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Nature of Technical Communication

*Communication is the transfer of information and understanding from one person to another person.
It is a way of reaching others with facts, ideas, thoughts and values.*

—Keith Davis

LEARNING OBJECTIVES

- Understanding the concept of communication
- Grasping stages of the communication process
- Identifying channels of communication
- Understanding the process of technical communication
- Learning to distinguish between general and technical communication
- Understanding the importance and need for technical communication
- Knowing technical communication skills
- Identifying the barriers that disrupt the communication process as well as appropriate steps to overcome these barriers

COMMUNICATION AS SHARING

Look around and you will find people involved in several activities, which involve informal conversations, discussions, meetings, presentations, phone calls, teleconferencing, videoconferencing, gossiping, net surfing, chatting, and so on. In short, we need to communicate in order to interact. Communication is one of the essential conditions of social interaction. Without communication, social interaction may not be possible because human interaction is essentially communicative interaction. It pervades the entire range of social and professional relationships, and plays a key role in our life. It is the reciprocal stimulation and response between individuals, and makes social as well as professional interaction possible.

Communication is a process of sharing information.

Now, let us try to understand what the term ‘communication’ means. The term has been defined at various levels. As it comes from the Latin word *communicare*, meaning ‘to share, to impart, or to commune’, its literal meaning is ‘giving or sharing information’. It is this sharing of information that makes

the process of communication so important to us. Whether it is an informal social situation or a formal academic or professional situation, we need to share information, ideas, and knowledge with others. However, this process of sharing information is a symbolic interchange, which is both dynamic and interactive, and results in an exchange of meaning and understanding. Let us look more closely at the whole process of communication.

Firstly, communication is a dynamic interactive process that involves the effective transmission of facts, ideas, thoughts, feelings, and values. It is not passive and does not just happen; we actively and consciously engage in communication in order to develop the information and understanding required for effective group functioning. It is dynamic because it involves a variety of forces and activities interacting over a period of time. The word 'process' suggests that communication exists as a flow through a sequence or series of steps. The term 'process' also indicates a condition of flux and change. The relationships of people engaged in communication continuously grow and develop.

Communication is any behavior that results in an exchange of meaning.
American Management Association

Communication is an exchange of meaning and understanding. Meaning is central to communication, and transmission of meaning is the central objective of communication. Communication begins with the sender sending out message cues, which are perceived by the receiver who assigns meaning to them and responds to them accordingly. Communication is not complete unless the message is decoded and understood by the receiver. Moreover, communication can be considered effective only when the receiver's response is congruent with the meaning the sender wanted to convey.

Communication is the process involving the transmission and reception of symbols eliciting meaning in the minds of the participants by making common their life experiences.
Baird Jr. E John

Communication is symbolic because it involves not only words but also symbols and gestures that accompany the spoken words. Infact, our ability to symbolise makes communication possible.

Effective communication is purposive symbolic interchange resulting in workable understanding and agreement between the sender and the receiver.
George T Vardaman

Communication is an interactive process. The two communication agents involved in the communication process are the sender (S) and the receiver (R). Both the communication agents exert a reciprocal influence on each other through interstimulation and response.

To conclude, we can define communication as a multidimensional interactive process of sharing common sets of signs, symbols, and language from one person to another person so that a suitable response results.

Progress Check 1

The purpose of a progress check exercise is to test your comprehension of the topic discussed and provide a quick review. You may check your answers with those given at the end of the chapter.
Study the following statements about the process of communication and tick True or False against each of them.

- (a) Communication directs the flow of information to help people interact with each other.
- (b) Communication is always a one-way process of passing information and ideas to someone else.
- (c) You may use a specific set of words, gestures, and images to convey what you want to say.
- (d) Symbolic action is limited to verbal communication.
- (e) Communication involves only words.
- (f) Human interaction is not communicative interaction.
- (g) Meaning is crucial to communication.
- (h) Communication achieves shared understanding.
- (i) Communication is designed to achieve a goal.
- (j) In order to achieve desired objectives, the sender and the receiver must share common understanding.

STAGES OF COMMUNICATION

As noted earlier, communication is a dynamic interactive process. It consists of five steps, that is ideation, encoding, transmission, decoding, and response. Study Fig. 1.1, given below, to understand the different stages of communication.

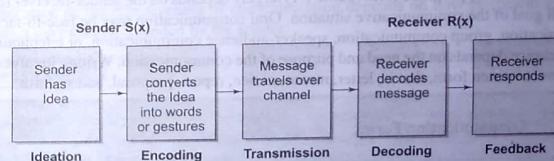


Fig. 1.1 The Communication Process

Ideation

The process of communication begins with ideation, which refers to the formation of the idea or selection of a message to be communicated. It consists of the 'What' of communication and is concerned with the content of the specific message to be presented. The scope of 'ideation' is generally determined by the sender's knowledge, experiences, and abilities, as well as the purpose of communication and the context of the communicative situation. However, the form of ideation depends on several other factors.

Messages generally have two kinds of content, logical and emotional. Logical messages consist of factual information, while emotional messages consist of feelings and emotions. In

The communication process has five steps: ideation, encoding, transmission, decoding, and feedback.

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a formal communicative situation, 'ideation' may consist of finding and selecting a subject or general topic, looking for ideas and thoughts, and deciding the type, scope, and sources of information.

Encoding

Encoding is the next step in communication. It is the process of changing the information into some form of logical and coded message. The encoding process is based on the purpose of communication and the relation between the sender and the receiver. In a formal situation, encoding involves:

- (a) selecting a language;
- (b) selecting a medium of communication; and
- (c) selecting an appropriate communication form.

Selecting the right language is essential for effective encoding. Verbal messages need a common language code, which can be easily decoded by the receiver. If the receiver is not able to decode or understand the message, communication will fail. For example, a person who does not understand Tamil cannot decode a message encoded in Tamil. We generally use our first language (L1) in informal situations while we prefer official language in formal business, academic, or professional situations.

As selecting the right medium of communication involves making the right choice out of many available options, it determines the effectiveness of encoding. This is vital as there are so many options available to a communicator for transmitting interpersonal messages that he or she may get confused. Making the right choice is the beginning of effective communication. There are three basic options for sending interpersonal messages, that is speaking, writing, and non-verbal signs and symbols. The spoken word involves vocalisation while non-verbal message cues are generally visual (auditory and tactile). Non-verbal clues play a significant role in oral communication. These clues include body movements, facial expressions, touching patterns, speech mannerisms.

The selection of the appropriate form (Table 1.1) largely depends on the sender-receiver relationship and the overall goal of the communicative situation. Oral communication may be face-to-face interpersonal communication, group communication, speaker-audience communication, or telephonic communication. The choice depends on the need and purpose of the communication. Writing involves the selection of the correct written form, that is, letter, memo, notice, report, proposal, and so forth.

Table 1.1 Communication Forms

Form	Examples
Interpersonal face-to-face communication	casual conversations, formal interactions, student-student negotiations, job interviews
Group communication	meetings, conferences, group discussions, panel discussions
Speaker-audience communication	speeches, debates, seminars, workshops, oral presentations
Telephonic communication	personal interactions, business deals, telephone interviews
Written communication	reports, proposals, memos, letters, emails

Transmission

Transmission refers to the flow of message over the chosen channel. Transmission confirms the medium selected during the process of encoding and keeps the communication channel free from interference or noise so that the message reaches the receiver without any disturbance. It is one of the most basic aspects

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of communication because it also involves choosing the proper time (when to communicate), proper place (where to communicate), and a proper way (how to communicate). For example, when you want to tell your teacher that you will not be able to attend his or her next class, you decide whether you should tell him/her before the class or after the class; in the class room itself or in his/her chamber. For communication to be effective, it is essential that the right time, the right place, and the right method is chosen.

Decoding

Decoding is the process of converting a message into thoughts by translating the received stimuli into an interpreted meaning in order to understand the message communicated. It is important to note that it is the message that is transferred, as meaning cannot be transferred from one person to another. The receiver has to assign meaning to a message in order to understand it.

The process of decoding involves interpretation and analysis of a message. Decoding in written communication refers to reading and understanding a written message. On the other hand, in oral communication, decoding includes listening and understanding. Effective decoding is very important for successful communication as any misinterpretation of a message leads to communication breakdown and creates confusion and misunderstanding.

Response

Response is the last stage in the communication process. It is the action or reaction of the receiver to the message. It helps the sender know that the message was received and understood. The feedback that goes to the sender makes it clear whether the receiver has accepted the information and filed it in his/her memory or rejected it. He or she may ask for more information or clarification. Response is, thus, the key to communication as the effectiveness of communication depends on how congruent a receiver's response is with the meaning intended by the sender.

Progress Check 2

Which of the following statements about the steps of communication are not True?

- (a) The process of communication begins when the sender converts the idea into words or gestures.
- (b) Ideation is shaped by assumptions based on the sender's experiences.
- (c) The scope of 'ideation' is not determined by the situation.
- (d) Transmission confirms the medium selected during the process of encoding.
- (e) Noise is anything that interrupts the transmission of a message.
- (f) Decoding relates to the sender of a message.
- (g) The sender is the person initiating the communication.
- (h) The sender often expects a response from the receiver.
- (i) The responses of the receiver create feedback.
- (j) It is the duty of the receiver to keep the communication channel free from interference.

CHANNELS OF COMMUNICATION

Communication is essential for the internal functioning of any organisation. By integrating the managerial functions and serving to influence the behaviour and attitudes of people through persuasion, it

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8 encourages them to perform in order to achieve organisational objectives. The interaction between the different individuals working in a company or organisation takes place through different channels. These channels could be both informal and formal.

Informal channels transmit official news through unofficial and informal communicative interactions known as the 'grapevine'. This informal communication network includes tea time gossip, casual gatherings, lunch time meetings and so on. These channels may not be very reliable as they may be company rumours or just gossip. Such channels are more active in organisations that are not transparent. As employees want to know what is going on in their organisation, they seek out unofficial sources of information. The grapevine is not always negative for an organisation and can, in fact, be helpful as it helps in positive group building by acting as a safety valve for pent-up emotions. It may help in building up organisational solidarity and harmony.

A formal communication channel, on the other hand, refers to the formal methods of communication that are followed in management. As illustrated in Fig. 1.2, four different channels of communication are used within an organization.

- Downward communication
- Upward communication
- Horizontal communication
- Diagonal communication

Downward Communication

As the main function of downward communication is providing direction and control, it refers to communication from the higher level in managerial hierarchy to the lower ones. A communication from the general manager of a company to the branch managers is an example of downward communication. Other examples of downward communication include annual confidential reports, performance appraisals, notices, project feedback, announcements of company policies, official instructions, telephone conversations, voice mails, emails, or face-to-face conversations.

There are four formal channels of communication: downward channel, upward channel, horizontal channel, and diagonal channel. Downward communication is essential for the functioning of any organisation as it involves the transfer of information, instruction, advice, request, feedback, and ideas to subordinate staff. It increases staff awareness and facilitates implementation of new policies, guidelines, decisions, and evaluation and appraisal of the performance of employees. However, too much downward communication can lead to reaction from subordinates and can hamper better employee-employer relationship.

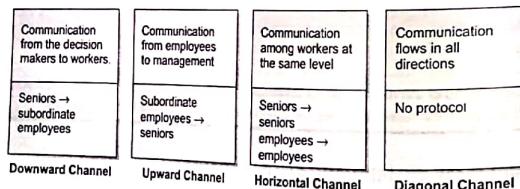


Fig. 1.2 Channels of Communication

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Upward Communication

As the main purpose of upward communication is to provide feedback on several areas of organisational functioning, it refers to communication from subordinates to superiors. A business report from the branch manager of a company to the managing director of the company is an example of upward communication. Other examples of upward channel include business proposals, suggestion box, exit interviews, grievance committees, and so forth.

Since upward communication involves the transfer of information, request, and feedback from the subordinates to their seniors, it promotes better working relationships within an organisation by giving the subordinate staff opportunities to share their views and ideas with their supervisors. It facilitates employee involvement in the decision making process. Nevertheless, in any organization there has to be a balance between downward and upward communication channels.

Horizontal Communication

The main objectives of horizontal communication are developing teamwork, and promoting group coordination within an organisation. It takes place between professional peer groups or people working on the same level of hierarchy. Horizontal communication is less formal and structured than both downward communication and upward communication, and may be carried out through informal discussions, management gossip, telephone calls, teleconferencing, videoconferencing, memos, routine meetings, and so on.

Diagonal Communication

Diagonal communication is the product of modern changes in information technology and management and is the result of the growing realisation of fraternity and equality in the corporate sector. It is basically a response to market needs that demand speed and efficiency. As the diagonal channel occurs between people who do not have to follow rigid norms of communication protocol, it flows in all directions.

Progress Check 3

Which of the following statements about channels of communication are TRUE?

- The main function of upward communication is providing direction and control.
- Communication from the chief executive officer of a company to the personnel manager of the company is an example of upward communication.
- Formal communication channels are based on social relationships in which employees talk about work during informal social gatherings.
- The main objectives of horizontal communication are developing teamwork and promoting group coordination within an organisation.
- Informal communication channels transmit official news through unofficial means.
- A formal communication channel is the process of communication that is followed in organizational management.
- A business proposal from the branch manager of a company to the managing director of the company is an example of horizontal communication.

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 (h) Horizontal communication takes place between professional peer groups or people working at the same level of hierarchy.
 (i) The main purpose of upward communication is to provide feedback on several areas of organisational functioning.
 (j) Diagonal channels flow in all directions.

NATURE OF TECHNICAL COMMUNICATION

Aspects of Technical Communication

Technical communication is a central factor in the emerging knowledge society, where technocrats and professionals in different areas face new communication challenges. In order to be an effective technical communicator, one needs to understand the process of technical communication. We may define technical communication as a transmission of scientific and technical information from one individual or group to another. This exchange of professional information may include simple definitions of tools, complex descriptions of machines and processes, or sophisticated explanation and interpretation of scientific principles. Effective technical communication is a dynamic interchange that may involve a systematic understanding of scientific and technical subjects.

The three important requirements of effective technical communication are:

- subject competence,
- linguistic competence, and
- organisational competence.

Subject Competence Ideation in the technical communication process depends on the sender's subject competence, that is, his or her professional knowledge, experiences, and abilities. Subject competence is the first requirement of technical communication. It is the possession of appropriate knowledge of a particular technical subject matter as well as the possession of highly sophisticated technical or professional skills. An inadequate background in the subject or lack of information might lead to incomplete and ineffective communication.

Linguistic Competence Linguistic competence, on the other hand, is the possession of appropriate language skills and the ability to present scientific facts or information clearly and objectively. As technical communication involves technical presentation of data in reports, proposals, research papers, technical bulletins, manuals, and handbooks, linguistic competence includes several functional skills. Lack of these skills may lead to ineffective or incomplete communication. These skills include the ability to:

- analyse facts or information for clear presentation,
- use appropriate rhetorical devices to present scientific data,
- use graphs, charts, and diagrams systematically.

Organisational Competence Since technical communication is a systematic and structured presentation of information, it involves a process of logical and thematic organisation. Organisational competence is the ability to organise technical information in a logical and structured way. It includes several skills such as the ability to sequence thoughts in a sentence, organise a paragraph according to the needs of the reader and the topic, use appropriate logical ordering, and provide thematic coherence to express

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Forms of Technical Communication

The fast growth of technical knowledge coupled with the development of sophisticated information technology has changed the way we communicate in professional situations. We prefer fast, interactive, and result-oriented forms of communication such as voice-mail, email, video transmission, teleconferencing, videoconferencing, intranet transmission, and so on to the traditional and slow forms of communication such as letters, memos, newsletters, and so forth. Today, one may find a range of interactive technologies for communication. However, technical communication still depends on the two basic forms of communication: oral and written.

Each form of communication has its merits and demerits. While oral communication provides immediate feedback and promotes better understanding, written communication provides a permanent record and facilitates the creation of organised messages. Oral communication gives a personal touch to the communication process whereas written communication is impersonal as the two communicators can not see each other. The choice of an appropriate form of communication may depend on the need and purpose of the communicative situation.

In addition, there are two widely recognised categories of technical communication: external communication and internal communication. External communication consists primarily of describing the areas of expertise technical people or professionals provide. This may include any communication that an organisation does with people belonging to other organisations. Internal communication includes memos describing problems or requesting additional resources, different kinds of reports and proposals, internal presentations, company meetings, policy statements, office instructions, and office descriptions to be used for public releases or company websites.

General and Technical Communication

Technical communication is the process of communicating a specific message to a specific audience with a specific purpose. The repetition of the word 'specific' indicates the special nature of technical communication. It is this need-based specific characteristic of technical communication that makes it different from general or literary communication.

There are several characteristic features of technical communication that make it different from general communication. As shown in Table 1.2, technical communication differs from general communication in content, in style and approach of presentation, in attitude, in organisation, and in language.

Table 1.2 Differences between General and Technical Communication

<i>General communication</i>	<i>Technical Communication</i>
<ul style="list-style-type: none"> • General content • General vocabulary • No formal elements • Both formal and informal in style • May not be factual • Both objective and subjective • Not always structured • No specific exposition techniques • Not always for a specific audience • May or may not involve graphics 	<ul style="list-style-type: none"> • Technical content • Specialised vocabulary • Formal elements • Always formal in style • Always factual • Objective • Logically organised and structured • Complex and important exposition techniques • Specific audience • Usually involves graphics

Progress Check 4

- Which of the following statements about technical communication are not True?
- Technical communication is the transfer of technical information from one individual or group to another.
 - Linguistic competence is the possession of appropriate language skills and the ability to present facts clearly and objectively.
 - Ideas in technical communication does not depend on the sender's subject competence.
 - Technical communication involves complex and important exposition techniques.
 - Inadequate knowledge regarding the subject might lead to incomplete and ineffective communication.
 - Technical communication does not involve understanding and analysis of graphical information.
 - Technical communication is less formal and structured than general communication.
 - Technical communication makes professional interaction possible and directs the flow of technical information and knowledge for the guidance of technocrats, engineers, and others in their professional activities.
 - Technical communication skills are crucial to professional success today.
 - The revolution in information technology is having a profound impact on technical communication tasks.

IMPORTANCE AND NEED FOR TECHNICAL COMMUNICATION

The functional importance of technical communication for an individual or an organisation cannot be overemphasised. Whether you are an executive working in a multinational company, an engineer working at the shop floor level, a scientist working in a premier scientific lab, or a technical student in a professional institution, you need effective technical communication skills in order to be successful.

Technical communication is the essence of organisational life and a prerequisite to effective management. The list of its multipurpose functions is very long. It not only makes professional interaction

possible but also directs the flow of technical information and knowledge for the guidance of technocrats, engineers, and others in their professional activities. It stimulates scientists and researchers to act to achieve individual as well as social and organisational objectives and develops information and understanding essential for effective group functioning. Moreover, it leads to unification between the activities of individuals as a work team and helps to foster positive attitudes required for motivation, cooperation, and other important organisational processes. Finally, it ensures free exchange of information and ideas and promotes scientific temper and maintenance of professional relations.

With the information revolution and socio-economic changes in the new millennium, the importance of effective technical communication skills has increased. The whole world has become a global market and the transfer of technology is playing a key role in economic growth and transformation. As the professional world becomes more diverse, competitive, and result-oriented, the importance of technical communication skills continues to increase. In fact, technical communication skills are crucial to professional success today because, success in communicating in the technical environment will depend not just on an effective style but on the ability to analyse, organise, and present essential information effectively.

Success in the highly competitive environment of today will depend not just on your professional knowledge and skills but on the ability to analyse, organise, and present essential information effectively.

Revolution in information technology is having a profound impact on technical communication tasks, and new kinds of communications tasks or skills will be required in the changed technological environment. These skills include knowledge of high tech communication capabilities, ability to present and explain complex technical information in a simple and familiar style, ability to understand and explain quantitative data, cultural awareness capability, and ability to analyse and prioritise information.

The changes that have taken place in the field of science and technology reflect several developments in the way technical communication skills are viewed. In fact, there has been a shift in perspective so that communication skills take priority over technical and professional skills. There is no doubt that good writing and speaking skills are essential to job success. It is also true that some technical skills are as important as communication skills but knowledge of highly sophisticated technical or professional skills will be useless if one does not know how to communicate the information and insights that result from the use and application of these technical and professional skills.

Progress Check 5

- Which of the following factors is not responsible for the increasing importance of technical communication?
- Highly competitive environment
 - Information revolution
 - Changed technological environment
 - Socio-economic changes in the new millennium
 - Changes in the field of politics
 - Growing diversity of the business world
 - Globalisation
 - Growing complexity of technical information

TECHNICAL COMMUNICATION SKILLS

As technical communication may be oral or written, it may involve all the skills of language: listening, speaking, reading, and writing. Let us discuss each skill in some detail.

Listening

Listening skills, as summarised in Table 1.3, are probably one of the most important language skills that you need in order to be successful in your academic and professional pursuits. As students, you have to listen to lectures, explanations during tutorials and practical sessions, seminars and workshops, lectures, presentations, academic discussions, academic interactions, viva voce tests, and so on. Once you join a profession, you may be required to listen to discussions in meetings and conferences, seminars, business presentations, news bulletins, pre-recorded talks, telephone conversations, teleconferences and video conferences, and so forth. In fact, it is hard to imagine any academic, professional, or business work that does not require efficient listening skills.

Moreover, one needs effective listening skills as it is a state of receptivity that permits understanding of what is heard and grants the listener full participation in the communication process. One cannot be an effective communicator unless one is an effective listener. In any oral communicative situation, listening

Technical communication involves all the four skills of language: listening, speaking, reading, and writing.

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is of special significance because oral communication cannot be complete without listening. One's response in an oral communication situation largely depends on one's ability to understand and appreciate the speaker's perspective. A student requires quick, efficient, and imaginative listening techniques in order to achieve academic success because his/her academic performance partly depends on the quantity and quality of listening. By listening to classroom lectures, academic discussions in seminars and workshops, and academic speeches the student acquires the professional knowledge and expertise needed to excel in his/her profession.

Table 1.3 Listening Skills*		
General	Academic	Professional
<ul style="list-style-type: none"> • Casual conversation • Formal conversation • Social interaction • Public speeches • Announcements • Radio • Television programmes • News reports 	<ul style="list-style-type: none"> • Lectures • Tutorials and practicals • Seminars and workshops • Technical presentations • Academic discussions • Academic interaction • Viva voce 	<ul style="list-style-type: none"> • Professional interaction • Meetings • Conferences • Interviews • Professional discussions • Professional presentations • Teleconferencing • Videoconferencing

*The list is not exhaustive.

The importance of listening also lies in its multipurpose functions. As a purposeful communicative activity, listening serves individual needs and aids in implementing oral communication goals. There are many ways by which decisions are made in an organisation: by discussion in meetings and conferences, by negotiation in business dealings, by voting in democratic processes, and so on. In each instance, listening plays an important role as it aids in analysing a problem, understanding the possible solutions, and making a decision. In brief, listening

- makes oral interaction possible;
- aids in decision making;
- stimulates others to act to achieve individual as well as professional objectives;
- develops information and understanding essential for decision making in meetings and conferences;
- leads to unification between the activities of individuals as a work team, towards achievement of common business, professional, or organisational goals; and
- promotes maintenance of professional relations.

Speaking

Speaking skills, as summarised in Table 1.4, are also very important for a person's professional survival and growth. One needs them to be successful in one's academic and professional pursuits. In fact, every academic, professional, or business work requires effective speaking skills. Whether you are a scientist engaged in technical research, a business executive involved in business activities, or a student working for a professional degree, you need effective speaking skills in order to take an active part in oral communicative processes.

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A person requires effective oral communication skills in several formal communicative situations, that is meetings, conferences, group discussions, panel discussions, interviews, teleconferencing, videoconferencing, seminars, workshops, and symposiums. Some of the sub-skills of oral communication that one may need include the following:

Asking and Answering Questions

- Asking questions in meetings, talks, business presentations, lectures, seminars, conferences, training sessions, fieldwork, and laboratory work
- Asking questions related to non-verbal data, formulae, equations, measures, numbers, fractions, and cardinal and ordinal numbers
- Answering questions, providing clarification, and giving explanations in the above situations

Expressing Opinions and Comments

- Asking for opinions
- Expressing criticism, objections, and doubt
- Expressing general comments
- Agreeing and disagreeing
- Seeking suggestions
- Giving suggestions
- Stating points of view

Academic and Professional Oral Interaction

- Interacting during interviews and viva voce tests
- Interacting orally with experts or professionals

Academic/Professional Discussions

- Discussing academic matter with fellow students
- Inviting to discuss
- Initiating discussion
- Initiating topic shift
- Giving information
- Coordinating in discussions

Meetings/Conferences

- Coordinating in meetings
- Conducting meetings
- Participating in meetings
- Summarizing and concluding in meetings

Oral Presentations

- Making oral presentations
- Orally describing and interpreting non-verbal data, e.g., graphs, tables, diagrams, charts, plans, maps, and so on
- Persuading
- Using visual aids effectively

Several factors have contributed to the increased importance of speaking skills today. The information revolution along with globalisation and other social and economic changes in the new millennium

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16 has increased the importance of speaking skills. Look around and you will find people involved in oral communication: conversations, meetings, discussions, presentations, telephone calls, voice mails, teleconferencing, videoconferencing, gossiping, and so on. Speaking pervades the entire range of social and professional relationships, and plays a key role in our life. Without oral communication, social as well as professional interactions may not be possible.

Table 1.4 Speaking Skills*

General	Academic	Professional
	Speaking in during	
• Casual conversation	• Lectures	• Professional interaction
• Formal conversation	• Tutorials and practicals	• Oral reports
• Social interaction	• Seminars and workshops	• Oral presentations
• Public speeches	• Technical presentations	• Group discussions/Meetings
• Small talks on local topics	• Academic discussions	• Conferences
• Negotiating meanings in social situations	• Academic interaction	• Workshops
• Conversation tasks in a given social milieu	• Viva voce	• Interviews
	• Oral interaction	• Professional discussions
	• Oral reports	• Teleconferencing
		• Videoconferencing

*The list is not exhaustive.

The growth and expansion of service oriented industry has also increased the significance of oral competence for professionals in different fields. As the economy becomes less dependent on manufacturing, and more service oriented, the need for students with good speaking skills has become more acute. Media reports frequently highlight employers' complaints that graduates' oral skills require considerable improvement. Students, thus, need to develop speaking skills if they are to be successful in their careers. Speaking skills are the single most important criterion in hiring professionals. Most of the professionals are hired through a selection process, which involves speaking skills in the form of group discussion/case discussion/personal interview/oral presentation or some other form of oral communication.

Moreover, increasing reliance on oral communication forms such as meetings, group discussions, conferences, seminars, workshops, and other forms of oral interaction in democratic decision making today has given increased significance to the need for effective speaking skills. Oral communication not only makes professional interaction possible, it develops information and understanding essential for decision making in meetings, conferences, and other similar oral communicative situations. Moreover, it leads to unification between the activities of individuals as a work team, towards achievement of common business, professional, or organisational goals; and promotes maintenance of business and professional relations.

As oral communication is a tool of professional and business interaction, one should be able to use it fluently, effectively, and confidently. A person should know how to speak using appropriate grammatical and lexical forms and how to sound using appropriate phonological and graphical forms. One should have the ability to be an understanding interlocutor, create coherent discourse, and take appropriate turns in conversations, as well as have the ability to negotiate meanings with others by creating reciprocity of perspectives on the topic of discussion.

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Reading

Like listening and speaking, reading is crucial to effective communication. You need effective reading skills as you may be required to read several kinds of reading materials for different general, academic, and professional purposes (summarised in Table 1.5). Professionals in different fields need to read technical and business documents: reports, proposals, professional papers and magazine articles, letters, promotional bulletins, catalogues, email messages, instruction manuals, and corporate brochures. Both professionals and students need excellent reading skills to be successful in their pursuits as it is hard to imagine any academic, professional, or business work that does not require efficient reading skills.

The changes in business and industrial fields, coupled with the development of advanced information technology have greatly changed the way we receive and interpret information. Reading is not merely reading of letters and memos; it includes receiving and interpreting sophisticated technical material, email messages, intranet information, information on websites, and so on. Reading has new dimensions in industrial and technical organisations.

Table 1.5 Reading Skills*

General	Academic	Professional
	Reading	
• Newspapers	• Text books	• Business reports
• Magazines	• Journals	• Proposals
• Journals	• Research papers	• Business letters
• Novels	• Scientific articles	• Memos
• Stories	• Classroom notes	• Email messages
• Articles	• Lecture notes	• Notes
• Personal letters	• Thesis	• Notices
• Emails	• Dissertations	• Circulars
• General books	• Abstracts	• Promotional bulletins
• Entertainment literature		• Catalogues
		• Instruction manuals
		• Corporate brochures

*The list is not exhaustive.

It is important that you are able to read and analyse scientific texts, instruction manuals, and technical materials in different forms. Comprehension of technical materials requires basic understanding of the technical subject, familiarity with scientific/technical terms, words and phrases, familiarity with scientific formulae/equations/abbreviations and with the discourse features of technical writing. It also includes the ability to understand and interpret graphic information.

Writing

The significance of writing skills (summarised in Table 1.6) cannot be overemphasised because writing is so important for students of all kinds and professionals in all fields. As a professional student, a person needs effective writing skills because one has to write examination answers, project reports, lab reports, summaries, synopsis, abstracts, and subject notes. Professionals are required to write business letters,

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memos, email messages, reports, proposals, minutes, notes, professional summaries, and so on. Both professionals and students need excellent writing skills to survive and excel in their pursuits as there is hardly any academic or professional activity that does not require writing skills.

Table 1.6 Writing Skills*

General	Academic		Professional
	Writing		
<ul style="list-style-type: none"> • Personal letters • Personal e-mail messages • Notes • Comments • General articles 	<ul style="list-style-type: none"> • Examination answers • Project reports • Lab reports • Synopsis • Thesis • Dissertations • Abstracts • Research papers • Scientific articles • Classroom notes • Lecture notes 	<ul style="list-style-type: none"> • Technical reports • Industrial reports • Project proposals • Business proposals • Business letters • Electronic mailing • Memos • Notices • Agenda • Minutes • Technical abstracts • Job applications • Resumes 	

*The list is not exhaustive.

BARRIERS TO EFFECTIVE COMMUNICATION

As communication is a complex process, it is desirable to take care of communication interference and the barriers in communication that may hamper the smooth flow of effective communication. These barriers may emanate from either the sender/receiver or the circumstances of communication. However, we need to avoid them to become effective communicators. In real communicative situations, any interference or noise, as it is commonly referred to, may complicate the communication process and interfere with our message. Communication barriers arise during the communication process and may confuse the listener or reader, create misunderstanding and confusion, and may sometimes lead to communication breakdown.

- A careful analysis of communication barriers reveal that they are generally created by
- improper encoding,
 - bypassing,
 - frame of reference,
 - physical distractions,
 - psychological and emotional interference, or
 - cultural differences.

Let us discuss some of these barriers to communication in greater detail.

*Nature of Technical Communication***Improper Encoding**

Improper encoding is a recurrent barrier in the process of communication. Since there is a lack of understanding on the part of the receiver, it leads to confusion and misunderstanding. The sender must consider the cognitive knowledge the receiver has of the communicative code that is being used. If the audience is not able to follow the language/dialect, a communication breakdown will definitely occur. In addition, selection of an inappropriate medium or linguistic form also leads to communication breakdown due to misunderstanding or confusion.



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Communication barriers include improper encoding, bypassing, frame of reference, physical distractions, psychological and emotional interference, and cultural differences.

Bypassing

The term 'bypassing' refers to misunderstanding resulting from missed meanings because of the use of abstract words and phrases on which both senders and receivers do not agree. Bypassing is probably the most common communication barrier that you have to deal with. Words mean different things to different people. Age, education, and cultural background are three of the more obvious variables that influence the language a person uses. In order to avoid bypassing, you should use familiar words with concrete meanings so that there is no scope for confusion. Moreover, it is also necessary to know the background of your audience.

For instance, an Indian asked his Arab colleague why he was a bachelor at the age of forty. The Arab replied innocently, "because of dowry...". The Indian responded, "You should not have been so greedy." The Arab was upset and confused because he could not understand why his Indian friend considered him greedy. There was a communication breakdown.

"Dowry" for an Indian is the money that the groom takes from the family of the bride while "dowry" for an Arab is the amount of "mehr" that the groom has to pay to the father of the bride.

Frame of Reference

Your weakness in viewing others within your frame of reference may also lead to confusion and misunderstanding. The moment you interpret others' point of view from your angle, you allow your preconceived notions and prejudices to start working for you. Your frame of reference is individual as it is based on your experiences, exposure, education, personality, and several other elements peculiar to you. In order to avoid communication failure, you have to be sensitive to this fact and try to put yourself in the other person's position.

Physical Distractions

Physical distractions can easily disrupt communication. For example, you are trying to give an oral presentation in the classroom but the room temperature is very high and there is no air-conditioner or fan in the room. Your discomfort may cause communication failure because a person who is physically uncomfortable can be neither a good speaker nor a good listener. You should avoid any physical discomfort during communication.

Psychological and Emotional Interference

Any psychological or emotional turbulence or disturbance can prove to be a barrier to effective communication because it leads to lack of interest and concentration. Feelings of sadness, fear, anger, anxiety, or jubilation influence our reception and receptivity to others' ideas. Communication is a purposeful activity based on rationality and reason and one must assure that one is not emotionally charged (for example, very excited/angry/nervous) before one takes part in a communicative interaction. One may find it difficult to concentrate on the content of the message if one is emotionally charged. Over arousal of emotions may adversely affect both encoding and decoding. Whether you are a sender or a receiver, it is necessary that you try to focus on the content of the message.

Intercultural Differences

As noted earlier, it is the receiver who assigns meaning to message cues and meanings are assigned in terms of a receiver's frame of reference. This interpretation of meaning can create misunderstandings during intercultural communication because the sender and the receiver belong to different cultures and share different values. In fact, our values are our personal guides to thought and behaviour, and exert a strong influence on us. We should be sensitive to cultural differences and take into account the values of our listeners/readers while communicating with them.

Checklist for Communication Barriers

- Know your audience before you communicate with them. Try to know their needs, perceptions, and expectations from you.
- Try to experience the world from the receiver's perspective.
- Use an appropriate and effective personal style and avoid using a negative or angry tone.
- Use an appropriate form and style of communication.
- Encode your message well.
- Avoid physical and psychological barriers.
- Listen and read carefully.
- Be precise and to the point. Avoid information overload.
- Be open, frank, and positive.
- Appreciate and understand cultural differences.

Progress Check-6

Study the following communicative situations to identify communication barriers in them. If the situation involves a communication barrier, tick Yes but if it does not involve a barrier, tick No.

(a) One of your colleagues has misbehaved with you. You are very upset and you want to complain to the director of your company.
Yes/No

(b) Suppose you are working in a company and you have thought of a brilliant idea to solve the technical problems of your company but you are not sure whether your colleagues will agree with you or not. You are very nervous as you do not know the response of your colleagues. However, you want to share your ideas with all your colleagues.
Yes/No

- (c) A friend wants to know why you are doing B.Tech in Computer Science and Engineering. You are not very clear about the reasons for joining the course but want to respond to his query.
Yes/No
- (d) You have some problems with one of your assistants. He has insulted you. You are very angry and upset, and immediately want to express your feelings to your immediate boss.
Yes/No
- (e) You have to attend a meeting where you have to present a proposal but you are very disturbed because your sister is very sick.
Yes/No
- (f) You are not happy with the internet facilities in your department and want to propose major changes. You want to share your innovative ideas with the head of the department.
Yes/No
- (g) You want to propose major changes in the computer facilities provided by your institution. You want to share your innovative ideas with all the students of your class.
Yes/No
- (h) Your communication teacher is very angry with you because you did not submit an important assignment as per the deadline set by him. You want to explain the reasons for the delay. You go and meet him personally.
Yes/No

EXERCISES.....

1. Please list below the names of persons with whom you have communicated in English during the last three days—even if only for a moment. Answering the following questions will provide you with the guidelines and basics of your communication:
 - (a) List of names
 - (b) With how many people did you actually communicate?
 - (c) What were the reasons for communicating with each person?
 - (d) What did they communicate about?
 - (e) What were the forms of communication that you used?
 - (f) How important is it to be able to communicate?
 - (g) What would it be like if we could not communicate with others?
2. Write short notes on the following:
 - (a) Ideation in technical communication
 - (b) Informal channels of communication
 - (c) Downward communication
 - (d) Organisational competence
 - (e) Communication barrier
3. Answer the following questions as briefly as possible:
 - (a) What is communication?
 - (b) What are the steps in communication?
 - (c) What makes technical communication different from general communication?
 - (d) Which communication channel is the most important? Give reasons to support your answer.



- (e) When communicating with people from different cultures/regions, what can you do to reduce misunderstandings?
- (f) Have you experienced any communication barrier in understanding this chapter? How can we eliminate communication barriers, so that we can work and understand better?

Key to Progress Check

Progress Check 1

- (a) True (b) False
(f) False (g) True

(c) True
(h) True

(d) False
(i) True

(e) False
(j) True

Progress Check 2

a, c, g

Progress Check 3

d, e, f, h, i, j

Progress Check 4

c, f, g

Progress Check 5

e

Progress Check 6

- (a) Yes (b) Yes
(f) No (g) No

(c) Yes
(h) Yes

(d) Yes

(e) Yes

