are the 7Cs of communication?

Types of Communication

- **Verbal Communication**
- Oral communication
- Written communication

- **Non verbal Communication**
- **Kinesics (body language)**
- **a. Personal appearance**
- **b. Posture**
- **c. Gesture**
- **d. Facial expression**
- **e. Eye contact**
- **Proxemics (space between sender and receiver)**
- **a.   Intimate- husband/wife, child/parents,lover/beloved,etc**
- **b.   Personal-friends and relatives**
- **c.   Social- neighbours, colleagues**
- **d.   Public- public on seminars, conference**
- **Chronemics- It is the way that our time speaks. Eg: interview time**
- **Haptics- touching behaviour of non-verbal communication(hugging, hand shaking,etc)**
- **Olfactics-non verbal communication related to the sense of smell**
- Para-lingual- **non verbal communication related to time, rhythm, *tone, speech, etc.***
- *Silence- turn taking*

Barriers to Effective Communication

- **Language barrier** (when people don't know each other language)
- **Cultural differences**
- **Emotions**(anger/fear/stress)
- **Political beliefs, values and attitudes**(different political background)
- **Biases** (different age, gender ,disability)
- **Physical barrier** (physical distance)
- **Use of jargons and technical terms**
- **Lack of attention, interest, distractions to the receiver**
- **Overdose of information**
- **Poor communication skill**

Style For Readability

- It can be used to announce or warn(notices), instruct(operating instructions), persuade (advertising) and inform (reports and articles)
- The writers should adjust length according to the readers.
- Use flexible sentence length
- Limit Sentence content
- Be economic on the use of the words
- Determine emphasis in sentence design
- Clear and accurate information

Writing with a computer

- Using a Word –processor

The majority of writers now use computers(as word –processors) for their writing. The use of computers does not change the principals of good writing, but it does make achieving them easier in many ways. The main advantage of the word processor is the ease with which mistakes can be corrected. But computers are not thinking machines. Student just may use copy and paste and lose creativity.

Computer-aided Writing

- The spell-checker tool

- Grammar checker tool

- Words Design

Writing Elements

- In this section, we discuss about technical definitions and technical descriptions
- **Technical Definitions:**
- Definitions of terms are the foundations of technical writing. A precise set of terms is used in technology and only with a common understanding of those terms can information be communicated accurately.

• **Types of Definitions**

- 1. **Informal Definition**: The definitions which is marked by the absence of formality and suitable to characteristics of ordinary, casual and familiar speech or writing is known as informal definition.
- 2. **Formal Definition:** The definition which is relating to form or essence of a thing concerning structure , relationships or arrangement of elements rather than content is called formal definition.
- 3. **Dictionary Definitions:** Dictionary are written for certain audiences. A small pocket- sized dictionary may provide only the most commonly words and definitions. Similarly, technical or scientific dictionaries may offer only technical terms and definitions. So, a technical writer should use dictionary definitions according to the reader or audience who need to read technical information.
- 4. **Extended Definitions**: Some objects or concept require more than one sentence, definition and such definition are called extended definitions. It may be as long as a paragraph or even several pages to fully define a complex concept or object.

- Technical Descriptions
- Technical descriptions can be part of a larger report or a report by itself. It is especially important when the report concerns a device, tool, process or concept that is new or unfamiliar. Descriptions typically include a definitions of the object or idea, an orientation to the overall characteristics followed by detailed descriptions of the parts in a logical order.
- 1. Comparison: Technical descriptions sometimes compare unfamiliar objects or concepts to familiar objects or concepts. It technology people need to express values, shapes, angles and joints in concrete meaningful terms.
- 2. Analogies: Analogy is a formal comparison based on the resemblance of two unrelated objects or ideas,
- 3. Technical slang: Technical writers should avoid technical slang and words within a specialized area that are unfamiliar to the public.
- 4. Physical Descriptions
- 5. Process Descriptions

Writing Descriptions and Explanations

- Descriptive Writing is the process of using precise details to show the way something looks, tastes, smells, sounds or feels.

- Write Descriptions Stage by Stage:

- Description writing should be based on different stages that a process or action gets into detail layer by layer. General statements, overviews and definitions at first , they orient the readers mind. The following basic questions should be answered while writing a description.

- What is it like?

- What is it used for?

- What does it consists of?

- How does it operate?

- How do you use it?

- Use logical order in description:

- The logical order for description starts with familiar and general, and moves by stages towards the specific and detailed.

- Explanations: Explanations go beyond description. The explanation goes further and says why and how something works; however, it is similar to writing description. In explanation, first give a general definition in terms of aim, purpose or the result of the process or system.

Writing In Examinations

- Effective writing in an examination should meet the following criteria.

- Relate your new information carefully to your readers; existing level(s) of experise.

- Discard information that you have available but that would be irrelevant to your readers' immediate need.

- Avoid Jargon or inflated vocabulary that your readers will not know or need.

- Acknowledge the following points when you are writing in examination.

-Give accurate information

-Introduce specialist terminology

-Follow pattern of effective writing

Examinations in Technical Writing

- Summary Writing

- Report Writing

- Memo Writing

- Business letters

- Official letter/application, etc

Article Writing

- An article is a piece of writing usually intended for publication in a newspaper, magazine or journal is written for wide audience, so it is essential to attract and retain the readers' attention. It may include amusing stories, speech and descriptions. It can be formal and informal depending on the targeted audience

- The articles should be written in an interesting manner. It should give opinions and thoughts as well as facts. It is in a less formal style than a report. An article can describe an experience, event, person or place, present an opinion or balanced argument, compare and contrast. It also provides information, offers, suggestion and advice.

Parts of an article

- An article should have an eye catching title which attracts the readers' attention and suggests the theme of the article. In addition, it should have subheadings before each body paragraph of necessary.
- Introduction
- Main Body
- Conclusion

Parts of an article

- *1. Title:* The title should be eye-catching. It should attract the attention of readers and suggest a theme. The article can also have subheadings before each paragraph.
2. Introduction: An Introduction defines the topic to be covered and maintains the reader's attention. It usually contains a topic sentence which is elaborated in the next paragraphs.
3. Main Body: It contains two or more paragraphs in which the topic is further developed in detail. In this section, the arguments and facts, etc are included in this section.

- *4. Conclusion:* In this section, the topic is summarised or the final opinion, suggestion or comment is provided.

- **Important Points:**
- For article writing, it is paramount to consider the following points.
  Where it is going to appear- in a magazine, newspaper or journal?
  Who is the target audience- a particular group such as students or teenagers it adults or people in general?
  What is the purpose of the article – to inform, suggest or advice, compare and contrast or describe, etc
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- SAMPLES OF ARTICLE WRITING
- The Himalayan Times
- 28th chaitra 2077

- # 1. Learning About Life

- Studying abroad is a great experience as it provides you the chance to study the customs and culture of the host country and its people. Aside from the beneficial education, I got during three years stay in England, I additionally made a wide network of friends and enhanced my language skills. I learned how to face and manage different issues, and accordingly, have turned out to be an increasingly independent and self-assured person.

- I learned English Literature and along with this made many friends both at college and through the part-time work I had, improved my English. Despite the fact that I previously spoke the language quite well, when I initially arrived I experienced difficulty understanding a few accents and the slang or idioms that are in regular use. Presently I am a much more fluent and normal speaker, and my writing has improved, as well.

- The most concerning issues I confronted were discovering someplace to live when I did not know the zone well, getting the electricity and phone associated and by and large learning how to take care of myself. I had to become acclimated to shopping, cooking and doing the housework, as well as studying and working, so I swiftly learned the art of planning my time reasonably.

- In spite of the fact that adjusting to living in another country isn't simple, once the underlying homesickness and missing the family has been overcome, learning how to fight for yourself absolutely makes you an increasingly independent person and certainly more confident. My time abroad helped me develop as a person and now I believe I could handle any issue now in a quiet and sure way, without having to promptly approach somebody for their assistance.

» **The Importance of Moral Education**
The kathmandu Post
1st April 2022

- In our country, the introduction of a new education system is essential which must be in tune with our major values of national tradition and integration. This system can only nourish and strengthen our national consciousness.

- Human actions are judged as good or bad right from an ethical point of view. These judgments are always determined by the common moral standard of our society. In a nutshell, morality means honesty of characters, fairness in attitude, absence of evils like hatred jealousy, greed, telling lies, etc. This ultimate objective of education is to inculcate these human values in the students.

- Moral education can be given through value education curriculum by all boards and universities. At school level, the syllabus should include folk tales, stories of patriotism, biographies of great men, poems, parables providing valuable lessons for the student. As a character is necessary for individuals, it is also necessary for a nation. A nation cannot make progress if it has lost its character.

- This, the introduction of moral education from grassroots to university level is very necessary.

Sample Editorial

Cell Phones in Our Schools

When you were a kid did you ever have to call your mother and the school wouldn't let you? Kids today still have to call their mothers sometimes! But they school won't let them! Schools have become much more strict about the phones even when its an emergency sometimes. So that's why it would be a great thing if schools would let us have cell phones in school

Cell phones have been an issue in schools ever since they became a bug thing amongst teenagers. Sixth grader Amber H. says, "There could be an emergency that no one knows about and there might not be time to reach a phone!" In a lot of schools teachers take it to far. They take students cell phones even when they aren't using them and they are turned off and hidden so that they don't disturb anybody. Teachers shouldn't be allowed to take cell phones when they aren't even bothering anyone they are put on silent and they are hidden from other classmates! Just two years ago in October a girl took the case to the Supreme Court! She had had her cell phone taken away. It was in her backpack turned off not disturbing anyone when the teacher saw it and took it away and she never had it returned to her!

"I wasn't even using it and the teacher saw it in my backpack and confiscated it!" I tried to explain that I had to have it for later that day when my practice was over but she wouldn't listen!" So many students bring their cell phones to school for reasons like that! Only to have there teacher confiscate it!

Imagine this. ..... You live in lower Manhattan and your child goes to school nearby. It's September 11th, 2001. You are working quietly and suddenly you hear a loud bang and look out your window to see the North Tower of the twin towers in flames! At your child's school they have been alerted. Suddenly the intercom comes and the principal's voice blares over the speaker, "Students, get out your cell phones and call your parents immediately!" They could use the school phones but not only is there a line to use the phones the first person finds out the lines are dead. Sure they could use the cell phones that the very few students brought to school but so many students using five or six cell phones wouldn't you think that the battery would die out?! How would a child reach their parents to tell them that they are ok? They can't!

In emergencies like it is very important to have a way for a child to reach their parents! Sixth grader Mimi W. says, "We need them in school because if there was an emergency and we couldn't use the school phones for one reason or another we could pull out our cell phones!"

Report Writing

- Report writing is used <u>to help students improve their writing, analytical, and research skills</u>. It involves **writing a formal document** that presents <u>information, findings, or results of an investigation or research on a specific topic</u>. The report may include an introduction, methods, results, discussion, and conclusion sections. Furthermore, it gives the chance to **research a subject of interest** and **communicate their findings** and insights **in a formal, structured way**.

Structure of the Report

- 1 Preliminary material

- Title of the Report
- Table of contents(not always required)
- Abstract

- 2. Body of the Reprt

- Introduction
- Methodology
- Results
- Discussion
- Conclusion
- Recommendations(not compulsory)

- 3. Supplementary material

- References
- Appendices

Questions

1. Discuss the barriers of effective communication.
2. How do you make your writing readable? Explain.
3. How would you adapt your writing with a computer? Discuss different ways of writing with a computer.
4. Discuss different elements used in technical writing.
5. Write short notes on writing in an examination.
6. Prepare a newspaper article in about 250 words on'the use and misuse of internet.
7. Write an article on Technical Writing.
8. Write a short report in Technical Communication.

Thank you

Sixth Semester, 2077/78/79

Nepathya College