

Technical communication is the process of making and sharing ideas and information in the workplace as well as the set of genres such as letters, emails, instructions, reports, proposals, websites, and blogs, which comprise the documents you write. The Society of Technical Communications (STC) defines technical communication as a broad field that includes any form of communication that is about technical or specialized topics, uses technology such as web pages or help files, or provides instruction about how to do something.

Specifically, technical writing involves communicating complex information to a specific audience who will use it to accomplish some goal or task in a manner that is accurate, useful, and clear. Whether you write an email to your professor or supervisor, develop a presentation or report, design a sales flyer, or create a webpage, you are a technical communicator. The occupation of technical communicator stemmed from the need for technology-based documentation for military and manufacturing industries. As technology grew, and organizations became more global, the relevance of and need for technical communication emerged. In short we can say that:

Technical communication may be defined as the transmission and reception of facts, figures, ideas and all sorts of scientific and technical information by professionals of various fields such as engineering, medicine, science, research, education and space etc.

“Technical writing is the practical writing that people do as part of their jobs”, write Pauley and Riordan.

Requisites of technical communication:

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



Characteristics/Features of Technical Communication:

- **Plain language and Relevant Content:** Purpose of technical communication is to inform, instruct or persuade a reader. Thus, the language need to be plain, straight forward with an easy understandable terminology. A good technical document doesn't encourage unusual or unreasonable content and loquacious phrases. Unnecessary words or content has to be avoided.
- **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.
- **Analysing audience:** Technical and workplace documents address a specific 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.
- **Rhetorical, persuasive, purposeful, and problem-oriented:** Technical communication is all about helping the reader or user of a document solve a problem or compel others to act.
- **Professional:** Technical communication reflects the values, goals, and culture of the organization and as such, creates and maintains the public image of the organization.
- **Research and technology oriented:** Workplace demands often technical and workplace writing to be created in collaboration with others through a network of experts and designers. This teamwork depends on sound research practices to ensure that information provided is correct, accurate, and complete.
- **Ethical:** Technical communication is ethical. All workplace writers have ethical obligations, many of which are closely linked to legal obligations that include liability laws, copyright laws, contract laws, and trademark laws.

- **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.
- **Accessible:** A foundational exigent for technical communication practices is to create access to information and instruction for all users. We use our document design expertise such as word choice and organization as well as our knowledge of software tools to develop avenues that make information easier to understand and use. Technical communicators are uniquely positioned to use their tools and expertise to continue to develop inclusive environments.
- **Specific style:** Technical documents have a set style based on specific format that straight away reach purpose of writing. Paragraphs are short, focusing on only one idea and clearly demarcated with headings and sub headings, tables and examples. 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".

PURPOSE OF TECHNICAL COMMUNICATION

- To inform the worker and officials about what they are supposed to do.
- To collect some information vital to making of a decision.
- To make enquiries, fix responsibilities, demand explanation and enforce discipline.
- To advice or to seek advice.
- To appreciate a work or to express disapproval.

Difference between general and technical communication:

1. General Communication-

- a) For sharing feeling and emotions
- b) The purpose is general.
- c) Day to day language/dialect
- d) Personal/informal/objective style
- e) Oral (face to face/ distant mode) method
- f) Used among relatives/friends/people nearby

2. Technical communication

- a) For sharing specific subject matter (related to field)
- b) Purpose is specific- instruction/direction/order/request etc.
- c) Specific language (related to a particular field)
- d) Impersonal/Informal/Subjective style
- e) Generally, rely on written documents/method
- f) Used among specific audience (related to specific field)

BASIS	G C	TC/PC/BC/
1. Subject matter	general	Specific
2. purpose	general	specific
3. Audiences	Not always specific	Specific audience
4. Style	Personal, poetic, decorative, bombastic	Accurate, precise style (depends on need of document)
5. Base	May not be factual	TC is based on facts
6. Nature	Objective and subjective	Objective
7.Organization	Not always structured	Well structured (well organized)
8. Techniques	Not always specific, exposition	Specific techniques are used depend on requirement
9. Use of graphics	May or may not involve	Graphics and charts are used
10. Vocabulary	General, use of dialect	Should be up-to-date, simple
11. Contents	Informal & sometimes Formal	Mostly formal
12. Language	Figuristic, with poetic devices, use of figure of speech	Should be simple and easy to understand
13. Jargons	Are not used generally	Used
14. Examples	Dramas, novels, Fictions,	T. reports, Proposals, business

	literature etc.	letters, news letters etc.
15. Required for	entertaining, passing time, releasing stress, boosting relation etc.	Sharing information, energizing business relations, increasing business, to instruct etc.

Language as a tool of communication:

It is a well-established fact that effective communication is made possible with the help of language. You do not have to be a linguist in order to acquire good language skills. However, a basic knowledge of the theory of language will certainly help you to understand the intricacies of writing and speaking clearly. When you try to define language, the first thing that comes to mind is words. Language employs a combination of words to communicate ideas in a meaningful way. By changing the word order in a sentence, you can change its meaning, and even make it meaningless.

When language first came into being, a community of people agreed to represent a certain object or idea by a specific sound or symbol. In the very first words, there may have been some correlation between the symbol and the sense they may have been onomatopoeic. A few such words that still persist in the English language are buzz, drizzle, and murmur. In fact most words evoke certain meanings because people have agreed that the symbols (words) represent specific meanings. Thus language is directly dependent on people and cannot exist in isolation. That is how words acquired their meaning.

It arose out of the human need to communicate. Primitive man communicated only with sign language and cries. Much later, as human beings became more interdependent and complex, language came into being. Of course, though it is accepted that language is universal, it cannot be denied that it is also specific to the individual. When you use it, you reflect your personality and your thoughts.

Characteristics of language:

People use language to give shape to their experiences. Since language is not exact, many a time it leads to misunderstandings. Being aware of the basic characteristics of language can help us understand this better and communicate more effectively.

According to the ideas put forward by eminent linguists such as Noam Chomsky and Ferdinand de Saussure, language is

- Artificial
- Restricted

- Abstract
- Arbitrary
- Creative
- Redundant
- Recursive

Language is Artificial: Language is created by people. It doesn't exist in isolation or outside the minds of people. It is created by human as they need it. Every symbol is attached to a particular thought or thing, called a referent. Let us take the word 'AIDS', which did not exist until people were infected by this contagious disease. The process of how this word was created is easy to trace. But this is not always possible. For instance, the word 'nice' has changed its shades of meaning over a period of time. Irrespective of the etymology, more important is the fact that we select a word for use in a particular way from the limitless choices available. As noted before, there is no organic connection between a symbol and its meaning. Humans attach meanings to words as they need to and modify these meanings according to changing needs. This is why we say language is artificial.

Language is Restricted: Thoughts, when translated into language, lose some of their meaning in the process. This is because of the restrictive nature of the language. Sometimes it is difficult to express one's feelings as words have limited expression which is the reason for the restriction. Sometimes we cannot find words to express our feelings. It is important that the language be used as accurately as possible.

Language is Abstract (conceptual): Language is abstract because it represents generalized ideas of things or thoughts. A word could represent different ideas at different times. For example: A 'table' can be of different shapes and sizes, and still be a table. This happens because the meaning gets associated with symbols and users keep expanding the range of meaning. The users associate meaning with words and symbols, which are expanded to include similar or other objects.

Example: Shirt, trousers, t-shirt, etc. can all be generalized under the category- clothes.

Language is Arbitrary: There is no direct relationship between a word and the idea or object it represents. Language keeps evolving to include new concepts and words. Language has evolved as a cultural system of agreements in which each word was agreed upon to mean something or a group of similar things. For example, there is no relationship between the word 'chair' and the idea it represents. To summarise, language keeps changing to include new concepts. Also words can attach a number of specific and arbitrary meanings.

Language is Creative: Language is creative in the sense new words are added in the course of time. This is necessary because of social, cultural and technological changes. Hence, it is imperative that language should be able to encompass and give meaning to new inventions. New words are added every year to English language and find a place in the updated versions of popular dictionaries.

Example: Telephone, mobile, I-pod, etc. are the recent additions to English as these instruments were not known two centuries ago.

Language is Repetitive: Language suffers from redundancy or repetitions. In the same sentence, there can be more than one word that refers to a plural noun. While in some cases it would seem necessary, in other it adds to wordiness. Look closely, for example, at this simple sentence:

A couple of girls are riding their bicycles.

How many signals in it indicate the presence of more than one person? The first two are the plural nouns: *girls* and *bicycles*. The third is the agreement of the verbs *are riding*. The fourth and fifth are *couple* and *their*. We can accept that in this instance repetition of information makes the meaning clear.

On the other hand, excessive and unnecessary repetition, or redundancy, may lead to verbosity or wordiness without contributing to the meaning. For example, when you say '*All of you meet together to see me in the afternoon at 3 pm*', you are using an excessive number of words to no purpose. Even if you leave out '*All of you*' and '*afternoon*', no confusion would arise.

Language is Recursive: All languages contain some basic templates (structures) in grammar. These structures can be used for a variety of expressions and sentences. One can generate any number of sentences using the same basic grammatical templates. The same structure can be repeated to make different sentences. Also, there is no limit to the potential length of a sentence. For example, consider the following statement:

This man who is wearing a crumpled suit, which he borrowed from me to wear to his interview, which was on Wednesday, which was the day it was raining..

If you use your imagination, you can see that this sentence can continue to any length if you keep on adding qualifying clauses for every noun. This is because the recursive quality of language here enables you to keep repeating the relative clause pattern.

So we can conclude that these basic characteristics of language make it an effective means of communication.

Reading and comprehension:

Reading is an important communicative process and reading skills are probably the most important language skills required for academic and professional purposes. **Reading** is a complex communicative process of receiving and interpreting the written word, whereas **Comprehension** is the ability to understand something. It involves recognising what is written and comprehending the matter, i.e., understanding the main and subsidiary points as well as links between different parts of the written

material. While receiving and interpreting the written word, the reader is concerned with four factors, i.e.,

- Decoding/Interpreting: it refers to the process of changing the coded message into information.
- Comprehending: in this process the reader interprets and understands the literal meaning of the message.
- Text analysis: The reader critically examines and evaluates the message.
- Response: This involves our action or reaction to the written message.

Types of reading:

Active reading	Passive reading
The reader pays attention to both content as well as style.	The reader pays attention to either content or style
The reader interprets and analyses what he or she reads in order to understand both explicit as well as implicit meaning of a written message.	The reader does not analyse what he or she reads.
The reader predicts and responds to context	The reader does not predict and respond to context.
The reader pays attention to the writer's intention.	The reader does not pay attention to the writer's intention.
The reader differentiates between ideas, opinions, feelings, and facts.	The reader does not distinguish between factual and non-factual information.
The reader infers the meaning of unfamiliar words from contextual or internal clues.	The reader does not infer the meaning of unfamiliar words from contextual or internal clues.
The reader draws inferences and conclusions.	The reader is only concerned with the literal meaning of a written message.
The reader identifies and evaluates a writer's attitude.	The reader does not identify or evaluate a writer's attitude.
The reader understands and interprets graphic.	The reader does not interpret graphic information.

Reading Skills:

Visual perceptual skills	<ul style="list-style-type: none">➤ Accurate visual perception of words and phrases.➤ Quick eye fixations.
Prediction techniques.	<ul style="list-style-type: none">➤ Using index or chapter headings to predict the theme of the text.➤ Guessing to predict information.➤ Scanning graphic or non-verbal context such as graphs, diagrams, charts, and so on to predict the nature and scope of content.➤ Using discourse and linguistic clues.
Scanning skills	<ul style="list-style-type: none">➤ Locating specific information
Skimming skills	<ul style="list-style-type: none">➤ Identifying a theme or central idea.➤ Identifying main ideas.➤ Identifying organisational patterns of writing.
Intensive reading skills	<ul style="list-style-type: none">➤ Reading for details➤ Critically reading a text to<ul style="list-style-type: none">- distinguish fact from opinion,- identify and evaluate a writer's attitude, and- understand the author's intention.➤ Drawing inferences and conclusions.
Vocabulary skills	<ul style="list-style-type: none">➤ Recognising the definitions of the words being used.➤ Guessing the meaning of the word from the structure.➤ Inferring the meaning of words from their context.

READING COMPREHENSION

It is the act of understanding what you are reading. While the definition can be simply stated the act is not simple to teach, learn or practice. Reading comprehension is an intentional, active, interactive process that occurs before, during and after a person reads a particular piece of writing.

Reading comprehension is one of the pillars of the act of reading. When a person reads a text, he engages in a complex array of cognitive processes. He is simultaneously using his awareness and understanding of phonemes (individual sound “pieces” in language), phonics (connection between letters and sounds and the relationship between sounds, letters and words) and ability to comprehend or construct meaning from the text. This last component of the act of reading is reading comprehension. It cannot occur independent of the other two elements of the process. At the same time, it is the most difficult and most important of the three.

There are two elements that make up the process of reading comprehension: **vocabulary knowledge** and **text comprehension**. In order to understand a text, the reader must be able to comprehend the vocabulary used in the piece of writing. If the individual words don’t make the sense then the overall story will not either. Children can draw on their prior knowledge of vocabulary, but they also need to continually be taught new words. The best vocabulary instruction occurs at the point of need. Parents and teachers should pre-teach new words that a child will encounter in a text or aid her in understanding unfamiliar words as she comes upon them in the writing. In addition to being able to understand each distinct word in a text, the child also has to be able to put them together to develop an overall conception of what it is trying to say. This is text comprehension. Text comprehension is much more complex and varied than vocabulary knowledge. Readers use many different text comprehension strategies to develop reading comprehension. These include monitoring for understanding, answering and generating questions, summarizing and being aware of and using a text’s structure to aid comprehension.

REASONS FOR POOR COMPREHENSION

The main reasons for poor reading comprehension are:

- Inability to understand a word.
- Inability to understand a sentence.
- Inability to understand how sentences relate to one another.
- Inability to understand how the information fits together in a meaningful way (organization).
- Lack of interest or concentration.

The reasons for lack of understanding could be situational, depending on the type of reading matter, the subject of the material, and your mental or physical state. Not all failures in all contexts can be attributed to the same factor. For example, inability to understand a biology text may be due to vocabulary problems, while failure to comprehend a mathematical text may be conceptual. Therefore, it is helpful for you to develop a number of strategies in order to deal effectively with different situations.

IMPROVING COMPREHENSION SKILLS

- Read a variety of materials. Do not limit yourself to textbooks.
- Read a fairly long portion of the material. It would be difficult to assess reading comprehension based on one or two paragraphs. Try to read an entire section or chapter instead.
- Circle unknown or unfamiliar words as you read.
- After reading, recall as much of the information as possible. Jot down points it you like. Then check the accuracy and completeness of your recollections. If the main ideas are presented in a particular order, see if you can recall the structure.
- Consider how interesting the subject matter is and how much you already know about the subject.
- Answer questions about the material after reading it.

How does reading comprehension develop?

As you can see, reading comprehension is incredibly complex and multifaceted. Because of this, readers do not develop the ability to comprehend texts quickly, easily or independently. Reading comprehension strategies must be taught over an extended period of time by parents and teachers who have knowledge and experience using them. It might seem that once a child learns to read in the elementary grades, he is able to tackle any future text that comes his way. This is not true. Reading comprehension strategies must be refined, practiced and reinforced continually throughout life. Even in the middle grades and high school, parents and teachers need to continue to help their children develop reading comprehension strategies. As their reading materials become more diverse and challenging, children need to learn new tools for comprehending these texts. Content area materials such as textbooks and newspaper, magazine and journal articles pose different reading comprehension challenges for young people and thus require different comprehension strategies. The development of reading comprehension is a lifelong process that changes based on the depth and breadth of texts the person is reading.

Why is reading comprehension so important?

Without comprehension, reading is nothing more than tracking symbols on a page with your eyes and sounding them out. Imagine being handed a story written in Egyptian hieroglyphics with no understanding of their meaning. You may appreciate the words aesthetically and even be able to draw some small bits of meaning from the page, but you are not truly reading the story. The words on the page have no meaning. They are simply symbols. People read for many reasons but understanding is always a part of their purpose. Reading comprehension is important because without it reading doesn't provide the reader with any information.

Beyond this, reading comprehension is essential to life. Much has been written about the importance of functional literacy. In order to survive and thrive in today's world individuals must be able to comprehend basic texts such as bills, housing agreements (leases, purchase contracts), directions on packaging and transportation documents (bus and train schedules, maps, travel directions). Reading comprehension is a critical component of functional literacy. Think of the potentially dire effects of not being able to comprehend dosage directions on a bottle of medicine or warnings on a container of dangerous chemicals. With the ability to comprehend what they read, people are able not only to live safely and productively, but also to continue to develop socially, emotionally and intellectually.

PRECIS WRITING/ ART OF CONDENSATION / SUMMARISING

'Précis'/ condensation have been derived from French word which means – summary, substance, abstract. According to Oxford Advanced Learner's Dictionary – précis/ condensation writing is the process of making a book etc. shorter by taking out anything that is not necessary. Latin word 'Praecidere' and English word 'precise' also means the same

Précis writing is an excellent exercise in reading. It teaches us how to express our thoughts clearly, concisely and effectively. "A precis is just a straight forward statement of the bare facts without any unnecessary trimmings. "

IMPORTANCE/ NEED OF PRECIS WRITING

Précis writing is a good exercise which makes a person understand the ideas expressed in a piece of composition clearly. In today's competitive age, people are short of time which makes them to do the thing speedily and also dispose the work at the earliest. The summary of some detailed piece of composition helps in economizing people's time and energy. A précis writer should equip himself with certain special talents, required to learn the art of précis-writing.

STEPS / PROCESS / METHOD OF PRECIS WRITING

- 1. Reading:** - First of all read the paragraph carefully. One reading is not sufficient to understand the contents. So read the passage three or four times very carefully.
- 2. Finding title:** - While reading try to find out the phrase, word or short sentence which may contain the theme of the passage.
- 3. Detailed study of the paragraph:** - To understand the details as well as main idea of the passage a repetitive and carefully reading is required. Dictionary can be consult for the difficult words and phrases.
- 4. Selection of necessary or unnecessary:** - Never make selection of necessary or unnecessary in a haphazard or mechanical way because on it the effectiveness of précis depends.

5. Writing: - Write down the main as well as selected ideas on a paper. First attempt may not be accurate or up to mark. It is good plan to write the first draft in your own words without using the words from original.

HOW TO WRITE PRECIS / TECHNIQUES OF PRECIS WRITING

1. Reading passage slowly and carefully to understand the theme and contents of the original.
2. Writing important points so as to form a framework for précis.
3. Trying to focus the topic sentence as the whole document is woven around the topic sentence.
4. Not adding or excluding any idea in or out of the original it should give the correct idea of the original document.
5. Using clear and lucid style write as simple, clearly, briefly and effectively as possible.
6. Using indirect speech to give a novelty touch to the original. Remember you are doing a new writing, not copying the original.
7. Writing the text in past tense.
8. Limiting the length of a precise by 1/3 of the original.
9. Avoiding decorative language to make the précis simple, direct, natural and idiomatic.
10. It is usually advisable to follow the order of the original. Writer is free to write in any order but précis should be in logical order.

FEATURES / CHARACTERISTICS OF A GOOD PRECIS

1. Lucidness: - Précis should be lucid in style. Ideas should be clear and understandable. Conciseness should not be at the cost of clearness.
2. Completeness and comprehensiveness: A good précis writer includes all essential ideas expressed by the author in original writing. Précis should be complete as far as its contents and theme is concerned.
3. Succinct: - in a précis every word should be treated important and should be used with utmost care. Extra words can be omitted but not the relevant.
4. Conciseness: - Unimportant details and minor ideas of the original should be avoided. Nothing irrelevant should be included.
5. Avoid repetition : - strictly avoid the words or phrases which are used in a passage for emphasis.

6. Verbosity less: - Verbosity has no place in précis writing. Language must neither be highly figurative nor very simple.

7. Connected whole: précis must give an impression of wholeness rather than assembling of different sentences.

8. Coherence: Coherence is another important component of précis writing. Ideas should be presented in a straight forward statement in such a way that they seem joint, forming a chain where one idea leads to another smoothly or automatically.

9. Heading: - Last but not the least is the heading of the précis. It is the key to the main theme. It is a great art to give an appropriate title to the précis.

TECHNICAL WRITING

It is a type of writing where the author is writing about a particular subject that requires direction, instruction, or explanation. This style of writing has a very different purpose and different characteristics than other writing styles such as creative writing, academic writing or business writing.

Uses of Technical Writing

Technical writing is straightforward, easy to understand explanations and/or instructions dealing with a particular subject. It is an efficient and clear way of explaining something and how it works.

The subject of technical writing can either be:

- Tangible - Something that can be seen or touched, such as a computer or software program, or information on how to assemble a piece of furniture.
- Abstract - Something that involved a series of steps that aren't related to a tangible object. One example of this might be steps required to complete an office process.

Some examples of technical writing include:

- Instruction manuals
- Policy manuals
- Process manuals

- User manuals
- Reports of analysis
- Instructions for assembling a product
- A summarization of a long report that highlights and shortens the most important elements

Tips for Good Technical Writing

Regardless of the type of document which is written, technical writing requires the writer to follow the properties of knowing their audience, writing in a clear, non-personal style and doing extensive research on the topic. By including these properties, the writer can create clear instructions and explanations for the reader.

- Know your audience. An expert in the field will understand certain abbreviations, acronyms, and lingo that directly applies to such a field. The novice will not understand in the same manner and, therefore, every detail must be explained and spelled out for them.
- Use an impersonal style. Write from a third person perspective, like a teacher instructing a student. Any opinions should be omitted.
- The writing should be straightforward, to the point, and as simple as possible to make sure the reader understands the process or instruction. This at times may appear as simply a list of steps to take to achieve the desired goal or may be a short or lengthy explanation of a concept or abstract idea.
- Know how to research. Gather information from a number of sources, understand the information gathered so that it can be analyzed thoroughly, and then put the information into an easy to understand format to instruct those who read it. The more inexperienced your audience, the more information you will need to gather and explain.
- Be thorough in description and provide enough detail to make your points; but you also have to consider that you need to use an economy of words so that you do not bore your reader with gratuitous details.

Note:- A good technical writer can make a difficult task easy and can quickly explain a complex piece of information.

SENTENCE

Sentence: - A sentence is a group of words that conveys a complete meaning having its own subject and predicate.

Sentence structure: - A sentence may be made up of two essential parts: -

- **Subject:** - The noun or pronoun about which we say something is called the subject of the sentence.
- **Predicate:** - The part in which we say something about the subject is called the predicate of the sentence.

Kinds of Sentences: - There are four kinds of sentences: -

1. **Statement:** - The assertive or declarative sentence is called a statement. A statement may be in the affirmative or in the negative.

SUB + (H.V.) + M.V. +

SUB + H.V. + NOT/ NO/ NEVER etc + M.V. +

Example → She is a beautiful girl. (Affirmative)

We should not tell a lie. (Negative)

2. **Interrogative sentence:** - A sentence in which some question has been asked is called an interrogative sentence.

(QUE. WORD) + H.V. + SUB + (NOT/ NO/ NEVER etc) + M.V. +

Example → Where do you live?

Who is your brother?

3. **Exclamatory sentence:** - A sentence which expresses strong feelings such as joy, sorrow, anger, surprise etc. is called an exclamatory sentence.

WHAT A (AN) / HOW + QUALITY + NOUN/ PRONOUN + (D. PRONOUN)

Example → Alas! We are ruined now.

Cheers, It's a big win.

4. **Imperative sentence:** - A sentence in which some command, advice or request is made is called an imperative sentence.

DON'T + 1ST FORM OF VERB + OBJECT

Examples → Please give me a glass of water. (Request)

Go in or you will catch cold. (Suggestion)

Phrase and Clause:

- **phrase:** - A phrase is usually a small group of words without a predicate which makes sense but not complete sense.

Examples → The sun is above our heads.

I would build a hospital for the poor.

Note: - The underlined words form a phrase.

- clause: - A clause is a distinct part of a sentence including a subject and predicate.

Examples→ A lady whom I know nursed the child.

They talk rubbish who never think.

REQUISITES / ESSENTIAL OF GOOD SENTENCE WRITING

The professional should inculcate the ability to write effective sentences by following certain rules of writing good sentences.

a. Choose appropriate sentence pattern:- Sentence pattern should be according to the needs of the information to be conveyed. Concrete and specific sentences focus on meaning and clarity to ensure easy readability, each sentence should include only one to two ideas.

b. Avoid awkward sentence structure:- Words should be placed in a correct order. The words, phrases and clauses should be placed correctly so that one can read it properly. Before constructing a sentence we must have the knowledge of different types of sentences and sentence structure.

c. Avoid sentence fragments:- Ideas should be expressed in complete sentence. A fragmented sentence does not convey the complete meaning and can be quite confusing for the reader (Fragments generally begin with linking words such as since, although because, as, and so on.)

d. Use appropriate connectors:- knowledge of connectors are one of the foremost requirement for professionals. Wrong usage of connectors can lead to confusion and it also kill the effectiveness of document. So connectors should be used very carefully.

e. Avoid long sentences. For better readability and to avoid misunderstanding, short sentences should be constructed. The habit of overloading a sentence with too much information leads to the loss of meaning and interest of reader. It doesn't mean that you must use only short sentences. Too much short sentences will bring choppy effect, and suggests prime simplicity. We should use mixed sentences and should adopt sentences of moderate length.

f. Write short and complete (clear) sentences: - Using of short sentenced doesn't mean that they are incomplete. The information should be completely delivered by the sender. Short sentence can not replace the completeness of sentences.

g. Follow the rule of proximity in order to avoid confusion: - while writing a document we must follow the rule of proximity specially if we are writing long sentences. The use of adverbs, adjectives etc should be near to the word to which these are used.

h. Select correct type of sentences. Sentence writing should be done according to the expression. Like for asking a question we must write a sentence in interrogative format.

i. Economizing on words : - Economy of words should be considered since 'brevity is the soul of wit.' Economizing of sentences means elimination of words. A professional must not indulge in the use of surplus words. We must not cluttering, repetition of words & ideas, use redundant phrases etc. to economizing of words

j. Avoid ambiguous sentences: - ambiguity is the main hindrance to clarity as it often mars the meaning of sentences. Ambiguous sentences effect the writing skill adversely.

PARAGRAPH

Group of sentences with unity and sequences on a general topic under a topic sentence is called a paragraph. It can be defined as a distinct section of a piece of writing. It consists of several related sentences and deals with one controlling idea/ topic/theme. The main function of a paragraph is to develop support, exemplify or explain the theme.

Parts of paragraph:-

1. Main sentence (express main idea of the paragraph). It is also called 'Topic Sentence'

- It is normally the first sentence of the paragraph.
- It conveys the overall point of the paragraph.
- It helps the writer focus on the idea written about.
- It helps the reader know about what the paragraph is all about.

2. Major supporting sentences: - these sentences are used to expand, illustrate, explain, support or strengthen main idea. These sentences deal with secondary points and major supporting details.

- They are sentences used to support the main idea stated in the topic sentence.
- They give more information about the main idea through examples.
- They say in details what the topic sentence says in general.
- They should be clear evidence that what the topic sentence says is trustworthy.
- They should be strong convincing points on which the topic sentence can rely upon.

3. Minor supporting sentences: - these sentences further exemplify and support. These sentences include minor points, and minor supporting details.

PRINCIPLES OF PARAGRAPH WRITING

Being a technocrat one must know the different principles, methods & techniques of paragraph development. In longer composition such as reports and proposals, paragraphs help to develop the core idea of the document. Technical writing needs to be purposeful. Precise and reader oriented. It is important to compose paragraphs that are clear, cohesive and concise and result- oriented. A paragraph must have the following essential things:

1. Presentation of single idea
2. A sequence of well connected sentences
3. Thematic unity with in the paragraph
4. Conciseness and exactness
5. Rejection of ambiguous expressions
6. Avoid the mixture of ideas
7. Avoid repetition
8. Use brevity

MAIN FEATURES OF PARAGRAPH

1. Proper length: - Paragraphs should be of moderate length. In short paragraphs we find it difficult to elaborate and in lengthy sentences reader feels boredom. The length of a paragraph depends on needs of readers, subject matter, writing, style, variety and emphasis. Proper length of paragraph will make a document more attractive to readers.

2. Unity: - Unity should be maintained within a paragraph. One idea should be there and every sentence should support and expand the idea. Topic sentence should be there in a paragraph to give a theme to a paragraph. Other sentences are built around the topic sentences. We can attain unity by writing paragraph in different methods (inductive, deductive, spatial, linear, chronological etc).

3. Coherence: - The word coherence literally means consistency especially of speech, thought, ideas, and reasoning which makes expression clear and easy to understand. It shows the logical relationship between the elements and the construction.

(Unity is concerned with singleness, while coherence is related with relatedness.))

4. Logical development of ideas: - a paragraph should be developed in a logical manner. It should be organized in such a way that one sentence leads on naturally to the next.

METHODS OF DEVELOPING A PARAGRAPH

There are many ways of developing a paragraph/ however, the basic patterns of logically organizing information in a paragraph include the following.

1. Inductive: - In inductive method an author moves from particular statement to the general statement. The author gives details arguments or illustrations, which lead finally to the conclusion. It is an objection and scientific logical techniques that scientists have been using over the year.

If you push a rubber ball under the surface of water in a container, you will feel an upward force against the bottom of the ball. Hence, it is evident that water exerts pressure upward.

2. Deductive: - this is the most common logical organization used in technical communication. It involves the process of moving from a general statement to specific details. The topic sentence is usually the first sentence in the paragraph starting some general statements.

God made all the natural living things for living beings mortal. Since Jaya and Shashi are human being, they are also mortal.

3. Spatial: - It is also called order of place. It involves the process of dividing a subject or topic based on how they are arranged in space. Once broken into simple manageable parts, the reader or audience may find the subject easy to follow. Technical reports, proposals, oral reports may be organized spatially by simple divisions of the subject.

4. Chronological: - It refers to the narration of events in the order in which they occur in time, beginning with the first event, going on to the next, and so on. Some times logical sequences may become essential for a particular piece of writing. It is quire easy and natural to record events in the order of their happening. It is mostly used in periodic reports, progress reports, accident reports etc. This method provides coherence and clarity and reader never get confused. Sometime making document in chronological order is boring and monotonous.

At 1.15 p.m., we arrived at the site and assessed the patient's condition, taking vitals. At 1.17 p.m., after stabilizing the patient, we contacted the hospital and relayed the vitals. By 1.20 p.m., the patient was on an IV drip and en route to the hospital. Our vehicle arrived at the hospital at 1.35p.m., and hospital staff took over the patient;s care.

5. Linear method: - The literal meaning of the word 'linear' is "in line" or "involving one dimension". In a paragraph one sentence leads to the next one and thus the sentences proceed towards their goal. Linear logical pattern involves presenting ideas in a progressive way where sentences are connected to each other in a logical way.

DEVICES FOR DEVELOPING A PARAGRAPH

A paragraph is a full and logical development of a single idea. There are the following devices to write a paragraph: - unity, coherence, emphasis.

1. TOPIC SENTENCE: - The sentence which states the main theme of the paragraph is known as the topic sentence. It is around a topic sentence that a paragraph is built. The other sentences of the paragraph develop, support, exemplify and explain the central theme. The topic sentence may be placed either in the beginning or at the end of a paragraph, depending on the logical organization of the paragraph. In deductive order topic sentence should be placed at the beginning. Inductive order it is written at the end of the paragraph. Sometimes a topic sentence may not be included and the main idea is expressed through details only. It plays a significant role in paragraph structure. It should be phrased with utmost care. It should introduce the paragraph and give the reader a clear idea about the content of the paragraph.

2. UNITY: - Unity is the principle of oneness. Unity in communication means that components deal with one main idea. Any writing, which does not have unity, distracts the reader and ceases to be purposeful. Any effective and purposeful composition should have one controlling idea or theme. Each paragraph should strengthen the main idea by contributing only to that aspect of the topic. Each sentence in the paragraph is directly related to that idea and contributes to its development. In order to maintain the unity of a paragraph, only one main thought should be expressed in a paragraph. The related ideas should be subordinated. There should be no digression and the main idea of the paragraph should not be sidelined or forgotten.

We can obtain the unity by writing the different paragraph in different logical order like 1- inductive, 2- deductive, 3- linear, 4- chronological, 5- spatial, 6- comparison

3. COHERENCE: - The word coherence literally means 'consistency' especially of speech, thought, ideas and reasoning which makes the expression clear and easy to understand. In technical writing, every sentence should logically follow from the one preceding it. Loosely hanging fragments, squinting words and clauses, dangling modifiers and unnecessary splitting infinitives should be avoided. There are some devices which can help you in maintaining coherence, namely: - pronoun, sentence linkers (conjunctions/connectors), sequence linkers, repetition, synonyms etc.

a. Pronoun: -Pronouns help in maintaining continuity of thought. You may use common pronouns such as they, we it or demonstrative pronouns such as this, that, these, and these in order to achieve coherence in a paragraph. Remember don't make your reader confuse with the careless use of pronouns.

b. Sentences linkers: - The use of connectives is another device which lends coherence to paragraph. These linkers connect two sentences in a paragraph. It may consist a word or a phrase. These are used to exemplify, express, indicates time relation, indicate cause/result/effect, express comparison, express contrast, indicate conclusion/express summary.

c. Sequence linkers: - The following words/phrases are generally used as sequence words: first, firstly, second, secondly, then, next, after that, now, later, finally, lastly, afterwards, following, and so on.

d. Repetition: - some times repetition of certain words also gives coherence to a paragraph. But too much repetition may lead to monotony.

e. Synonyms: -synonyms are used in place of certain words, already used and have similar meaning. This includes variety and thus helps the writer to avoid monotony

4. EMPHASIS: -Emphasis means force or prominence. In order to get desired effect in writing, proper emphasis is required. A paragraph may contain various facts and ideas and out of which some are important. There are five devices which help to give proper emphasis to the important ideas in a paragraph: 1- balance, 2- emphatic position, 3- space, 4- repetition, 5- contrast.

DIFFERENT TECHNIQUES OF PARAGRAPH DEVELOPMENT

There are several techniques to develop a paragraph and the selection of the technique is totally depends on the subject and topic requirement.

1. Develop your paragraph using description - In this paragraph, you convey how something sounds, smells, tastes, feels, and/or looks. Using transitional words and phrases that indicate location are often recommended.

2. Develop your paragraph using exemplification - In other words, this paragraph uses specific illustrations to clarify a general statement. Using transitional words and phrases that signal examples are recommended.

3. Develop your paragraph using process - A paragraph using process describes how something works, presented by a series of steps in a strict chronological order. Using transitional words and phrases that signal time are highly recommended.

4. Develop your paragraph using cause and effect - When you use this technique, you are exploring why events occur and what happens as a result of them. Transitional words and phrases that signal causes and effects are suggested.

5. Develop your paragraph using comparison and contrast - A paragraph that demonstrates comparison and/or contrast examines how given subjects are either similar or different. Comparison examines how the subjects are the same. Contrast examines how the subjects are different. Using transitional words and phrases that signal comparison and contrast are highly recommended.

6. Develop your paragraph using division and classification - When you use the division strategy, you are discussing a single item and breaking it down into its components. Whereas, when you use the classification technique, you are taking many separate items and grouping them into categories according to qualities and characteristics that they all share.

7. Develop your paragraph using definition - A paragraph demonstrating this technique will include a definition of the term, the class to which it belongs, and the details that differentiate it from other members of its class.

TECHNICAL STYLE: DEFINITION, TYPES & METHODS

Technical writing refers to a type of writing where the author outlines the details and operations of administrative, technical, mechanical, or scientific systems. The main goal of technical writing is to educate, direct, and give others the ability to use a certain system.

TYPES OF TECHNICAL WRITING

There are three main types of technical writing:

- **End-user documentation:** This type of writing includes documents where the writer explains a topic to a novice so that they can understand technical terms and apply them in a real-life situation.
- **Traditional technical writing:** This is writing that is geared to an audience already at least somewhat familiar with a technical field such as engineering or politics.
- **Technological marketing communications:** This is writing used in promotional marketing such as fliers and promotional brochures that would entice a person to purchase a certain product or service.

End-User Documentation

Examples of end-user documentation might include:

- "*Blackberry for Dummies*" - that teaches you how to use your new cellular phone and that is written in order to cater to someone who has never before used a cell phone or who is not a cell phone expert.
- A manual that comes with a computer.
- A manual that comes with a video game system, such as the PS3 users guide.

Traditional Technical Writing

Examples of traditional technical writing might include:

- A whitepaper published in an engineering journal about a new system that has been devised.
- An article published in a law review that caters to lawyers.
- An article in a medical journal summarizing an experiment that has been conducted and written to a medical audience. For example, articles published in the New England Journal of Medicine would fall into this category.

Technical Marketing Communication

These might include:

- A promotional ad outlining why you would want to purchase a new computer and explaining the features of that computer.

- A promotional ad explaining why you would want to purchase a new cell phone, outlining the phone's features.
- A promotional ad explaining why you would want to purchase a new mp3 player and outlining the phone's features, such as an ad for the Creative Zen Mozaic Mp3 player.

Successful Technical Writing

When carrying out a technical writing assignment, you must remember to follow what is known as the three 'Cs' and ask yourself the following questions:

- Is it clear?
- Is it concise?
- Is it complete?

Because technical writing is so often aimed towards those who may be unfamiliar with technical jargon and terminology, it is important that a technical writer uses clear and unambiguous language in their assigned piece.

- If the writing is too full of technical language, the message may not come across as intended.
- If the information being written about is provided in a convoluted and round-about way, the message is likely to be lost entirely. Straight forward and to the point is always best.

If a technical writer's information is incomplete, it inhibits the audience's understanding of the topic and can, in some cases such as instruction and safety manuals, prove dangerous. Above all, technical writing needs to be very clear and concise to be successful.

Methods of Technical Writing

There are mainly the following methods:

- 1. Be clear and logical** The information, which we are putting in a technical content that must be logically arranged. The ideas must be clear to the audience or reader.
- 2. Focus on the audience** At the outset of communication the audience or reader is the prima factor. The focus should be on the fulfillment of the need of the audience.
- 3. Consider every word** The words which we are using must be upto the mark. No unnecessary word should be used.
- 4. Keep it brief** The matter should be brief. No unnecessary information should be given.

THE FLOW OF COMMUNICATION:

DOWNWARD, UPWARD, LATERAL OR HORIZONTAL, DIAGONAL

Formal channel of communication is multi-dimensional. Information flows in different directions.

The various directions or flow of communication are as follows: -

(i) DOWNWARD COMMUNICATION

Downward communication means flow of information from higher levels to lower levels in the organizational hierarchy. Information flows from top-most authority to the bottommost persons (workers) through various levels. This flow of information generally prevails where autocratic style of management is dominant.

Contents of Information: The following information generally flows in downward direction:

- How to do a job.
- Rationale for doing those jobs.
- Policies and practices of organisation.
- Performance level of employees.
- The need to develop a sense of mission.

Forms of Downward Communication:

Downward communication can be oral or written. Oral communication can be through speeches, telephone, face-to-face interaction or meetings. Written communication takes place through letters, hand books, pamphlets, posters, bulletins, annual reports, policy statements, notices, circulars etc. Written form of downward communication is used when confidential matters are to be reported which requires documentary evidence.

Merits of Downward Communication: Downward communication has the following merits:

- It provides information regarding organizational plans and policies.
- It informs employees about the rationale of organizational goals and how they can coordinate these goals with personal goals.
- It enables employees to know their area of discretion. They know what is expected of them and perform within those constraints.
- It increases job satisfaction and morale of employees to perform better.

Limitations of Downward Communication: Downward communication suffers from the following limitations:

- Information distortion – In large-sized organisations, information flows through a number of levels. It is possible that by the time it reaches the lowest unit in the organizational hierarchy, the message received is different from what is sent. The message is screened at various levels.
- Information gaps – Oral information often gets lost in transit. A part of the information is retained at some level and gets filled by some unintended information at another level. Messages are encoded and decoded according to people's perception. Researches have shown that in some cases, information up to about eighty per cent gets lost on the way.
- Time consuming – If organizational hierarchy has too many levels, it takes time for information to reach the person concerned. Sometimes, information reaches after the desired action has already been taken.
- Incomplete transmission – Sometimes, managers withhold part of the information and transmit incomplete information so that subordinates remain dependent upon them for information.
- Employees cannot perform effectively with incomplete information. This may affect superior-subordinate relationships.

Note: - These limitations do not undermine the importance of downward communication. Proper feedback of information from lower to higher levels can help managers overcome the limitations of downward communication.

(ii) UPWARD COMMUNICATION

Flow of information from lower levels to higher levels is known as upward communication. Employees respond to managers' directions and instructions through upward communication. This flow of communication is suitable where democratic or participative style of management is prevalent.

- Reports about subordinates' work, achievements, progress and future plans.
- Subordinates' work problems which need the assistance of supervisors.
- Ideas or suggestions offered by subordinates to improve the working of any unit or organisation as a whole.
- Subordinates' perception about their work, work environment and co-workers.

Contents of Information: The following information generally flows in upward direction:

Forms of Upward Communication: Upward communication can take place through media like suggestions, appeals, meetings, grievance procedures, open door policy (subordinates can approach top managers directly by-passing some of the hierarchical levels), complaint system, questionnaires, group meetings etc.

Merits of Upward Communication: Upward communication has the following merits:

- Managers receive feedback from lower levels that helps in carrying out the controlling function.
- It helps in knowing attitude of employees towards corporate goals and plans for effective implementation of plans.
- It increases employees' morale and motivation to work. When employees know their grievances, ideas and suggestions are considered by top managers, they feel morally committed to their work.
- It provides managers with creative ideas and suggestions from subordinates.
- It strengthens superior-subordinate relationships and creates harmonious industrial relations.
- It overcomes resistance to change on the part of employees as they can present their fears and apprehensions upwards.

Limitations of Upward Communication: Upward communication suffers from the following limitations:

- Filtration – As in downward communication, substantial part of information gets filtered when it flows upward. In upward communication, each subordinate level filters that part of information which may present unfavourable picture to the superiors.
- Time consuming – Too many levels in the official chain of command delay transmission of information.
- Fears and apprehensions – Subordinates do not always report the matters upward the way they want. When they know that the news is not what the boss wants to hear, they do not transmit it at all. They may even distort or edit the information before transmitting it upwards. Thus, the information passed is not what is true but what the boss wants to hear.
- Attitude of superiors – Sometimes superiors do not listen to the juniors. Most of what is said by lower levels goes unheard at the top levels. The very purpose of upward communication, in such cases, gets defeated.
- Low effectiveness – When employees approach top managers by-passing some links in the scalar chain, it avoids filtration of information but those who are surpassed may feel morally affected. This strains the superior-subordinate relationships and hampers the effectiveness of further transmission.

Note: - Upward communication is an effective dimension of communication. Managers must improve the upward flow of interaction. They should be willing to listen to employees. They should specify the type of information that should flow upwards. Every matter should not be reported to top managers. Only important information that needs their attention and action should flow upwards. Informal channels of communication can increase the efficiency of upward communication. Use of suggestion schemes, grievances procedures, periodic reports, committees, open door policy etc. are helpful in this regard.

(iii) HORIZONTAL OR LATERAL COMMUNICATION

Flow of information amongst people at the same level is known as horizontal communication. It is interaction amongst peer groups. Most common horizontal communication is communication between functional heads. Marketing manager and production manager constantly interact with each other to coordinate demand with production schedules.

It takes place between:

- Members of a particular work group.
- Members of different work groups.
- Members of different departments operating at the same level.
- Members of line and staff.

Note: - It does not follow the official chain of command but cuts across it.

Objectives of Horizontal/Lateral Communication: Horizontal communication serves the following purposes: -

- It coordinates work assignments carried out by different departments.
- It helps to share information about organizational plans and policies.
- It helps to solve organizational problems.
- It develops common understanding amongst all the organizational members.
- It conciliates, negotiates and arbitrates differences arising on account of cultural and attitudinal factors amongst employees.
- It develops interpersonal support amongst people of different units.

Forms of Horizontal Communication:

Horizontal communication can be oral and written. Oral communication takes place amongst people of the same level—when they meet during lunch break, after office hours, discussions in meetings and conferences or talk over telephone. Written communication takes place through reports, bulletins, boards, letters, memos, reports etc.

Merits of Horizontal Communication: Horizontal communication has the following merits:

- It helps to review activities assigned to people working at identical positions.
- It speeds up the flow of work.
- It facilitates problem-solving amongst members at their level and integrates the work.
- It develops trust and confidence amongst people of different departments.
- It provides job satisfaction to employees and boosts their morale to improve performance.

- It relieves top managers of the burden of solving problems at the work place, if workers can solve them on their own. It, thus, settles inter-departmental and intradepartmental differences at the place of origin.
- It solves common problems of people and creates teamwork.

Limitations of Horizontal Communication: Horizontal communication suffers from the following limitations:

- Personal biases – Personal likes and dislikes amongst members of work groups can obstruct free flow of information.
- Specialisation – In the modern era, functional heads are highly specialized in managing activities of their departments and they lack specialised knowledge of other functional areas. This affects communication at the horizontal level. For example, marketing manager may not be knowing much about sources and uses of funds, financial management and capitalization. He will not be able to effectively communicate with the finance manager on matters related to finance.
- Perceptions and attitudes – Differences in perceptions and attitudes of functional heads can be counter-productive in horizontal communication. Functional managers may look at the same problem from different angles. If CEO of the company directs functional heads to cut down costs, finance managers may want marketing manager to cut selling costs, while marketing manager may want production manager to cut production costs. Inter-departmental conflicts can arise and the objective will not be achieved.

Note: - The problems mentioned above should overcome by supporting heads and members of various work groups to promote healthy communication amongst them. While superiors allow information to flow horizontally in the organisation, they should ensure that subordinates do not violate the limits of authority. The subordinates should keep the superiors informed of whatever interaction takes place amongst the peer groups.

(iv) DIAGONAL OR CROSS-WISE COMMUNICATION

Flow of information amongst people of different departments at different levels is known as diagonal communication. When regional sales manager talks to workers of finance or production department, diagonal communication is said to have taken place. People who are generally not in contact, come close to each other through diagonal communication.

Forms of Diagonal Communication:

Diagonal communication can be oral and written. Oral communication takes place in meetings, conferences, project teams etc. Written communication takes place through magazines, bulletins, boards, notices, circulars etc.

Merits of Diagonal Communication: Diagonal communication offers the following merits:

- It increases efficiency and speed of work. People can directly talk to each other without following the formal chain of command.
- It boosts morale and commitment of employees to work as they can directly talk to the managers.
- It coordinates the activities of various departments as they can interact with each other.
- It provides job satisfaction to employees.

Limitations of Diagonal Communication: Diagonal communication suffers from the following limitations:

- Violation of chain of command – Information cuts across all levels and all departments. There is complete violation of chain of command.
- Attitudinal problems – When manager of sales department talks directly with workers of production department, production manager may feel offended about the same. This can affect relationship with workers of his department.

Note: - Diagonal communication increases the efficiency of organizational activities as every information cannot be passed through vertical lines of communication. Best use of diagonal communication can be made when cross relationships are cordial and subordinates keep the line superiors informed of their interactions with people of other departments.

Barriers of communication:

Communication is an effective tool to share information, ideas, thoughts, feeling, information etc. it is a complex process. Some time it is felt by the speaker that the listener does not understand his/her point clearly. This may be due to any interference or any disturbance during communication.

These interferences or disturbances are called barriers to communication. Barriers act like a sieve allowing only a part of message to filter through. That's why desired response is not achieved.

Result or consequences of barriers:

- Barriers may hamper the smooth flow of effective communication.

- Barriers may emanate either from receiver or from sender or from circumstances.
- Barriers can make the communication process dull and uninteresting and bored. Barriers lead to confusion.
- Barriers can stop the desirable response coming to you.
- Barriers may sometimes lead to communication breakdown.
- Barriers may bring complications to the communication.

Types of barriers:

Physical barriers: Physical barrier is the environmental and natural conditions that act as a barrier in communication. workspace design problems, technological problems and noise are the parts of physical barriers. Some of the reasons of physical barriers are -

- **Environment or Climate:** Thunder, rain, wind, unstable temperature and other environmental factors create disturbances which cannot be stopped and interrupt the message flow.
- **Time:** Time also acts as physical barrier because If a message is not sent timely, the message will not have the effect. This causes barrier in communication. So, the time of the message should be accurate.
- **Distance:** Face to face communication has the least physical communication barrier but the geographical distance creates more barriers as it requires more technical channels.
- **Medium Disturbance or Technical Problem:** Mediums have to use network facilities which might lead to technical and technological problems. Sometimes the medium itself acts as a communication barrier and disrupts communication flow. Every kind of medium has one or the other defects and disadvantages over another.
- **Venue Design:** If the workspaces of sender and receiver are far away from each other they will not be able to communicate properly, take proper orders, make plans, get feedbacks and suggest new ideas. Seating arrangements and physical comfort also create disturbance in communication. In this way, workspace designs act as a physical barrier to effective communication.
- **Noise:** Noise is the disruption found in the environment of the communication. It is an unwanted, signal or interruption which hinders the flow of communication. It disturbs the communication process and acts as a barrier as it makes the message less accurate, less productive and unclear. It might even prevent the message from reaching the receiver

Semantic barriers: Different meanings of words and symbols create misunderstanding between senders and receiver which result in barriers to communication. The denotative and connotative meanings of words and symbols leads to confusion.

Denotative meaning

Direct meaning of any word which must be shared by two people to understand each other is the denotative meaning.

Connotative meaning

The implied meaning of a word is known as Connotative meaning. Connotative barrier in communication refers to the difference of meaning according to different abstract situations, contexts, actions and feelings.

- **Unclear Message:** Lack of clarity and poor expressions phases etc leads to poor understanding of message.
 - **Homonyms, Homophones and Homographs:** A word may have several meanings but that expression should be made which is understood as it is by receiver.
 - Homophones** Homophones are the words with same pronunciation but different meaning which might have different spelling too. For example: Words buy, by and bye.
 - Homonyms** Homonyms are the words which have the same pronunciation and their spellings are mostly same, but the intended meaning is different. For example, the noun “bear” and the verb “bear” has different meanings but same pronunciation and spelling.
 - Homographs** Homographs are the words that have the same spelling but the pronunciation and meaning are different. For example- You will definitely live till the end of this century to see the live telecast of Chandrayan -III.
- Example: The word “value” may be expressed in different ways: -
- We value our customer.
 - The value of this book is Rs 100.
- **Technical words or jargons:** Specialists and technical experts always use technical language but common man cannot understand it. So too much use of jargons should be avoided.
 - **Faulty translation:** Sometimes instructions originally drafted in a language need to be translated in a language understood by workers (Hindi) or else they won't be able to draw the meaning out of it.
 - **Unclear Assumptions:** Sometimes messages are based on certain assumptions which are subject to different interpretations. E.g. Take care of your guest. One may take care of only few problems but some other may do it right from vehicles to lodging and food.
 - **Body language and Gesture:** Along with verbal communication, body language should also mean the same or else it will obstruct the proper meaning.

Socio psychological barriers:

- **Difference in perception:** Due to the differencing experience, education and culture, the two people perceive the same information in a different way and it creates problem.

- **Difference in attitude:** If the message is consistent with our attitude, we tend to like it otherwise dislikes it. E.g. A news of salary hike will please mood of the employees while the implantation of new machinery will disappoint many of the employees.
- **Emotions:** How the receiver feels at the time of receipt of information, affects a lot on how he interprets the information. E.g. If the receiver feels that the communicator is in jovial, he interprets that the information being sent by the communicator to be interesting.
- **Inattention:** If receiver or sender and of them does not pay attention on what the other person is saying, it will obstruct communication.
- **Closed Minds:** Both the sender and receiver should be open minded while listening to each other or else it will cause misunderstanding and misinterpretations.
- **Pre mature evaluation:** Some people form a judgment before receiving the full information which becomes a barrier in effective communication.
- **Distrust:** If the sender and receiver both do not trust each other, none of them can communicate effectively with other.
- **Resistance to change:** When new ideas are communicated, most of the people do not filter them or resist them. It works as a barrier to communication.
- **Cultural Differences:** People with different cultures have different meanings of different signs, symbols and assumptions. So, in communication, while communicating by a person by one culture may be interpreted differently by the receiver of other culture. E.g. thumb up means all the best in one culture but a kind of disrespect in some other culture.

Organisational barriers:

- **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.
- **One-way flow:** When sender and receiver both in the organization don't participate in communication, it will not be effective.
- **Complex Organizational Structure:**
 - several layers of supervision
 - long communication lines
 - organizational distance between workers and top managers
- **Rigid rules and regulations:** Lots of Do's and Don'ts obstruct the communication flow.
- **Attitude of superiors:** If the attitude of superiors is fine, there is no problem in communication but if the attitude is unfavorable, there is a greater possibility that messages would not flow adequately from/or to superior.
- **Lack of confidence in subordinates:** When the subordinates are less competent or less confident, they don't flow information upwards.
- **Ignoring Communication:** Sometimes even superiors do not like to communicate properly with subordinates as to maintain status, it creates problems.

- **Filtering of Information:** Sometimes the sender intentionally screens the information for passing only such information which will look favorable to the receiver.
- **Shortage of time:** “No time”, “lack of time” etc. phrases are used by superiors and they do not communicate properly.
- **Barriers in Subordinates:** Following barriers in subordinates act as barrier to communication: -
 - 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.

Personal barriers:

Inter personal barriers: Barriers due to inappropriate transaction of words between two or more people are called interpersonal barriers.

- **Limited vocabulary:** Inadequate vocabulary is the major hindrance in communication both oral or written. During the speech or at writing if we are tongue fumbles and pen falters due to loss of proper words the connotative or denotative meaning will distort the message completely.
- **Communication selectivity:** When a receiver of the message pay attention only to a part of the message then the barrier is known as communication selectivity. Here sender is not at fault but the receiver’s fault of choice breaks the flow of communication both in written and oral forms.
- **Cultural variation:** Day by day businesses are increasing globally. The outlook of global and domestic work force has changed drastically. Thus, to compete successfully, in today’s globalized business environment we have to overcome the communication adequacy due to different languages and cultures.
- **Incongruity of verbal and non-verbal:** It is a well-known fact that nonverbal communication enhances the impact of verbal communication but some time it is found that the nonverbal communication is giving a wrong interpretation and making the receiver puzzle. If the nonverbal cues are misinterpreted the message is distorted. For example, if an uninvited guest comes to your home and you have an urgent piece of work outside then your word definitely welcomes him but your nonverbal cues will tell him that he is unwanted and that time.
- **Emotional out bursts:** Being a human, you are emotional no matter whether you are in office or at home. Sometimes you are so much overwhelmed with emotions that you can’t say your feelings well in words and your tears stop you to say something.
- **Poor listening skills:** Hearing is a passive exercise while listening is an active process which requires careful attention and accurate decoding of the signals received from the speaker. But sometimes we cannot pay attention to what sender is saying. the reason may be different at different situations, like- emotional disturbance, indifferences, aggressiveness etc.

Intra personal barriers: Barriers due to different experience, education, values and personality are called intrapersonal communication. These communication barriers arise from individuals' attitude and habits.

- **Wrong assumption:** We know that two people in the world cannot be same not even siblings. This barrier occurs when the sender of the message has a false assumption of the level of understanding, knowledge, and thinking. The speaker sometimes doesn't realize the background, education, and experience of the receiver. For example, if a doctor said to his patient – take the medicine only SOS. The intrapersonal barrier breaks the communication as patient was confused about the term 'SOS'; Because doctor had wrong idea about his patient's knowledge and didn't try to make him understand.
- **Different background:** No two people have same background in the world. Even children of a family differ from each other in their genetic heritage. These variations are due to education, culture, language environmental, age and other factors which give rise to the difference in background of the individuals. For example, if a computer representative gives much details about hardware to a customer who want to get that computer installed in his house. And this is due to different background.
- **Categorical thinking:** There are many people who think that they 'know it all'. Such people are called 'pansophists'. They think that they are all perfect and they need not of any kind of additional information on the related topic. They would not accept any further information related to the subject or topic. For example- generally people are not very much serious or sincere in attending the regular meetings in their offices which are conducted on regular basis for smooth functioning in an organization.
- **Varied perception:** Every individual has its own opinion about a particular thing and his perception may differ from others due to his taste, preferences, and knowledge. There is a well-known story of six blind men who perception about an elephant was totally different from others.
- **Wrong inferences:** Sometimes people make wrong conclusions after analyzing the things or matter. Inferences are more dramatic than a fact so these give rise to gossip and rumors. If the inferences are base-less and pre-conceived these hamper the flow of communication.