

PART I

INTRODUCTION TO TECHNICAL COMMUNICATION

Chapter 1: Basics of Technical Communication

Chapter 2: Barriers to Communication

Chapter 3: Non-verbal Communication

Basics of Technical Communication

OBJECTIVES

You should study the chapter to know

- the importance of technical communication
- how general-purpose communication is different from technical communication
- the objectives and characteristics of technical communication
- the constituents of the communication process
- the different levels of communication
- how communication flows in an organization
- how and why visual aids are used in technical communication

INTRODUCTION

In the academic environment, we encounter various situations involving speech or writing: conversation with friends, professors, or colleagues to achieve various purposes; seminars, group discussions, written tests, and examinations; and laboratory or project report submissions on diverse topics. Likewise, at the workplace, we interact with superiors and subordinates, converse with them face-to-face or over the telephone, and read and write emails, letters, reports, and proposals.

All these activities have a common denominator—*the sharing of information*. For example, when you request your professor to explain a concept you could not understand very well in class, you transmit the information to him/her that you need some clarification. Now, the professor receives this information, understands it, and responds by giving an explanation which clears your doubt. If you are satisfied with this explanation, you thank the professor and the communication comes to an end. If you are still in doubt, you once again request clarification, and the process continues. This process involving the transmission and interchange of ideas, facts, feelings, or courses of action is known as the *process of communication*. We give, get, or share information with others during this process. Whether the communication is oral or written, this process essentially remains the same.

When one becomes a part of any organization, one needs to communicate, and communicate effectively. No organization can survive without communication. All the activities an organization undertakes have communication at their hub. The better our communication skills, the greater are our chances of quick progress. However skilful one may be in other aspects such as work, knowledge, thoughts, and organization, without proper communication, those are of little use. For instance, though you may have an excellent academic record, you may not be successful in an interview if you are not able to express your ideas clearly to those on the other side of the table. It has been observed that

people who are successful in their careers generally have excellent communication skills, which is one of the very reasons for their success. Most of this is technical *communication*, so let us find out more about what role technical communication plays in an organization.

IMPORTANCE OF TECHNICAL COMMUNICATION

Technical communication plays a pivotal role in any set-up, whether it is a business enterprise, an industry as a whole, or an academic institution. All managerial or administrative activities involve communication, be it planning, organizing, recruiting, coordinating, or decision-making. When you write reports, give instructions, or read brochures and manuals, you are involved in the process of communication. Communication serves as an instrument to measure the success or growth of an organization. For example, papers published by R&D organizations bring to light their progress. When the chief executive officer (CEO) of an organization presents his/her company's achievements in a meeting, each of the participants comes to know of these milestones. The higher one's position is, the greater is their need to communicate. A labourer, for example, may not be as involved in formal communication as a top-level executive. The various types of communication not only help an organization to grow, but also enable the communicators to develop the required skills.

However, though most professionals are well aware of the importance of communication, they do not develop their skills to good effect in their sphere of work. The more people participate in the communication process, the better they develop their skills in collecting and organizing information, analysing and evaluating facts, appreciating the difference between facts and inferences, and communicating effectively. To become an effective communicator, one needs to communicate, communicate, and communicate. There is no other way out.

GENERAL AND TECHNICAL COMMUNICATION

Communication is important not only in an organization but also in one's daily life. It is an integral part of daily activity. When an alarm clock goes off, it is communication through sound, urging one to get out of bed. When one feels loyal towards a particular brand of toothpaste, it is possible that the television (TV) commercials for that brand have been successful in communicating the message. Watching news on TV, saying goodbye to one's family, or calling a cab and giving directions are all different types of communication. At the workplace, all activities revolve around oral or written communication. Interacting with one's boss, reading the newspaper at home, or even dreaming in one's sleep are all examples of communication.



Communication in everyday life

**TABLE 1.1** Differences between general and technical communication

General communication	Technical communication
<ul style="list-style-type: none"> Contains a general message Informal in style and approach. No set pattern of communication. Mostly oral. Not always for a specific audience. Does not involve the use of technical vocabulary or graphics, etc. 	<ul style="list-style-type: none"> Contains a technical message Mostly formal Follows a set pattern Both oral and written Always for a specific audience Frequently involves jargon, graphics, etc.

Messages that are non-technical or informal in nature are categorized as general-purpose communication, whereas messages pertaining to technical, industrial, or business matters belong to the category of technical or business communication. Table 1.1 shows the differences between the two categories.

OBJECTIVES AND CHARACTERISTICS OF TECHNICAL COMMUNICATION

Technical communication takes place when professionals discuss a topic with a specific purpose with a well-defined audience. Technical communication usually has the following objectives:

- To provide organized information that aids in quick decision-making
- To invite corporate joint ventures
- To disseminate knowledge in oral or written form

Let us take an example of a customer who has bought a washing machine and does not know how to use it. The customer reads the instructions in the user manual and gradually learns to operate the washing machine without any assistance. This is an example of successful technical communication. When you are confused about which camera to buy, the salesperson explains all the technical features of each model to you. If that helps in your buying decision, it is successful technical communication again.

Technical communication has to be correct, accurate, clear, appropriate, and to the point. Correct information is objective information. The language should be clear and easy to understand. If the communication is through a user manual for a phone, remember that people will usually never use it unless they are stuck. And if they are stuck, they will look for instant information to solve their problem. The information must be brief and arranged sequentially so that it is easy for a user to find relevant information. It is also vital that the technical information provided in the manual be accurate.

PROCESS OF COMMUNICATION

Communication can be defined as the exchange of information, ideas, and knowledge between a sender and a receiver through an accepted code of symbols.

For sharing information, two parties are required—the sender and the receiver—without whom communication, which is an interactive process, cannot take place. At any given time, one is active and the other is passive. However, this is not sufficient; there should also be cooperation and understanding between them. Through what they have to communicate, the sender and receiver mutually influence each other. They should have a mutually accepted code of signals making up a common language. So,

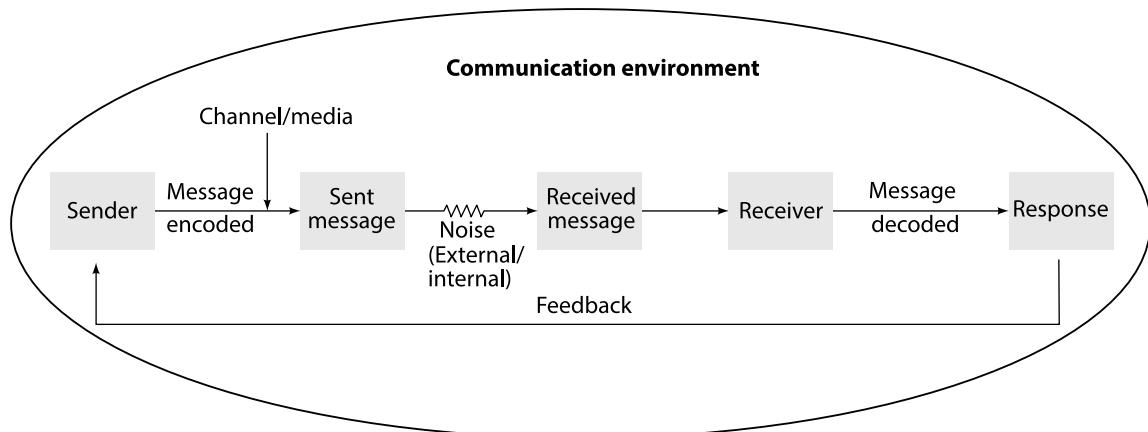


FIGURE 1.1 The process of communication

communication can be defined as the exchange of information, ideas, and knowledge between a sender and a receiver through an accepted code of symbols. It is termed effective only when the receiver receives the message intended by the sender in the same perspective. Otherwise it becomes miscommunication.

Communication Cycle

Consider the communication process shown in Figure 1.1. The communication cycle involves various elements, as discussed in the following paragraphs.

The first step is *formulation*, wherein the sender forms the content of the message to be sent. This formulation depends on the level of experience, intelligence, knowledge, and purpose of the sender. The content, once formed, is called the *message*. The sender *encodes* the message using a basic *tool*. This tool is nothing but the language used—words, actions, signs, objects, or a combination of these. Once encoded using proper language, the message is ready to be delivered. This delivery happens through *channels* or media of communication. It can be face-to-face, on paper, or through electronic or digital media such as the Internet. The *receiver* receives the message, *decodes* it, and acts on it. If the message received is the same as the message sent, there will be an appropriate response; if not, there will still be a response, but probably an inappropriate or unexpected one, as there has been a breakdown or interference in the communication. This may happen because of *noise*, which has been discussed in detail in Chapter 2. *Noise affects the decoding part of the communication process.*

The transmission of the *receiver's response* to the sender is called *feedback*. Feedback is essential, as it measures the effectiveness of communication. When a message is sent, the communication

cycle is complete only when there is a response from the recipient of the message. Otherwise, the message needs to be re-sent. When a response is received, the message has been successfully delivered to the other party. For example, you put up a notice asking the members of your student council to attend a meeting on a specified date, at a particular time, at the location mentioned. On the day of the meeting, you find that some of them have come while the others have not turned up. In this case you have obtained both positive and negative responses to your message. However,

'How well we communicate is determined not by how well we say things, but how well we are understood.'

—Andrew Grove



since you have got some feedback, the communication process is complete. You also know that it has been effective, at least from your side. Hence, to know whether the communication has been successful or not, there must be some feedback, which is nothing but an observation of the recipient's response. *The communication is fully effective only when there is a desired response from the receiver.*

Effective communication takes place in a well-defined set-up. This is called the *communication environment*. A classroom is the communication environment when a teacher delivers lectures to students. If such a communication is attempted without a proper environment, it will not have the desired effect. Similarly, a teacher's cubicle becomes the communication environment when a student privately approaches the teacher. Thus, the essentials of *effective communication* are as follows:

- A well-defined communication environment
- Cooperation between the sender and the receiver
- Selection of an appropriate channel
- Correct encoding and decoding of the message
- Feedback

LEVELS OF COMMUNICATION

Having understood the communication process, let us now study the various levels at which human communication takes place:

- Extrapersonal
- Intrapersonal
- Mass
- Interpersonal
- Organizational



Extrapersonal Communication

Communication between human beings and non-human entities is extrapersonal. For example, when your pet dog comes to you wagging its tail as soon as you return home from work, it is an example of extrapersonal communication. A parrot responding to your greeting is another example. More than any other form, this form of communication requires perfect coordination and understanding between the sender and the receiver because at least one of them transmits information or responds in sign language only.

Intrapersonal Communication

Intrapersonal communication takes place within an individual. We know that the brain is linked to all parts of the body by an electrochemical system. For example, when you begin to 'feel hot', this information is sent to the brain and you may decide to 'turn on the cooler', responding to instructions sent from the brain to the hand. In this case, the relevant organ is the sender, the electrochemical impulse is the message, and the brain is the receiver. Next, the brain assumes the role of sender and sends the feedback that you should switch on the cooler. This completes the communication process. This kind of communication pertains to thinking,

which is the basis of information processing. Without such internal dialogue, one cannot proceed to the further levels of communication—interpersonal and organizational. In fact, while we are communicating with another party, our internal dialogue with ourselves continues concurrently—planning, weighing, considering, and processing information. You might have noticed that at times you motivate yourself or consciously resolve to complete a certain task. Self-motivation, self-determination, and the like take place at the intrapersonal level.



Interpersonal Communication

Communication at this level refers to the sharing of information among people. To compare it with other forms of communication, such as intrapersonal, organizational, etc., we need to examine how many people are involved, how close they are to one another physically, how many sensory channels are used, and the feedback provided.

Interpersonal communication differs from other forms of communication in that there are few participants involved, they are in close physical proximity to each other, many sensory channels are used, and feedback is immediate. Also, the roles of the sender and receiver keep alternating. This form of communication is advantageous because direct and immediate feedback is possible. If a doubt occurs, it can be instantly clarified. Note that non-verbal communication plays a major role in the interpretation of a message in this form of communication due to the proximity of the people involved.

Interpersonal communication can be *formal* or *informal*. For example, your interaction with a sales clerk in a store is different from that with your friends and family members; the interaction between the panel members and the candidate appearing at an interview is different from the conversation between two candidates waiting outside. Hence, depending upon the formality of the situation, interpersonal communication takes on different styles.

Moreover, most interpersonal communication situations depend on a variety of factors, such as the psychology of the two parties involved, the relationship between them, the circumstance in which the communication takes place, the surrounding environment, and finally the cultural context.

Organizational Communication

Communication in an organization takes place at different hierarchical levels. As we have learnt, it is extremely necessary for the sustenance of any organization. Since a large number



of employees are involved in several different activities, the need to communicate effectively becomes greater in an organization. With a proper networking system, communication in an organization is possible even without direct contact between employees. Organizational communication can be further divided into the following.

Internal-operational All communication that occurs in the process of operations within an organization is classified as internal-operational.

External-operational The work-related communication that an organization has with people outside the organization is called external-operational communication.

Personal All communication in an organization other than that for business or official purposes is called personal communication.

We will learn more about communication in organizations later in this chapter.



Mass Communication

Mass communication is meant for large audiences and requires a medium to transmit information. There are several mass media such as journals, books, television, and newspapers. The audience is heterogeneous and anonymous, and thus the approach is impersonal. Press interviews given by the chairman of a large firm, advertisements for a particular product or service, and the like take place through mass media. This type of communication is more persuasive in nature than any other form, and requires utmost care on the part of the sender while encoding the message. Oral communication

through mass media requires equipment such as microphones, amplifiers, etc., and the written form needs print or visual media. The characteristics of mass communication are as follows:

Large reach Mass communication has the capacity to reach audience scattered over a wide geographical area.

Impersonality Mass communication is largely impersonal, as the participants are unknown to each other.

Presence of a gatekeeper Mass communication needs additional persons, institutions, or organizations to convey the message from a sender to a receiver. This 'gatekeeper' or mediator could be a person or an organized group of persons active in transferring or sending information from the source to the target audience through a mass medium. For example, in a newspaper, the editor decides which news makes it to the hands of the reader. The editor is therefore the gatekeeper in this mass communication process.

FLOW OF COMMUNICATION

Information flows in an organization both formally and informally. *Formal communication refers to communication that follows the official hierarchy and is required to do one's job.* In other words, it flows through formal channels—the main lines of organizational communication. Internal-operational and external-operational communication is formal. In fact, the bulk of communication that a business needs for its operations flows through formal channels. For

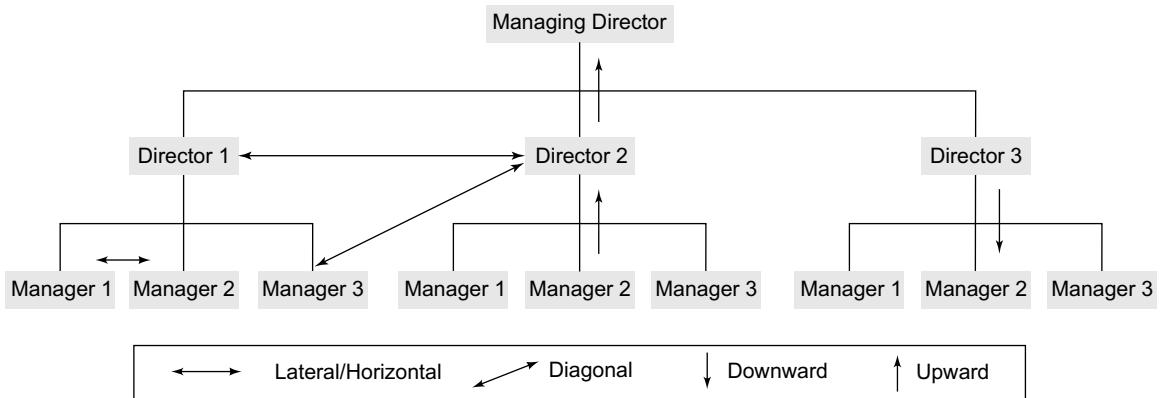


FIGURE 1.2 Flow of communication in an organization

example, when a manager instructs a subordinate on some matter or when an employee brings a problem to a supervisor's attention, the communication is formal. Similarly, when two employees interact to discuss a customer's order, the communication is formal. Information of various kinds flowing through formal channels, such as policy or procedural changes, orders, instructions, and confidential reports, is formal communication. Formal communication can flow in various directions—vertical, lateral, or diagonal—as shown in Figure 1.2.

Vertical Communication

Figure 1.2 shows that communication can flow in any direction in an organization. Vertical communication consists of communication up and down the organization's chain of command. Vertical communication can be classified as downward communication and upward communication according to the direction of its flow.

Downward communication

Downward communication flows from a manager down the chain of command. When managers inform, instruct, advise, or request their subordinates, the communication flows in a downward pattern. This is generally used to convey routine information, new policies or procedures, seek clarification,

ask for an analysis, etc. People also send feedback to their subordinates on their actions through this channel. Downward communication can take any form—emails, memos, notices, face-to-face interactions, or telephone conversations. However, it should be adequately balanced by an upward flow of communication.



Upward communication

When subordinates send reports to inform their superiors, or to present their findings and recommendations to their superiors, communication flows upward. Upward communication



keeps managers aware of the business operations as well as of how employees feel about their jobs, colleagues, and the organization in general. Managers also rely on upward communication for making certain decisions or solving problems concerning the organization.

The extent of upward communication, especially that initiated at the lowest level, depends on the organizational culture. In an open culture without too many hierarchical levels, i.e., in a flat structure, managers are able to create a climate of trust and respect, and implement participative decision-making or empowerment. In such an environment, there will be a considerable amount of upward communication. This happens mainly because the employees provide the input for managerial decisions. In a highly authoritative environment, where downward flow dominates, upward communication still takes place but is limited to the managerial ranks. Suggestion boxes, employee attitude surveys, grievance procedures, superior–subordinate decisions (decisions taken for the subordinate by his/her superior), review reports, statistical analyses, etc. provide restricted information to top management.

Horizontal Communication

Horizontal or *lateral* communication takes place among peer groups or hierarchically equivalent employees, i.e., employees at the same seniority level. Such communication is often necessary to facilitate coordination, save time, and bridge the communication gap among various departments. Occasionally, these lateral relationships are formally sanctioned. But generally, they are informally created to bypass the formal hierarchical channels and expedite action.

From the organization's point of view, lateral communication can be either advantageous or disadvantageous. As compared to vertical (downward or upward) communication, which can at times hold up and delay timely and accurate transfer of information, lateral communication can be beneficial. Nevertheless, they can also create conflicts when formal vertical channels are bypassed by employees in order to accomplish their goals, or when superiors find out that they had not been consulted before certain decisions were taken.

Lateral communication enables the sharing of information with a view to apprise the peer group of the activities of a department. The Vice President (Marketing) sending some survey results in the form of a memo to the Vice President (Production) for further action is an example of lateral communication. This type of communication is vital for the growth of an organization as it builds cooperation among the various branches. It plays a greater role in organizations where work is decentralized, because there is a higher probability of communication gaps in such set-ups.

Diagonal Communication

Diagonal or cross-wise communication flows in all directions and cuts across the various functions and levels in an organization. For example, when a sales manager communicates directly with

the Vice President (Production), who is not only in a different division, but also at a higher level in the organization, they are engaged in diagonal communication. Though this form of communication deviates from the normal chain of command, there is no doubt that it is quick and efficient.

In some situations, ignoring vertical and horizontal channels expedites action and prevents other employees from being used merely as messengers between the actual senders and receivers.

The increased use of email also encourages cross-wise communication. Any employee can communicate via email with another employee, regardless of the receiver's function or status. Since there is no specific

'A coordinated flock of birds or a shoal of fish maintain their relative positions, or alter direction simultaneously due to lateral communication amongst members; this is achieved due to tiny pressure variations.'

-Wikipedia

line of command, diagonal communication is also referred to as *cross-wise*, *radial*, or *circular* communication, depending upon the structure of the organization. For instance, a managing director could directly call a supervisor and give instructions.

VISUAL AIDS IN TECHNICAL COMMUNICATION

An illustration is a visual representation such as a drawing, painting, photograph, or other work of art that stresses subject more than form.

Visual aids are an important part of written technical communication. You might have observed that most technical reports, whether they are laboratory reports, project reports, or feasibility reports, include illustrations such as tables, graphs, maps, diagrams, charts, or photographs. In fact, text and illustrations are complementary in technical communication. Visual aids are also used extensively in presentations, to support the facts and figures being presented. Graphics can be used to represent the following elements in technical writing.

Concepts

This element depicts non-physical, conceptual things and their relationships. If you want to show how your company is organized, that is, the relationships between the different departments and officials, you could set up an organization chart—boxes and circles connected with lines that show how everything is hierarchically arranged and related. This is an example of a graphic depicting a concept.

Objects

Photographs, drawings, diagrams, and schematics are the types of graphics that show objects. If you are describing a fuel-injection system, you will probably need a drawing or diagram to explain the system properly. If you are explaining how to graft a fruit tree, you will need some illustrations of how it is done.

Numbers

Numbers are used while presenting data and statistics. If you are discussing the rising cost of housing in a particular city, you could use a table, with the columns showing the data for five-year periods since 1995. The rows could be for different types of housing. You could show the same data in the form of bar charts, pie charts, or line graphs.

Words

Graphics are also used to depict words. You have probably noticed how textbooks put key definitions and examples in boxes with words.

To further understand visual aids, let us answer the following questions:

- When to use?
- Why to use?
- How to use?
- What are the types?

When Illustrations are very effective when there is a mass of statistics and complex ideas to be represented. Statistical data is best explained through tables, graphs, charts, maps, diagrams, or photographs. As already mentioned, text and illustrations are complementary in technical communication. Hence, whenever the information to be communicated is too complicated or



technical to transmit just through words, we use visual aids. However, they should not be used just for the sake of using them.

Why Visual communication has more impact than verbal communication. Using illustrations has many advantages:

- Arouses interest and focuses on essentials
- Leads the reader to quicker comprehension
- Supports and reinforces words
- Saves much time and effort in explaining and interpreting complex ideas
- Explains the data in much lesser space but with greater accuracy
- Simplifies numerical data
- Emphasizes and clarifies certain facts and relationships
- Makes the descriptions vivid and eye-catching
- Renders a professional flavour to the communication

How The following are some guidelines to use illustrations effectively. The illustrations should be

- neat, accurate, and self-contained
- appropriate to the data
- labelled completely
- self-contained
- integrated with the text
- placed as close to the first reference as possible
- sized appropriately so that they are clear even upon reproduction
- such that they create a good balance between the verbal and the visual

Types Figure 1.3 classifies the various types of illustrations. It is clear from this figure that though there are various kinds of visual aids, they can be broadly classified into two main categories, namely tables and figures. All illustrations other than tables are usually categorized under figures.

In the process of selecting and designing illustrations, the question of which type to use always arises. Which type of illustration can be used most effectively to accomplish the desired objective? What type will present the facts more clearly? Before these questions can be answered, and before the actual work of selecting and designing the illustration can begin, the following preliminary steps must be taken. First the material must be arranged in some sort of systematic

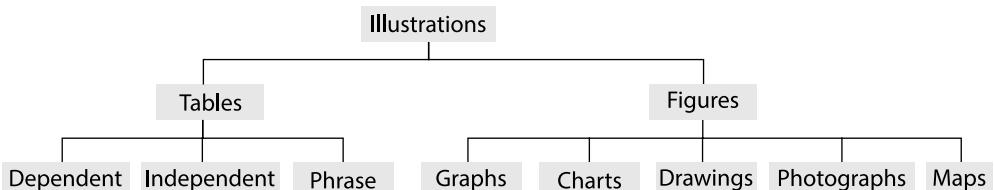


FIGURE 1.3 Types of illustrations

order: a series, a distribution, or some other logical arrangement. Next, we must be thoroughly familiar with the material and be aware of the implications of its use. The final step involves a decision about the type of illustration to be used. Several factors are considered for a decision of this kind, such as the nature of the data, the anticipated use, and the intended audience. These factors are usually interrelated.

The type of data will often aid in the selection of the appropriate type of media. For example, if the data were quantitative in nature, the selection might be from one group of charts; if the data were more qualitative in nature, the selection might be made from another group.

The following pages provide samples of various types of illustrations and also briefly explain the purpose for which each of these types is used.

Tables

A table is a systematic arrangement of numbers, words, or phrases in rows and columns, used to depict original numerical data as well as derived statistics. It permits rapid access to and relatively easy comparison of information. If the data is arranged chronologically (for example, sales figures over a ten-year period), the table can show trends—patterns of rising or falling activity. Of course, tables are not necessarily the most clear or vivid means of showing such trends or relationships between data—that is why we have charts and graphs (discussed later in this chapter).

The most important use of tables is for presenting numerical data. Imagine that you are comparing different models of laser printers in terms of physical characteristics such as height, depth, length, weight, and so on—you can use a table in this case.

Traditionally, the title of a table is placed on top of the table or in the first row of the table. If the contents of the table are obvious and there is no need to cross-reference the table from anywhere else in the communication, the title can be omitted. To avoid complications, tables can be considered as figures (the same as other graphics), and numbered within the same sequence.

As shown in Figure 1.3, there are three types of tables:

- Dependent
- Independent
- Phrase

Dependent tables are those whose contents cannot be understood without going through the text. This type is used for presenting less data (Figure 1.4). Independent tables are the most commonly used ones. Though the text should explain each table, readers need not go through the text to understand the contents of these tables (Figure 1.5). Phrase tables are used when the data is in words or phrases instead of numerical figures (Figure 1.6).

Advantages and disadvantages

The tabular form of presentation, while simple for the communicator, has both advantages and disadvantages. A lot of numerical figures can be depicted through a table. A number of

TABLE I Details of inpatients admitted on 14.11.15

General ward	35
Special ward	15
Maternity ward	10

FIGURE 1.4 Dependent table

Style and Formatting Guidelines for Tables

- In the text just preceding the table, refer to the table. Explain the general significance of the data in the table; do not expect readers to figure it out entirely for themselves.
 - Do not overwhelm readers with monster 11-column, 30-row tables. Simplify the table data down to just that amount of data that illustrates your point—without, of course, distorting that data.
 - Do not put the word or abbreviation for the unit of measurement in every cell of a column. For example, in a column of measurements all in millimetres, do not put ‘mm’ after every number.
- Put the common abbreviation in parentheses along with the column or row heading.
- Right- or decimal-align numbers in columns. If the two entries in a column are 123 and 4, 4 should be right below 3, not below 1.
 - When there is some special point you need to make about one or more of the items in the table, use a footnote instead of clogging up the table with the information.
 - Most of the advanced word-processing software packages, such as Word and WordPerfect, now have table-generating tools. You do not have to draw the lines and other formatting details.

TABLE II Fatal road accidents 2011–15 (% wise)

Year	Pedestrians	Cyclists	Others	Total	%
2011	2380	830	1310	4520	19.7
2012	2315	850	1615	4780	20.8
2013	2255	805	1750	4810	20.9
2014	2460	750	2060	5270	22.9
2015	2050	735	800	3585	15.7
Total	11460t	3970	7535	22965	100
Percentage	50%	17%	33%	100%	

FIGURE 1.5 Independent table

TABLE III

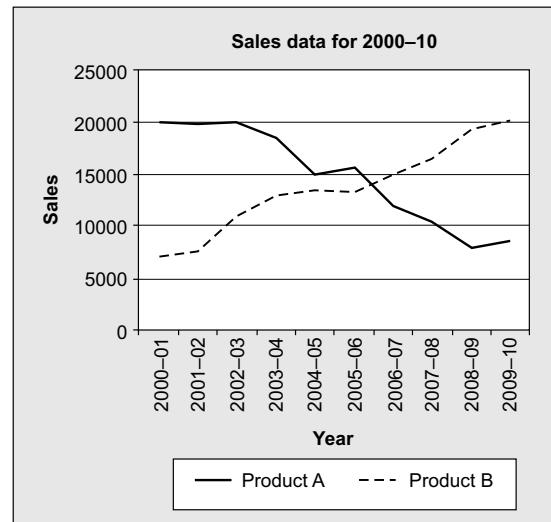
Goods	Durability	Nature/metal	Availability
Wires	Long lasting	Copper	Freely
Utensils	Long lasting	Steel	Scarce

FIGURE 1.6 Phrase table

combinations are possible in the tabular form; for example, numeric and non-numeric data can be depicted together. However, it also has certain disadvantages: while it is a part of visual depiction, yet, visually, the details are not evident at a glance. Occasionally, the writer might, in

TABLE 1 Sales data for 2000–10

Year	Product A	Product B
2000–01	20000	7000
2001–02	19899	7500
2002–03	20100	11000
2003–04	18500	13000
2004–05	15000	13500
2005–06	15500	13250
2006–07	12000	15000
2007–08	10500	16500
2008–09	8000	19258
2009–10	8500	20136

FIGURE 1.7 (a) Table presenting sales data for a ten-year period**FIGURE 1.7** (b) Line graph showing the same data

the process of putting in too much data, make it too detailed and complicated. Finally, there is very little visual appeal in tables.

Graphs

Graphs are actually just another way of presenting the same data that is presented in tables—in a more impressive and interesting way. At the same time, however, a chart or diagram offers less detail or precision than tables. Figure 1.7 shows the difference between a table [Figure. 1.7(a)] of sales figures for a 10-year period and a *line graph* [Figure. 1.7(b)] for the same data. The graph presents a better sense of the overall trend but not the precise sales figure.

Producing graphs

As with illustrations, the following options are available for creating graphs: photocopying from other sources, generating graphics using special software, and manually drawing original graphics. Many spreadsheet application software packages (such as MS Excel) have fancy features for generating graphs—once the data is fed and the format specified, the application generates the required graph. Several types of graphs can be used. The various types are rectilinear or line graph, bar graph, pie graph, scatter graph, pictorial graph, and surface graph.

Line graphs Line graphs [Figure 1.8(a) and (b)] are used to show continuous change with respect to time. For example, the increase, decrease, or no change in temperature along with time can be depicted through a line graph. If two or three experiments have been conducted, the three different readings can be depicted using three lines.

Several trends (indicated by lines) over a specific period of time can be depicted by the line graph, indicating trends over time and allowing easy comparisons. However, a little caution should be exercised if the lines cross each other at points, as this can confuse the reader. Preferably, if there are criss-crossing lines, only three variables should be plotted, as too many variables would prevent the fine distinctions from being noticed, leading to erroneous conclusions.

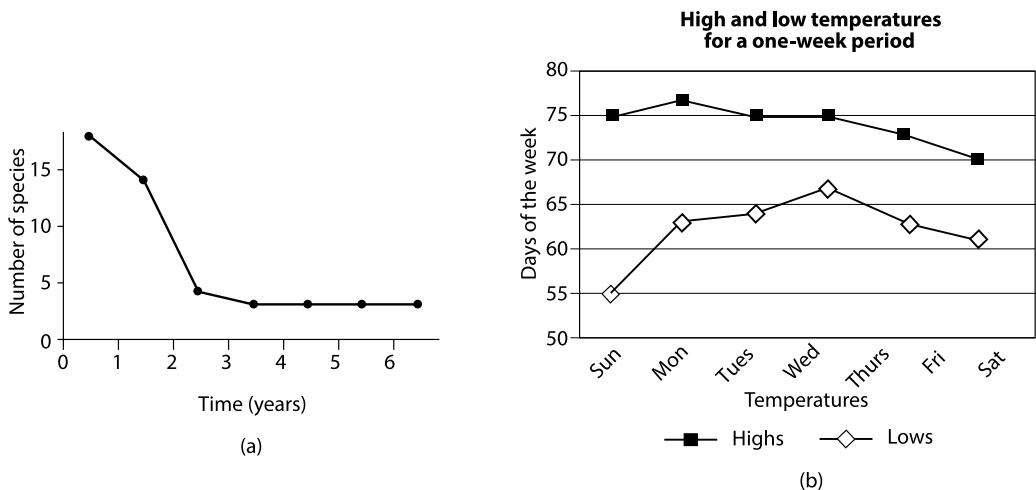


FIGURE 1.8 Line graphs

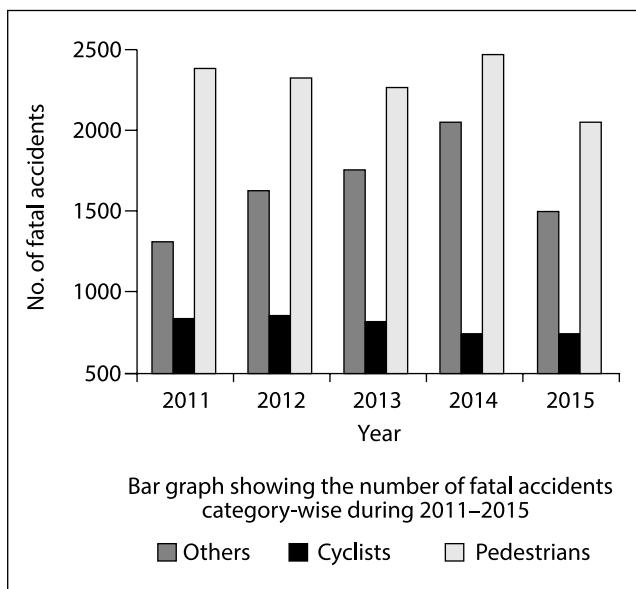


FIGURE 1.9 Bar graph with three variables

Bar graphs Bar graphs are effective in emphasizing the comparison of various data items. They can be used to depict the quantity of different items during the same period or the same item during different periods.

These are the simplest to construct and very easy to understand. They could be of various types: vertical with singular or multiple bars stacked (Figure 1.9) or comparative and horizontal. If these graphs depict more than one variable, two colours or designs are used to highlight the difference between the two variables. These graphs are comparative and if more than two variables in terms of the same time frame are used, a stacked vertical or horizontal bar graph is used. The greatest advantage of these bar diagrams is that they can also be used with a three-dimensional effect.

Presentations in this form are advantageous as they have a convincing impact, and two or more variables can be stacked without leading to difficulties in grasping the details. The colour and schematic designs added to the bars lend visual appeal to these graphs. However, there could be a lack of precision in the presentation of details, as the variables may become too cluttered and the lettering too small.

Pie graphs Alternatively known as a *percentage graph* or *circle graph*, a pie graph is a circular chart divided into sectors, illustrating proportion (Figure 1.10). In such type of graph, the arc length of each sector (and consequently its central angle and area) is proportional to the quantity

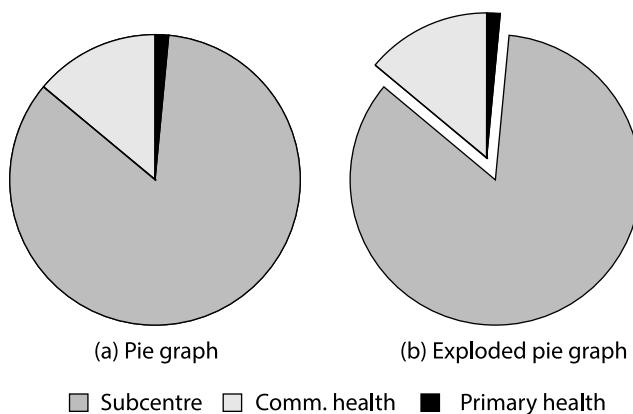


FIGURE 1.10 Pie graph

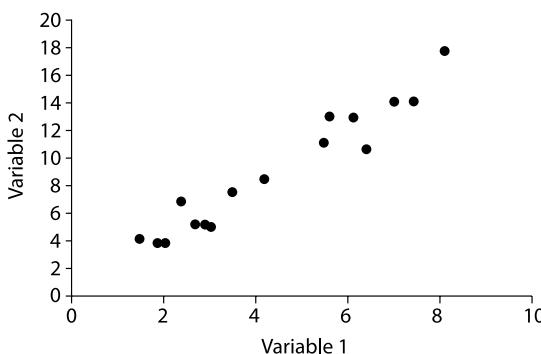


FIGURE 1.11 Scatter graph

of clustering refers to the absence of correlation between the two items represented on the horizontal and vertical axes. Notice the clustering at various places in the scatter graph given in Figure 1.11.

Pictograms/pictorial graph Pictograms are similar to bar graphs, with figures or small pictures plotted instead of bars. The pictures are chosen in accordance with the variables represented. This graph is self-explanatory; for example, if a graph were to indicate the population boom in the last five years, human figures could be used, thus illustrating the point being made by the writer. In such an example, a cluster of the figures or pictures would indicate an excessive number during that period. This type of graph is not used extensively for business reports.

The advantage of pictograms is that large numbers can be presented by a single cluster of figures. Much time and effort goes into the design of this graph so as to make it truly representative of the situation it seeks to address. However, it is not very useful for business reports, which contain more concrete data that cannot be represented pictorially. As pictograms are eye-catching, they are suitable for magazines (Figure 1.12).

Area graphs Area graphs can be used to show how something changes over time. Usually, the x axis represents the time period and the y axis represents the variable being measured. Area

it represents. This is one of the most popular forms used to depict the share of various categories making up a certain quantity and their correlations to the whole as a percentage. If there is a need to emphasize a particular segment, it is detached from the pie and referred to as the *floating wedge*. Such a pie is referred to as an *exploded pie*.

The pie graph captures the attention of the reader more effectively than probably any other presentation would. Within one graph itself, the various segments can be highlighted. In addition to the colour pattern used, the categorization of the segments can be given within, outside, or alongside the graph. However, there could be occasions when the difference is very minor and it might get blurred; for example, a segment depicting 0.5% may become too small to notice. Hence, it is not advisable to use pie graphs if the number of variables in your data is more than five, as it becomes difficult for the human eye to detect the relative percentage of too many cluttered items.

Scatter graph A scatter graph is used to show the correlation between two variables. Usually, dots (•) or crosses (×) are used to represent the data. In scatter graphs, the plotted data must lead to clusters. The absence

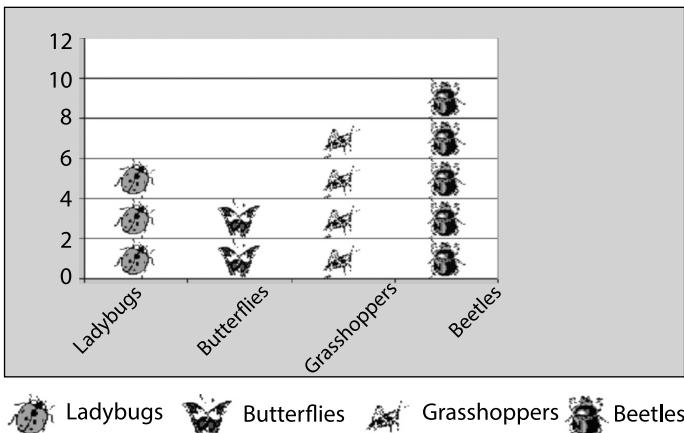


FIGURE 1.12 Pictorial graph

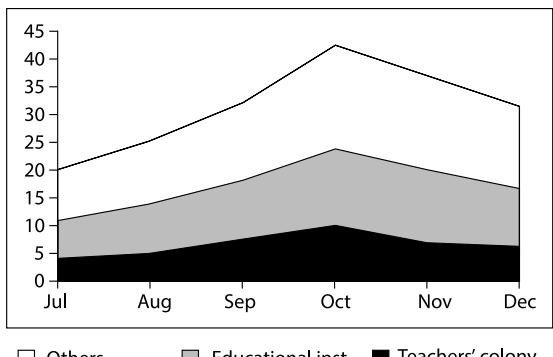


FIGURE 1.13 Area graph

charts. These charts can also be used to depict the organization of various other ideas such as the different sets of instructions given to subordinates or the different decisions taken for a particular project. Figure 1.14 shows how different options can be organized in the form of an organization chart.

Flow charts

Flow charts present a sequence of activities from start to finish. They are normally used to illustrate processes, procedures, and relationships. The various elements in the chart are generally depicted through geometrical figures (Figure 1.15). Circular or oval boxes are used to indicate the start or stop of the procedure, diamond-shaped boxes represent decision-making steps, and rectangular boxes indicate processing steps. Arrows indicate the process flow.

Charts are often used to make it easier to understand large quantities of data and the relationships between different parts of the data.

Drawings and Diagrams

In technical documents, drawings and diagrams are used to depict the objects, processes, circuits, etc. that are being described. Diagrams can be used to show the normal, sectional, or cut-away view of an object.

graphs can be used to plot data that has peaks (ups) and valleys (downs), or data that was collected in a short time period.

These graphs also help to compare trends over a period of time. For example, when an area graph is plotted to show the water consumption in a particular educational campus, the total consumption of water in that campus as well as the consumption in individual areas can be shown (see Figure 1.13).

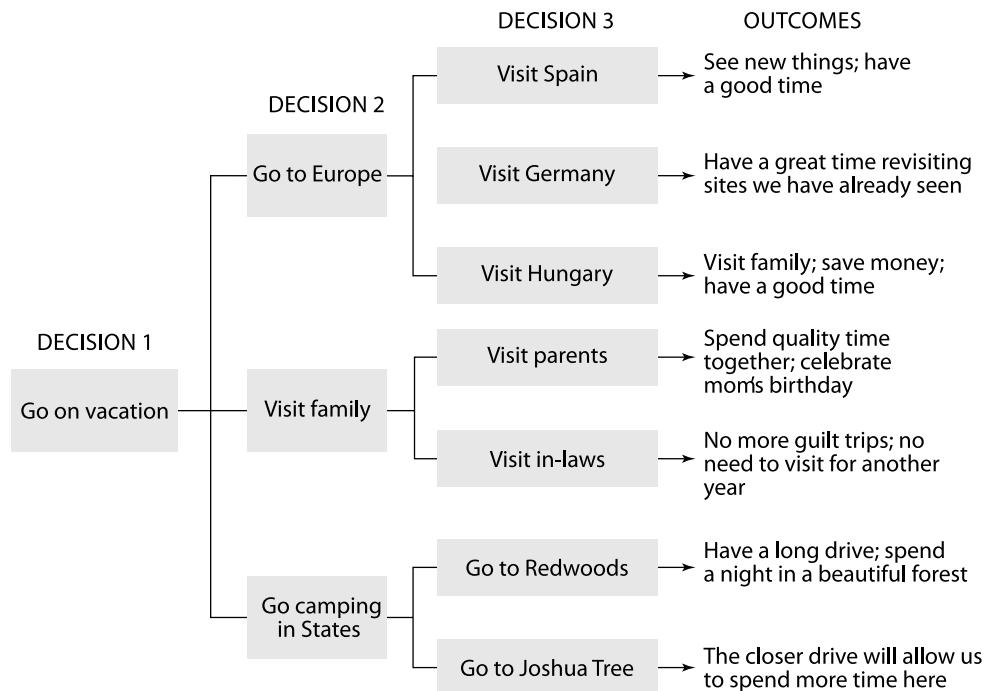
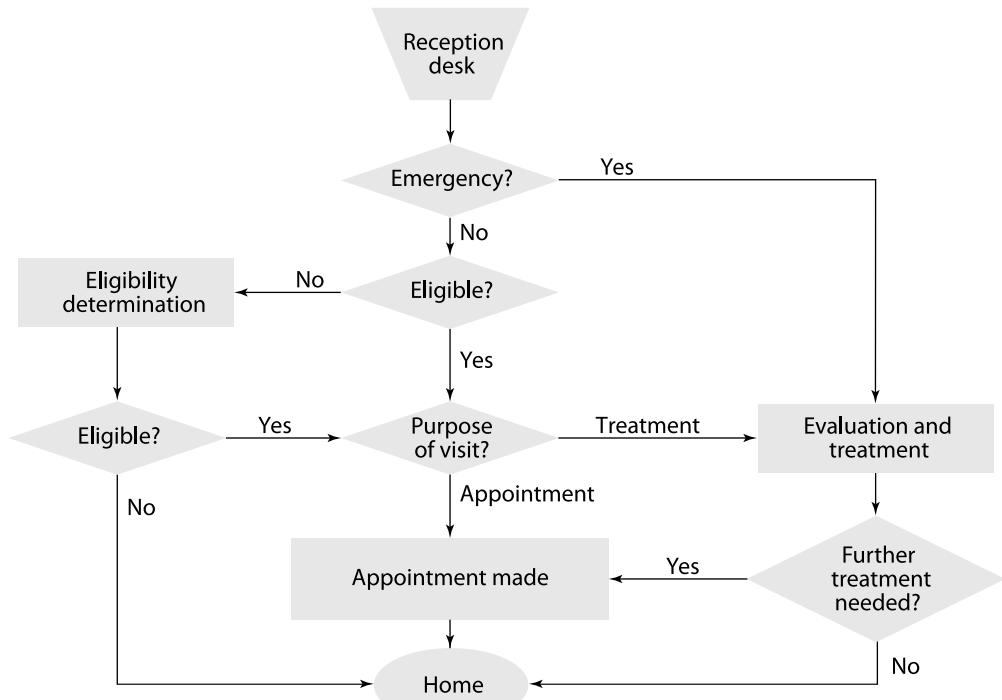
While index lines are predominant in line graphs, the area between the lines is highlighted in an area graph. In addition, shades of colours are also used. A darker shade is used at the bottom, and as the plot goes higher and higher, the shades become lighter. In Figure 1.13, the peak shows the total water consumption in the campus.

Charts

There are two types of charts: organization charts and flow charts.

Organization charts

Organization charts are generally used to illustrate the various positions or functions of an organization. Most of the communication channels in an organization are described through such

**FIGURE 1.14** Organization chart**FIGURE 1.15** Flow chart



Drawings and photographs range from those showing minimal detail to those illustrating maximal and minute details. For example, a simple line drawing of how to graft a fruit tree reduces the detail to simple lines representing the hands, the tools, the graft stock, and the graft. On the other hand, there can be complex diagrams showing a schematic view of systems; for example, the wiring diagram of a clock radio, which hardly resembles the actual physical system at all. These graphics with their gradations of detail have varying uses.

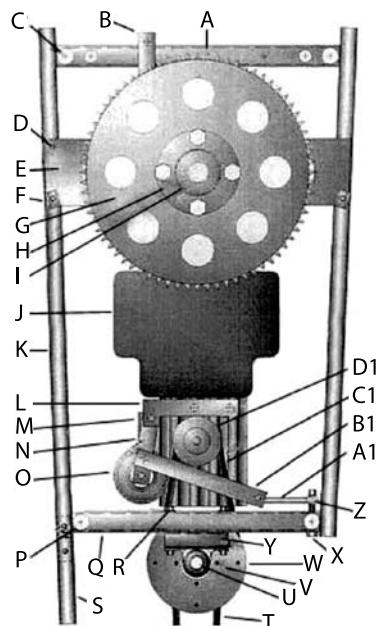
In instructions, simple drawings (often called *line drawings* because they use just lines, without other detail such as shading) are the most common. They simplify the explanations and the objects so that the reader can focus on the key details. In descriptions, detailed drawings are used, including those with shading and depth perspectives. Figures 1.16 and 1.17 show examples of technical drawings.

Several application software programs as well as the Internet provide clip arts, which are pre-made images of fairly common objects such as computers and telephones. These images can be used in technical documents along with suitable labels. Figure 1.18 shows some examples of clip art available in MS Word.

One difference between photography and other forms of graphics is that a photographer, in principle, just records a single moment in reality, with seemingly no interpretation.

Photographs

Photographs are often used in feasibility, recommendation, and evaluation reports. For example, if you are recommending a photocopier, or if you want to compare various cars, automated teller machines, etc., you might want to include photographs to support your report.



A	Upper crossmember front	O	Idler pulley
B	Control rod support	P	Rotor tower tubes
C	Rotor tower tubes	Q	Middle crossmember
D	AN 3 bolts	R	Motor mount spacers
E	Lower main rotor bearing crossmember	S	Tail boom tubes
F	Support tube bracket	T	Tail rotor belt B 210 gates
G	Main rotor sprocket to tooth	U	Jack shaft
H	Main rotor sprocket hub	V	3/4 Pillow block bearings
I	Main rotor shaft	W	Driven pulley
J	503 rotax or larger	X	AN4 bolts
K	Main frame long runs	Y	1 x 3 bolts
L	Idler pulley bracket	Z	Clutch lever
M	Idler pulley engine spacket	A1	MW 4 rod ends
N	Idler pulley swing arms	B1	Engagement arms
C1	Belts (5) super HC 3V280 gates	D1	Drive pulley

FIGURE 1.16 Sample drawing showing a belt drive

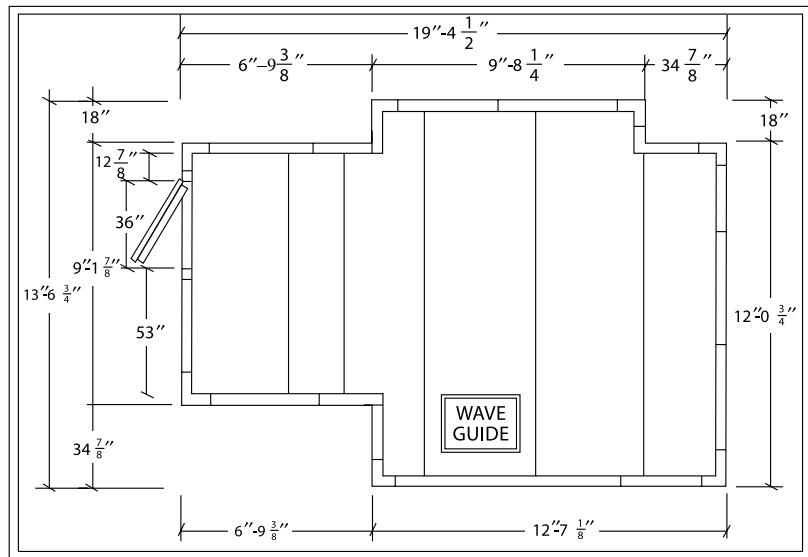


FIGURE 1.17 Sample diagram

Photographs give the reader a realistic view of the object. However, they should have a good enough resolution so that they are clear even upon reproduction. Irrelevant details can be removed from photographs by working on the negatives.

Maps

Maps graphically represent spatial relationships on plane surfaces. They are used to establish a frame of reference and to facilitate the understanding of spatial relationships that are difficult to

describe in words, especially to serve as navigational aid. They may take different forms, such as the map of a political territory (town, state or country), the layout of a store or a manufacturing plant, or the market area of a business. They are appropriate when discussing or presenting statistical data through geographical indicators or expressing relationships between locations. Figure 1.19 shows the map of India's population density.

The choice of scale for a map depends on its purpose and the amount of detail to be shown. It should be an accurate representation of the geographic details (places, buildings, streets, etc.). Cross-hatching or shading in maps is used to portray absolute amounts, rates, ratios, and percentages of data, such as health statistics, population, employment, traffic flow, and land usage. Colours, symbols, and pictograms may be used to make maps more appealing and attractive.



FIGURE 1.18 Example of clip art available with MS Word

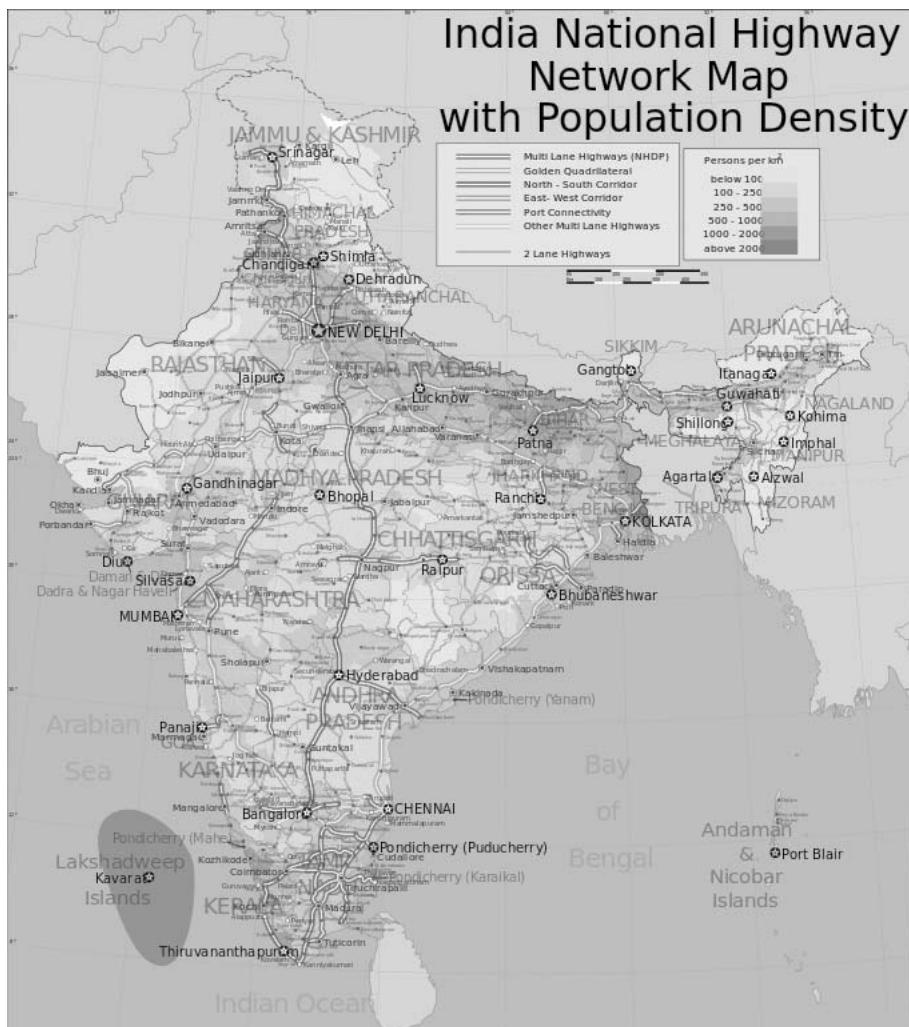


FIGURE 1.19 Sample map illustration

SUMMARY

Technical communication is process of sharing information through various modes with a specific audience for a specific purpose. The process involves the transmission and interchange of ideas, facts, feelings, or courses of action. Technical communication is different from general communication. The objective of technical communication is to present correct, accurate, concise, clear, and appropriate information.

The communication process includes six main elements—sender, message, channel, receiver,

response, and feedback. The success of communication lies in positive feedback. Sometimes the message received is not the same as the message intended by the sender; this is because of the presence of noise.

Communication takes place at different levels: extrapersonal, intrapersonal, interpersonal, organizational, and mass communication. In an organization the flow of communication can be vertical, horizontal, or diagonal.

Visual aids are a very important component of written technical communication. These are used extensively in reports, presentations, and proposals, to support the facts and figures being

investigated and presented. The various types of visual aids that can be used in technical documents are tables, graphs, charts, drawings and diagrams, photographs, and maps.

EXERCISES

1. Answer the following questions in about 200 words each:
 - (a) How is general-purpose communication different from technical communication?
 - (b) Communication is the process of sending and receiving information. Explain the communication process in the light of this statement. Draw the communication cycle to support your answer.
 - (c) How is feedback important in communication? Give two examples of delayed feedback.
 - (d) Explain 'flow of communication'. Illustrate it with examples from the existing communication patterns in your college/institute.
2. What do you understand by the term technical communication? Explain its importance with examples.
3. Human communication takes place at different levels. How can you distinguish between intrapersonal and interpersonal communication?
4. What are the characteristics of mass communication? Explain the term gatekeeper.
5. What are the various modes of communication flow in an organization? What is upward flow and what is the purpose of this mode in an organization?
6. How can visual aids enhance technical communication? What points should be borne in mind while using visual aids?
7. Project: Visit a few organizations (academic institutions/business enterprises/industries) and determine the communication patterns existing there. Classify them into oral and written categories. Also figure out the direction in which these flow. Prepare a two-page report on each of your visits.

CHAPTER

2

OBJECTIVES

You should study the chapter to know

- what communication barriers are and what causes them
- how to avoid communication failures caused by noise
- how to classify communication barriers

Barriers to Communication

INTRODUCTION

Having studied the basic principles of technical communication in Chapter 1, we now move on to a very important factor related to communication. Imagine you are a junior executive who has just joined as a trainee in an automobile company. You go to meet your boss, to seek permission for visiting the automobile exhibition being held in Delhi. While you are talking, two of your colleagues also arrive to get your boss' signature on some bills. You fall silent while he signs the bills. After they leave, you resume talking but you find that your boss has not really grasped what you have said earlier. You later analyse this situation, and realize that your colleagues' intervention led to your boss' lack of concentration. As the sender, you had patiently tried to express your wish. But because of the interruption by your colleagues, the receiver, your boss, could not decode your message fully. Hence the communication process failed.

This discussion brings us to the introduction of the term 'barrier' in communication. A barrier is defined as something that prevents or controls progress or movement. This definition implies that a barrier is something that comes in the way of the desired outcome. In the example given above, notice that the arrival of your colleagues was an event that prevented your boss from concentrating completely on what you were saying. So, we say that this incident was a barrier to the communication between you and your boss. All of us have come across such situations while communicating with parents, friends, or colleagues. Let us now learn how to avoid such communication failures and make our interactions more effective.

We all know that effective communication is the nerve of all the business activities in an organization. Even a slight break in the communication flow can lead to misunderstandings. Communication is effective only if it creates the desired impact on the receiver. Often, managers get frus-

Communication is effective only if it creates the desired impact on the receiver.

trated in their efforts, and end up saying that nobody in the organization understands them. Many employees fail to listen attentively during meetings, or send incomprehensible business letters. Such situations arise due to the presence of barriers in communication, which can take many forms such as inadequate communication skills.

There are numerous such barriers associated with communication. These need to be addressed in order to ensure that no gap occurs in the communication cycle. A common barrier is the wrong assumptions made about the person to whom the message is being sent and *sometimes about the message itself*. For example, if the sender of the message is talking about a technical proposal, he/she would be wrong if he/she makes assumptions about the receiver's level of technical knowledge. The problem can be resolved to a great extent if the sender of the message analyses his/her message thoroughly and anticipates the likely response before sending it.

If a particular communication fails to evoke the desired response, the following five steps can help solve the problem:

- Identify the problem
- Find the cause/barrier
- Work on alternative solutions
- Opt for the best solution
- Follow up rigorously

The first step—identifying the problem—is the most difficult. We first realize that there is a problem when we do not receive the desired feedback. To identify the problem correctly, it is mandatory that the feedback be analysed carefully. For example, you have asked your subordinate to write a bimonthly report, and until the next month, he has not done so. When you ask him about the delay, he replies that he was asked to produce the report bimonthly. The problem here is that to you the term *bimonthly* meant *twice in a month*, whereas to your subordinate it meant *once in two months*. Later, you look up the dictionary and find that *bimonthly* means *twice a month* as well as *once in two months*!

Having identified the problem, the next step is to find out what caused it. In this situation, we could say that it was the choice of words. The third step is to explore possible solutions. In this case, a way out would be to choose words that are more specific in their meaning, i.e., words that could mean only one thing—the intended meaning. After thinking through the alternatives, apply the best solution that not only solves the problem, but also does not create any new difficulties. Hence, instead of using the troublesome term *bimonthly*, either *twice a month* or *once a fortnight* could be used. After successfully completing all the four steps, the last step requires that we implement the best solution properly. Having once come across a particular communication barrier, there should be a conscious effort to never let it crop up again.

In this chapter, we will discuss the various types of communication barriers, and how they can be identified and overcome. Before going on to consider the different barriers to communication, however, let us first understand the related term 'noise'.

Noise

Any interference in the message sent and the message received leads to the production of 'noise' (see Figure. 2.1).

The term communication barrier, or that which inhibits or distorts the message, is an expansion of the concept of noise. Noise here does not mean sound, but a break or disturbance in the communication process. If noise occurs because of technological factors, it is not too much of a problem as it can be removed by correcting the technological faults. However, if the noise is due to human error, the parties involved in the communication process need to take corrective measures.

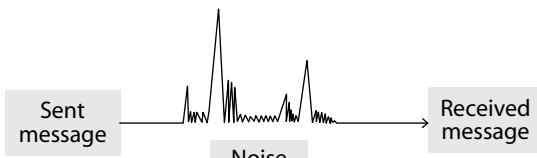


FIGURE 2.1 Noise interferes in the correct transmission of messages

Noise is defined as any unplanned interference in the communication environment, which affects the transmission of the message.

manner, related to a (*baseless*) assumption of superiority. Other examples of semantic noise are ambiguous sentence structure, faulty grammar, misspellings, and incorrect punctuation.

Noise is defined as any unplanned interference in the communication environment, which affects the transmission of the message. Noise can be classified as *channel* and *semantic*. *Channel noise* is any interference in the mechanics of the medium used to send a message. Familiar examples of channel noise are distortion due to faulty background, noise in telephone lines, or too high a volume or pitch from loudspeakers. In written communication, illegible handwriting can

be termed as channel noise. Whereas channel noise develops externally, *semantic noise* is generated internally, resulting from errors in the message itself. It may be because of the connotative (implied) meaning of a word that is interpreted differently by the sender and the receiver. For example, the word 'condescend' may have been used in a positive manner, implying grace or dignity of manner, but the receiver might interpret it in a negative

manner, related to a (*baseless*) assumption of superiority. Other examples of semantic noise are ambiguous sentence structure, faulty grammar, misspellings, and incorrect punctuation.

CLASSIFICATION OF BARRIERS

A barrier acts like a sieve, allowing only a part of the message to filter through; as a result, the desired response is not achieved. To communicate smoothly and effectively in an organization, irrespective of your position, you need to know how barriers operate, why they cause misunderstandings, and how to minimize their negative impact. How often have you said, 'I meant to say this and not that'? Even with the best intentions, communication barriers crop up and our written and spoken messages are misunderstood. If we classify barriers according to the processes of message formation and delivery, we can identify three types:

- Intrapersonal
- Interpersonal
- Organizational



Intrapersonal Barriers

Individuals are unique because of differences in perceptions, experiences, education, culture, personality, etc. Each of us interprets the same information in different ways, as our thinking varies. These differences lead to certain inbuilt or intrapersonal barriers. Let us explore all the common causes that lead to these intrapersonal barriers:

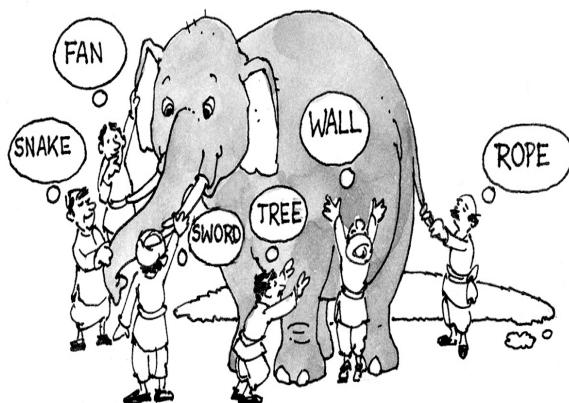
- Wrong assumptions
- Varied perceptions
- Differing background
- Wrong inferences
- Blocked categories
- Categorical thinking

Wrong assumptions

Many barriers stem from wrong assumptions. For example, when a doctor tells her patient that he has to take some medicine only 'SOS' (i.e., during an emergency), without knowing whether the patient understands the term 'SOS', she is creating a barrier in their communication. Here the



'Take this medicine only SOS.'



be able to appreciate his/her opponent's point of view. It is all a matter of perception. The best way to overcome this barrier is to step back and take a wider, unbiased perspective of the issue.

Differing backgrounds

No two persons have the same background. Backgrounds can be different due to different education, culture, language, environment, financial status, etc. Our background plays a significant role in how we interpret a message. At times, something not experienced earlier is difficult to interpret or appreciate. Think of a class where the professor talks about his rock-climbing adventure. Students who have experienced rock climbing may be able to appreciate the professor's talk, while others who have never been into adventure sports may not find it interesting at all. The representative of a computer company would not make much sense to a group of doctors if in his/her presentation he/she goes into details about the hardware aspects of the computer that he/she plans to install in a hospital.

To enhance communication skills, it is necessary to know the background of the audience. This information can accordingly be used to construct your message.

doctor has made a wrong assumption about her patient's level of knowledge. Wrong assumptions are generally made because the sender or the receiver does not have adequate knowledge about the other's background or entertains certain false concepts, which are fixed in his/her mind. To strengthen your skills as a communicator, try to put yourself in the shoes of the listener. This exercise will prevent making wrong assumptions about the receiver.

Varied perceptions

We all know the story of the six blind men and their description of an elephant. The elephant was perceived by each man as a fan, a rope, a wall, a sword, a snake, and a tree. None of the blind men were wrong, as the part of the elephant body touched by each man compared well with the various objects they named. This is how different individuals hold different viewpoints about the same situation.

Similarly, individuals in an organization also perceive the same situation in different ways. Let us take the case of disagreement between two individuals. If you are close to one of them, you are likely to be biased. You may perceive your friend's arguments as correct, and hence, may not

To enhance communication skills, it is necessary to know the background of the audience. This information can accordingly be used to construct the message. *Empathy or identification with another person is the solution to this barrier.* We must make an effort to understand what the listener can find difficult to comprehend in our message because of the difference between our background and that of the listener. The language



... and if you clip a carabiner to each end of the sling, you have a quickdraw...

understood by the receiver should be used to avoid ambiguity and reduce multiple meanings.

The exact meaning of a word resides in the mind of the speaker; therefore, one ought to be cautious while using words. The multiple meanings of a word can astronomically increase the problem of communication barriers. A word can have several connotations (implied meanings) and definitions. The more a word is prone to multiple meanings, the greater are the chances of it being misunderstood. A conscientious speaker is careful to explain her message in context by rephrasing and repeating words that can be confusing.

Confusables

Common groups of words are sometimes confused or ignored by users.

- Ability is a skill that you have mastered through study or practice. Capacity refers to innate talent.
- If something affects you, it has an effect on you. To effect something, however, means to make

something happen: 'The new management wanted to effect drastic changes, but the unions felt these would adversely affect workers.'

Refer to Chapter 16 for more on this.

Wrong inferences

Suppose you have returned from a business trip and you find that two of your colleagues are absent. They do not turn up for several days. Since there is a recession on, you draw an inference that they have been laid off. The fact is that they have been promoted and sent to another department. This is an example of *fact-inference confusion*. It has happened because you failed to distinguish between what actually exists and what you had assumed to exist.

Inferences are more dramatic than facts, and for this reason they can provide more scope for gossip and rumour to spread. When professionals analyse material, solve problems, and plan procedures, it is essential that inferences be supported by facts. Systems analysts, marketing specialists, advertisers, architects, engineers, designers, and others must work on various premises and draw inferences after collecting factual data. When presenting any inference in the course of your work, you could use qualifiers such as 'evidence suggests' or 'in my opinion' to remind yourself and the receiver that this is not yet an established fact.

Blocked categories

In general, we react positively to information only if it is in consonance with our own views and attitudes. Conversely, when we receive information that does not conform to our personal views, habits, and attitudes, or appears unfavourable to us, we tend to react negatively or even disbelieve it. Rejection, distortion, and avoidance are three common, undesirable, and negative reactions to unfavourable information.

When Writing or Speaking

1. Think of your audience. How well do they understand the language? How much do they know about your logic?
2. Select your words with care, especially technical terms. Words must be suited to your audience's language skills.
3. If you have to use slightly difficult or unfamiliar words, try to explain these as part of your communication.
4. Do not fall into the trap, however, of oversimplifying your language; your audience could get put off if you use words that sound unprofessional or non-technical.
5. Feedback serves as an effective barometer to find out if the intended message has been put across. Ask the receiver to paraphrase the message and also ask questions on what was said.
6. Even if you have an extensive vocabulary, never use words merely to impress. Rather use them to express your ideas as simply and clearly as possible.

Communication and other technologies are advancing so rapidly today that many people find it difficult to quickly adapt themselves to these developments. Instead of taking advantage of these developments, which help expedite the communication process, such people tend to resist and criticize them. This is a result of having a closed mind. Such people are called *misanalytics*. They tend to ignore variations and differences, which leads to unreliable conclusions. Some people have certain prejudices so deeply embedded in their mind that these cannot be challenged.

Similarly, people who are very rigid in their opinions may face problems in communicating effectively. For example, one of your fellow students may think that only students of science are good in reasoning; another might be of the opinion that young executives are more efficient than older ones. Such people fall into blocked categories, because they may not be able to accept any deviation from their points of view.

Categorical thinking

People who feel that they 'know it all' are called *pansophists*. This type of thinking exists in people who feel that they know everything about a particular subject, and therefore refuse to accept any further information on that topic. For example, in a general body meeting of your organization, you are to be briefed about the annual budget. However, you do not pay attention because you feel you have already been briefed about it by your secretary the previous day. Later you propose that new vehicles have to be bought. Imagine your embarrassment when you realize that the topic was discussed and a decision has already been taken in the general body meeting. This type of thinking can pose a major barrier, leading to a failure in communication. In such instances, the receivers refuse information because of their 'know-it-all' attitude.

The clue to detecting this barrier in ourselves and in others is the use of words like *all*, *always*, *everybody*, *everything*, *every time* and their opposites like *none*, *never*, *nobody*, and *nothing*. If a message contains too many of these words, then there is a fair chance of the communication getting distorted. To avoid this barrier, substitute these words with phrases like 'in most situations' or 'most likely'. Label your opinions with phrases like, 'it appears to me' or 'the evidence indicates'. If your data is insufficient, it is better to admit that you are unaware of the rest of the information rather than being indirect. To sum up, good communicators should:



- Be non-judgemental
- Be empathetic
- Not assume anything
- Stick to the subject
- Listen, and above all, paraphrase
- Remember that generalizations do not always hold good in all situations

Interpersonal Barriers

Intrapersonal barriers stem from an individual's attitudes or habits, whereas interpersonal barriers occur due to the inappropriate transaction of words between two or more people. The two broad categories into which these barriers can be classified are:

- Inefficient communication skills
- Negative aspect nurturing in the climate

The second point refers to a situation when negative tendencies nurtured by some people affect others around them. This leads to a barrier as individuals start thinking only negative.

Interpersonal barriers creep in as a result of the limitations in the communication skills of the encoder or the decoder, or of both. In addition, they may also occur because of some disturbance in the channel or medium of communication. If two people are involved in communication, the traits that distinguish them as individuals can be the root cause of a communication problem.

In a business environment, we neither attempt to change these traits, nor can we do it; however, we can try and understand the role of differences among individuals that lead to communication breakdowns. The most common reasons for interpersonal barriers are:

- Limited vocabulary
- Incompatibility (clash) of verbal and non-verbal messages
- Emotional outburst
- Communication selectivity
- Cultural variations
- Poor listening skills
- Noise in the channel

Limited vocabulary Inadequate vocabulary can be a major hindrance in communication. At times, we find ourselves searching for the exact word or phrase that would be appropriate for what we are trying to express. For example, during a speech, if you are at a loss for words, your communication will be very ineffective, and you will leave a poor impression on the audience. On the other hand, if you have a varied and substantial vocabulary, you can create a favourable impression on your listeners.

Merely having a wide vocabulary is of no use unless the communicator knows how to use it. In communication, the denotative (literal or primary) and connotative (implied or suggested) meanings of the words used should be absolutely clear to the receiver. Therefore, one should make constant efforts to increase one's vocabulary by regularly reading a variety of books and listening to native speakers of the language. Thereafter, using a wide vocabulary regularly will also help to make its usage comfortable and natural. Chapter 16 discusses vocabulary development in detail

Incompatibility of verbal and non-verbal messages

Imagine a situation where your CEO introduces the newly recruited middle-level manager to the other employees. In a small speech, he conveys the message that he is very delighted to have the new manager appointed in his office. However, the expression on his face shows just the opposite of what he is saying. The stark difference between the verbal and non-verbal aspects of his communication leaves his listeners feeling confused and puzzled.

A communicator should acclimatize himself to the communication environment, think from the angle of the listener, and then communicate. Misinterpreted non-verbal



'Did whatever I said in the last half hour make any sense to you?'

The first impression about people is most often made on the basis of their physical appearance, which significantly affects the quality of communication.

people initially formed negative impressions of Einstein because of his worn-out appearance.

Guidelines to improve your appearance:

- Dress according to the occasion.
- Wear neat and clean clothes.
- Choose an appropriate hairstyle.
- Wear clean and polished shoes.

While interpretation of non-verbal cues requires keen observation, there are also pitfalls to guard against. For instance, there is great disparity in the use and interpretation of non-verbal messages across countries and cultures. For example, in Kenya, a mother-in-law and a son-in-law avoid eye contact. In fact they turn their backs to each other. In America, this would be a sign of disrespect.

In brief, your non-verbal cues should consistently match your verbal messages, adding to their effectiveness and enhancing your image as a competent and interesting communicator.

Emotional outburst

Imagine that you are the President of a well-established company. There are rumours floating amongst your employees that you have indulged in fraudulent activities. You are fully aware that these rumours are baseless. However, when you are asked to address the same employees, you are unable to put your point across, as you are flushed with anger. Despite the fact that you are a confident public speaker, your communication failed as you were overwhelmed by your emotions.



communication acts as another barrier to effective information flow instead of enhancing and enlivening verbal communication. Non-verbal cues provide a deeper insight into the sender's message. Ignoring non-verbal cues or misinterpreting them can result in the message being completely misunderstood. Thus, one should not only try to accurately gauge others' non-verbal cues but also be aware of one's own body language.

Generalizations, based on assumptions about physical appearance or dress, can also lead to severe communication barriers. Physical appearance often serves as one of the most important non-verbal cues. For instance, many

people initially formed negative impressions of Einstein because of his worn-out appearance.

Guidelines to improve your appearance:

- Dress according to the occasion.
- Wear neat and clean clothes.
- Choose an appropriate hairstyle.
- Wear clean and polished shoes.

In most cases, a moderate level of emotional involvement intensifies communication, making it more personal. However, excessive emotional involvement can be an obstacle in communication. For example, extreme anger can create such an emotionally charged environment that a rational discussion becomes impossible. Likewise, prejudice, stereotyping, and



boredom all hinder effective communication. Positive emotions such as, happiness and excitement, also interfere in communication, but to a much lesser extent than negative feelings.

Emotions are an integral part of our being, whether in business or in personal encounters. By sharpening self-awareness, intuition, and empathy, emotions can help in developing an environment that is highly conducive to good communication. Yet, situations often arise where people react negatively. Depending on their nature and the situation, this negative reaction may be classified as hostile or defensive. Hostility can be considered as a move to counter-attack the threat, whereas defensiveness is resistance to it. Both reactions occur when the receiver of the message perceives some kind of threat. Both these responses have an extremely negative impact on the communication. Messages are misinterpreted, ignored, or overreacted to by people displaying such behaviour. Those who witness such behaviour are most likely to lower their opinion of such people.

It is important to maintain one's composure in all kinds of communication. Viewing issues from different perspectives helps develop objectivity and rational thinking, which in turn can eliminate many of the causes of hostility or defensiveness. When confronted with such negative behaviour, it is essential to avoid reacting. The person displaying these emotions should be calmed down. They should preferably be taken to a quiet place to try and sort out the problem that caused their emotions to spin out of control.

Communication selectivity

When the receiver in a communication process pays attention only to a part of the message, he/she is imposing a barrier known as communication selectivity. This happens because he/she is interested only in that part of the message which may be of use to him/her. In such a situation, the sender is not at fault. It is the receiver who breaks the flow of communication.

Take for example, a meeting held by the CEO of a company. She has called all her senior executives from various divisions—production, marketing, finance, human resource (HR), etc. During the meeting she discusses diverse topics. However, she may not be able to get the entire message across to each one of the participants, unless she gets their undivided attention. If the production manager and the marketing manager pay attention only to matters related to their respective areas, they may not be able to get the total perspective of what the CEO is conveying.

Communication selectivity may act as a barrier in written forms of communication as well. While reading any document, if you read only the parts you consider useful, you are posing this barrier.

Cultural variations

This is one of the predominant interpersonal factors contributing to communication failure. As businesses are crossing national boundaries to compete on a global scale, the outlook of the global and domestic workforce has changed drastically. European, Asian, and American firms have expanded their businesses worldwide to create international ties through partnership, collaborations, and affiliations. The management and employees of such companies need to closely observe the laws, customs, and business practices of their host countries, while dealing with their multinational workforce. To compete successfully in such a business environment, one must overcome the communication inadequacy arising due to different languages and cultures.

This factor holds good in the area of education as well. You will prove to be a successful communicator abroad, during the course of your higher studies, if you take pains to understand

the culture of the educational campus in which you would be studying. Success, whether as a student or as a professional, lies in knowing the business practices, social customs, and etiquette of the particular country one is dealing with.

Poor listening skills

A common obstacle to communication is poor listening habits. We should remember that listening and hearing are not the same. Hearing is a passive exercise while listening requires careful attention and accurate decoding of the signals received from the speaker. Misunderstandings and conflicts can be avoided if people listen to the message with attention. The various distractions that hinder listening can be emotional disturbances, indifference, aggression, and wandering attention.

Sometimes, an individual is so engrossed in his/her own thoughts and worries that he/she is unable to concentrate on listening. If a superior goes on shifting the papers on his/her desk while listening to his subordinate, without making eye contact with the latter, he/she pays divided attention to the speaker's message. This divided attention adversely affects the superior-subordinate relationship, besides distorting the communication. Chapter 4 discusses listening skills in detail.

Noise in the channel

As discussed earlier, noise interferes in the transmission of signals. Noise is any unwanted signal that acts as a hindrance in the flow of communication. It is not necessarily limited to audio disturbances, but can also occur in visual, audio-visual, written, physical, or psychological forms. All these forms of noise communicate extraneous matter which may distract the receiver from the message, and even irritate him/her.

Technical or physical noise refers to the din of machines, the blare of music from a stereo system, or other such sounds which make the task of the listener difficult. Human noise can be experienced when, for instance, employees gather for a meeting and a member arrives late distracting everybody's attention. Disturbances in telephone lines, poorly designed acoustics of a room, dim typescripts, and illegible writing are some more examples of technical noise.

Organizational Barriers

Communication barriers are not only limited to an individual or two people but exist in entire organizations. Every organization, irrespective of its size, has its own communication techniques, and each nurtures its own communication climate.

In large organizations where the flow of information is downward, feedback is not guaranteed. Organizations with a flat structure usually tend to have an intricately-knit communication network. Irrespective of size, all organizations have communication policies which describe the protocol to be followed. It is the structure and complexity of this protocol that usually causes communication barriers.

Most large companies are realizing that a rigid, hierarchical structure usually restricts the flow of communication. This is because there are numerous transfer points for communication to flow in these hierarchical systems, and each of these points has the potential to distort, delay, or lose the message. To obviate this, there should be direct contact between the sender and the receiver with minimum transfer stations. If the message is presented orally, this further reduces the dependence on transfer stations.



The main organizational barriers are as follows:

- Too many transfer stations
- Fear of superiors
- Negative tendencies
- Use of inappropriate media
- Information overload

Too many transfer stations

The more links there are in a communication chain, the greater are the chances of miscommunication. Imagine, for instance, that your professor asks you to convey a message to X. You, because of some inconvenience or sheer laziness, ask your friend Y to do this job. Now, there are four people involved in this communication channel. Let us see how the message gets distorted as a result of the increased number of transfer stations:

Professor: X was supposed to meet me today regarding the submission of an assignment on Magnetic Theory. But I want X to meet me on Friday, as I am going out of station tomorrow.

You (to your friend Y): Ask X to meet the professor tomorrow, regarding the assignment, as the professor is going out of station today.

Your friend Y(to X): X, you have to meet the professor today as he will not be available tomorrow.

This is an example of how messages get distorted in huge organizations with several layers of communication channels. The message gets distorted at each level not only because of poor listening or lack of concentration, but also because of several other reasons. Some employees may filter out the parts of the message they consider unimportant. Whatever the reasons for filtering or distorting the message, having too many transfer stations is always an obstacle to effective communication and should be avoided. Transfer stations do serve a purpose, but having too many of them is counter-productive.

Fear of superiors

In rigidly structured organizations, fear or awe of superiors prevents subordinates from speaking frankly. An employee may not be pleased with the way his/her boss extracts work from him/her but is unable to put his/her point across because of fear of losing the boss's goodwill. As a supervisor, it is essential to create an environment which enables people to speak freely. An open environment is conducive to increasing the confidence and goodwill of a communicator.

To avoid speaking directly to their boss, some employees may shun all communication with their superiors. At the other extreme, they may present all the information they have. This is because they feel that they will be viewed in an unfavourable light by leaving out some vital information. In written communication, this results in bulky reports, where essential information is clubbed with unimportant details. Such unfocussed messages result in a lot of wasted time. Such practices need to be eliminated by superiors to ensure that communication

flows effectively in their organizations. Moreover, by encouraging active participation from their subordinates, senior officers pave the way for more ideas, resources, or solutions to come forth from their subordinates.

In organizations with many levels of communication, messages have a greater chance of being distorted. This occurs due to poor listening, lack of concentration, or a person's tendency to leave out part of the message.

Negative tendencies

Many organizations create work groups. While some groups are formed according to the requirements of the task at hand, such as accomplishing a particular project, many other small groups are also formed for recreational, social, or community purposes. These groups may be formal

or informal, and generally consist of people who share similar values, attitudes, opinions, beliefs, and behaviours. Nevertheless, on some occasions, a communication barrier can exist due to a conflict of ideas between the members and non-members of a group.

For example, the student members of the sports club of an educational institution may be annoyed with non-members who oppose the club's demand for allocating more funds to purchase sports equipment. This type of opposition gives rise to insider-outsider equations, which in turn pave the way for negative tendencies in the organization. Once these negative tendencies develop, they create noise in interpersonal communication.

Use of inappropriate media

Some of the common media used in organizations are graphs and charts, telephones, facsimile machines, boards, email, telephones, films and slides, computer presentations, teleconferencing, and videoconferencing. While choosing the medium for a particular occasion, the advantages, disadvantages, and potential barriers to communication must be considered. While deciding upon the medium, the following factors should be considered:

- Time
- Cost
- Type of message
- Intended audience

The telephone, for instance, would not be an ideal medium for conveying confidential information. Such messages are best conveyed in person or, if the receiver is located in another office, by private chat messenger. Printed letters, which provide permanence, are preferable for information which requires to be stored for future reference. Usually, a mix of media is best for effective communication. For example, after booking an order online, a follow-up call can be made to verify whether the order has been placed.

information overload

One of the major problems faced by organizations today is the decrease in efficiency resulting from manual handling of huge amount of data. This is known as *information overload*. The usual results of information overload are fatigue, disinterest, and boredom. Under these circumstances, further communication is simply not possible. Very often, vital, relevant information gets mixed



up with too many irrelevant details, and is therefore ignored by the receiver. Thus, the quality of information is much more important than the *quantity*.

To reduce information overload in an organization, screening of information is mandatory. Messages should be directed only to those people who are likely to benefit from the information. Major points should be highlighted, leaving out all irrelevant details.

Bearing in mind all these possibilities and reasons for communication failure, one can take pre-emptive measures to avoid these barriers.



Tips for Effective Communication

Constant practice and rigorous implementation of these ideas will help you become an excellent communicator.

- Always keep the receiver in mind.
- Create an open communication environment.
- Avoid having too many transfer stations.

- Do not communicate when you are emotionally disturbed.
- Be aware of diversity in culture, language, etc.
- Use appropriate non-verbal cues.
- Select the most suitable medium.
- Analyse the feedback.

SUMMARY

Communication fails because often the message sent is not always the message received. Various interruptions or barriers prevent the proper passage of information from sender to receiver. This failure can be attributed to various types of 'noise', which could exist either at the source, in the channel, or at the receiver.

If a speaker does not see the desired response from the audience, he/she must identify the problem, find the cause or barrier, work on alternative solutions, select the best solution, and follow up rigorously to ensure that this barrier does not come up again.

Barriers to communication are classified as intrapersonal, interpersonal, and organizational. Intra-personal barriers occur because of individual

attributes, such as wrong assumptions, varied perceptions, differing backgrounds, wrong inferences, blocked categories, and categorical thinking. Interpersonal barriers occur due to inappropriate transactions of verbal and non-verbal messages between two or more people. The different barriers are limited vocabulary, incompatibility, or clash of verbal and non-verbal messages, emotional outburst, communication selectivity, cultural variations, poor listening skills, and noise in the channel.

Organizational barriers stem from organizational attributes such as too many transfer stations, fear of superiors, negative tendencies, use of inappropriate media, media, and information overload. Once we know the reasons for failure of communication, we should take pre-emptive measures to overcome it.

EXERCISES

1. Identify the communication barrier that describes each of the following situations:
 - (a) 'Every time I have a meeting with Mr Gupta, I end up disagreeing with him about a particular issue.'
 - (b) *Manager:* 'Reeta, where is the report that I asked you to submit on the financial matters of the company?'
Reeta: 'I do not remember you asking me to submit a report.'
 - (c) *Teacher:* 'Students, why have you not submitted the report within the fortnight?'
Students: 'But you asked us to submit it bimonthly!'
 - (d) 'This room is horrible to work in. I am able to hear everyone around, and there is no scope for privacy.'
 - (e) 'It is quite tedious to manually work on the students' records, but I fear using the computer as it might corrupt all our data.'
 - (f) 'Why every time I get a meeting with John, I usually end up showing my disinterest with him about a particular topic?'
 - (g) 'If you want some more information from me, ask only the specific questions and do not waste my precious time!'
2. Identify and explain a communication barrier which may hinder each of the process compo-

- nents given in the schematic representation of the human communication process.
3. 'A barrier acts like a sieve, allowing only a part of the message to filter through; as a result, the desired response is not achieved.'
- Keeping in mind the above statement mention the various types of interpersonal barriers which hinder the communication process. Substantiate your answer with suitable examples.
4. Imagine you are the Sales Manager in Ramanath Paper and Pulp Company. Some of your co-employees are spreading rumours that you are involved in fraudulent activities. In order to defend yourself, you are asked to address the same co-employees. You are angry due to these rumours and you find it difficult to put your views before them. Identify the communication barrier that hinders this communication situation.
 5. Explain the following terms with reference to communication barriers and give two examples for each term.
 - (a) Organizational barrier (b) Emotional outburst
 - (c) Cultural differences (d) Information overload
 - (e) 'Know-it-all' attitude
 6. You have been assigned to host a group of American university students who are visiting your institute for the next two weeks. What can you tell them that will help them fit into the culture on your campus? Make a list of the important behavioural rules they should understand in order to communicate effectively with students and faculty on your campus. Also point out some problems that might occur if the American students disregard these rules.
7. Identify the barriers that lead to miscommunication in the following scene. How can the manager overcome this barrier?
- 
- 'I called for a meeting with the supervisors. But none turned up... nobody pays attention to me in this place.. . it would be better to quit.'*
8. Write the possible solutions to overcome these barriers:
 - (a) Dealing with people working in isolated office or environment.
 - (b) Dealing with a customer who is very talkative
 - (c) Working in a noisy surrounding
 - (d) Dealing with a frustrated and angry client
 - (e) Dealing with visual distractions at workplace
 9. Give at least two situations for the barriers mentioned below:
 - (a) Physical barrier
 - (b) Negative tendency
 - (c) Wrong inferences
 - (d) Transfer station
 - (e) Difference in background and language

CHAPTER

3

Non-verbal Communication

OBJECTIVES

You should study the chapter to know

- the meaning of non-verbal communication
- the different aspects of non-verbal communication such as kinesics, proxemics, and chronemics
- cross-cultural communication differences

INTRODUCTION

Effective communication takes into account both the verbal and non-verbal aspects of communication. While verbal communication is organized by language, non-verbal communication is not. This chapter discusses non-verbal communication. Non-verbal communication refers to all communication that occurs without the use of words, spoken or written. It is concerned with body movements (kinesics), space (proxemics), and vocal (paralinguistic) features. It includes all unwritten and unspoken messages, both intentional and unintentional. Non-verbal cues, however, speak louder than words, as even though speech can be made up, bodily expressions can rarely be masked well enough to hide one's true feelings and emotions.



*Crossed at the
ankle*



*Crossed at the
knees*



*Open crossed with one
ankle on the other thigh*



*Uncrossed and straight
closed together*



*Uncrossed and
straight far apart*

Personal appearances, facial expressions, postures, gestures, eye contact, voice, proximity, and touch are all non-verbal signals that influence the way in which a message is interpreted and understood. Though they have a profound impact on the receivers, it is difficult to analyse them accurately. This is because the interpretation of non-verbal cues is a very subjective concept, varying based on people's varied backgrounds (refer to cross-cultural communication). Nevertheless, they must not be ignored, but recognized and understood as correctly as possible.



See the PowerPoint presentation on body language in the CD. See also the GD and interview video situations on body language.

KINESICS

Kinesics is the study of the body's physical movements. It is the way the body communicates without words, i.e., through the various movements of its parts.

'You cannot not communicate. You communicate just by being. Nodding your head, blinking your eyes, shrugging shoulders, waving hands, and other such physical activities are all forms of communication.'

-Watzlawick and associates

'He that has eyes to see and ears to hear may convince himself that no mortal can keep a secret. If his lips are silent he chats with his fingertips; betrayal oozes out of him at every pore.'

-Sigmund Freud

Some kinesic behaviours are deliberate. For example, you nod your head to indicate acceptance. While speaking, listening, reading, or writing, we consciously use words to receive or send ideas. Why do we use words? Because they are the primary symbolic forms that convey our thoughts. On paper, words remain static; however, punctuation marks are used to convey pauses, expressions, emotions, etc. But in face-to-face communication, the message is conveyed on two levels simultaneously. One is verbal and the other is non-verbal. For example, suppose you are congratulating two of your friends on their successful interviews. If you extend your hand to them with a big smile on your face along with the utterance, 'Congrats', your appreciation has more impact on them than the word in isolation. Your smile and the handshake are kinesics, which enhance the impact of your verbal communication.

The non-verbal part of any communication is not as deliberate and conscious as the verbal part. Rather, it is subtle and instinctive, and often involuntary. It is important to study body language because it is estimated that the verbal component of oral communication carries less than 35 per cent of the social meaning of the situation, while more than 65 per cent is attributed to body language. People react strongly to what they see.

Body Language

When a speaker presents himself/herself, we see him/her before we start hearing him/her. Immediately, we begin developing impressions of his/her abilities and attitudes based on the non-verbal signals he/she sends. This is why body language is so critical in oral communication.

Body language includes every aspect of our appearance, from what we wear, how we stand, look, and move, to our facial expressions and physical habits, such as nodding the head, jingling change in the pocket, or fiddling with a necktie. Our use of space and gestures are other key indicators.

Personal appearance Personal appearance plays an important role; people see before they hear. Just like we adapt our language to the audience, we should also dress appropriately. Appearance includes clothes, hair, accessories, cosmetics, and so on. Today, the purpose of clothing has



altered from fulfilling a basic need to expressing oneself. Clothes also accentuate the body's movements, and the choice of clothes reveals a lot about the wearer's personality and attitude.

Personal appearance must be so planned that it communicates effectively to others. Even before a speaker utters his/her first syllable the audience begins to form an opinion about him/her and visualizes the way he/she is going to talk. One's appearance may put the audience into a resistant or hostile attitude or induce in them a receptive mood. To be clean and well groomed, conforming to the need of the occasion, is of utmost importance. Appearances communicate how we feel about ourselves and how we want to be viewed.



Posture Posture generally refers to the way we hold ourselves when we stand, sit, or walk. One's posture changes according to the situation. If nervous, one would normally be seen pacing, bobbing the shoulders, fidgeting with notes, jingling coins, moving constantly, or staying glued to the ground.

When we are with friends we are probably spontaneous. We are not conscious about our posture and our physical movement is natural. But when we encounter an unfamiliar situation, we become more conscious of our posture. For instance, during an oral presentation, stiff positions, such as *standing akimbo* (with hands on hips and elbows pointing away from the body), send the message of defiance or aggression. It is always better to lower the hands to one's sides in a natural, relaxed, and resting posture. Standing, sitting, or walking in a relaxed way is a positive posture, which will encourage questions and discussion. Also being comfortably upright, squarely facing an audience, and evenly distributing one's weight are aspects of posture that communicate professionalism, confidence, attention to detail, and organization. The way one sits, stands, or walks reveals a lot:



Slumped



Erect



Lean forward



Lean backward



Crossed arms



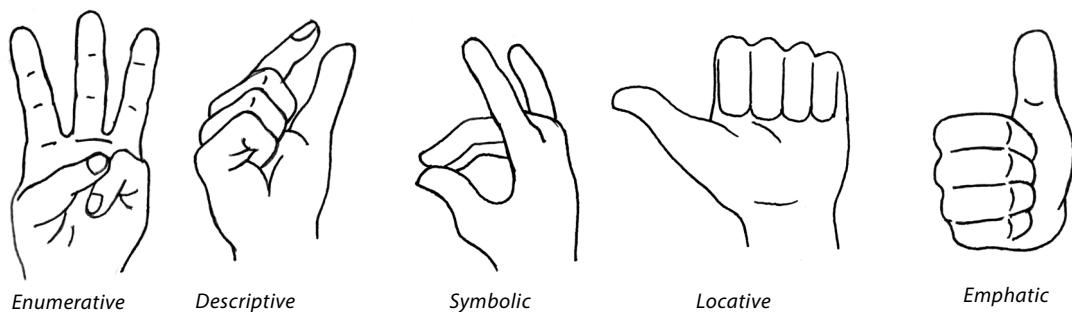
Uncrossed arms

- Slumped posture—low spirits
- Erect posture—high spirits, energy, and confidence
- Lean forward—open, honest, and interested
- Lean backward—defensive or disinterested
- Crossed arms—defensive and not ready to listen
- Uncrossed arms—willingness to listen

Gesture Gesture is the movement made by hands, head, or face. Skillful and appropriate gestures can add to the impact of verbal communication. A well-timed gesture not only drives a point home but also enhances the value of what is being said. Similarly, an awkward gesture (like playing with a key chain or button) can mar the effectiveness of the message.

Gestures clarify our ideas or reinforce them and should be well suited to the audience and occasion. Gestures are more numerous than any other form of non-verbal communication, and the meanings attached to them are diverse. It has been observed that there are as many as 700,000 varied hand gestures alone (Birdwhistell 1952), and the meanings derived from them may vary from individual to individual. Some hand gestures are shown in a PowerPoint presentation on body language in the CD.

Gestures should not divert the attention of the listener from one's message. They should be quite natural and spontaneous. Be aware of and avoid irritating gestures such as playing with a ring, twisting a key chain, clasping hands tightly, or cracking knuckles. Gestures can roughly be divided into the following types:



- Enumerative—numbers
- Descriptive—size of the objects
- Symbolic—abstract concepts
- Locative—location of an object
- Emphatic—emphasis

Facial expression Along with postures and gestures, facial expressions also play an important part in non-verbal communication. The face is the most expressive part of our body. A smile stands for friendliness, a frown for discontent, raised eyebrows for disbelief, tightened jaw muscles for antagonism, etc. Facial expressions are subtle. They can be used in a variety of ways to aid, inhibit, or complement communication. The face rarely sends a single message at a time. Instead, it sends a series of messages—facial expressions may show anxiety, recognition, hesitation, and pleasure in quick succession.

Facial expressions are difficult to interpret. Though there are only six basic expressions, there can be many shades and blends of these. Also, people tend to hide their true feelings, and



project expressions that are appropriate according to the circumstances. The six basic facial expressions are:

- Happiness
- Surprise
- Disgust
- Fear
- Anger
- Sadness

Eye contact Eyes are considered to be the windows of the soul. We look at the eyes of a speaker to find out the truthfulness of his/her words, intelligence, attitudes, and feelings. Eye contact is a direct and powerful form of non-verbal communication. We use our eyes to cull information. Eyes are also a rich source of feedback.

Looking directly at listeners builds rapport. Prolonging the eye contact for three to five seconds (without, however, giving the impression of staring) tells the audience that the presenter is sincere in what he/she says and that he/she wants us to pay attention. Eye contact is especially important when we start a conversation.

Our upper eyelids and eyebrows help us convey an intricate array of non-verbal messages. Arabs, Latin Americans, and South Europeans look directly into the eyes. Asians and Africans maintain far less eye contact. In the professional world one should make personal and pleasant eye contact with the listeners. Eye contact shows one's intensity and elicits a feeling of trust. A direct look conveys candour and openness. This direct and powerful form is a signal of confidence or sincerity; therefore, experienced speakers maintain longer eye contact. The eyes should convey the message, 'I am pleased to talk to you, do believe in what I am saying.'



Happiness



Surprise



Disgust



Fear



Anger



Sadness

PROXEMICS

Proxemics is the study of physical space in interpersonal relations. Space is related to behavioural norms. The way people use space says a lot about them. In a professional setting, space is used to signal power and status. For instance, the head of a company has a larger office than junior employees.

Gestures should be in accordance with the space available. When there is plenty of space to manoeuvre, one should move more boldly and expand one's gestures. When seated at a table, one should use milder gestures. One can even subtly reach out over the table to extend one's space. This expresses control and authority.

It is possible to learn a great deal about how to manipulate space by watching dynamic and influential speakers. Interestingly, like kinesics, proxemics also has cultural variations. A Latin American or French person is likely to stand closer to another person when conversing than an Anglo-Saxon would in the same situation. Americans, addressed from a close distance, may feel offended or become aggressive. Studies show that Americans, unlike many other nationals, avoid close contact with one another in public places. Indians decide the distance based on the relationship. They prefer to maintain distance with elders and a superior person. However, with a friend they may maintain less distance. Edward T. Hall (1966) divides space into four distinct zones (see Figure 3.1).

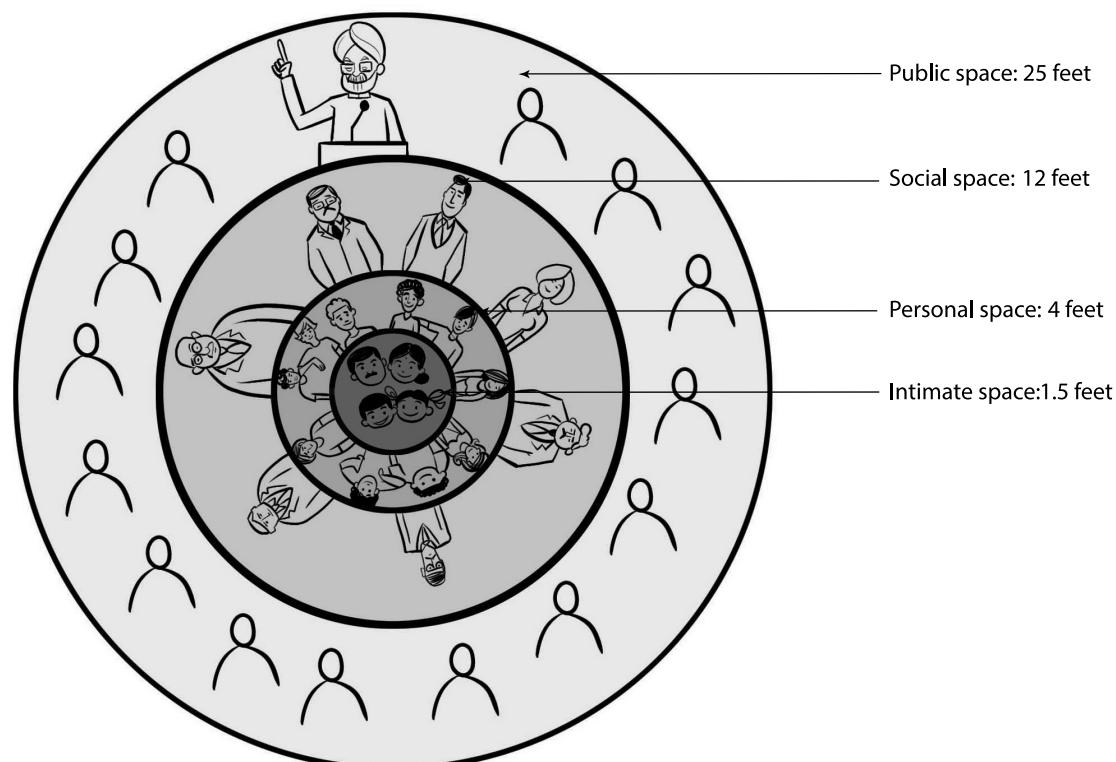


FIGURE 3.1 The four distinct space zones



Intimate This zone starts with personal touch and extends just to 18 inches (one and a half feet). Members of the family, lovers, spouses, relatives, and parents fall under this zone. The best relationship that describes it is the mother-child relationship. This zone does not need active conversation. One can whisper or make unintelligible sounds but still be able to communicate. Other individuals come close for a very brief period and only under special circumstances—when they want to congratulate, sympathize, or console. A handshake, a pat on the back, or a hug, all come into this zone.

Personal This zone stretches from 18 inches (one and a half feet) to 4 feet. Close friends, colleagues, peers, etc. fall in this zone. Instead of whispering sounds or utter silence, there can be normal conversation in this zone. Though this zone is personal, it is quite a relaxed and casual place. It permits spontaneous and unplanned communication. Sitting or standing so close brings one closer to the listener and gives the impression of friendliness and warmth.

Social Social events take place in the radius of 4 feet to 12 feet. In this zone, relationships are more formal and official. People are more cautious in their movements. These situations involve less emotion and more planning. The number of people decides whether it should be a sitting–sitting or sitting–standing position. It is through experience that one decides which position to take. If the number of people is less and eye contact can be maintained, a sitting–sitting position can be used. To be authoritative with a large audience, a sitting–standing position is used.

Public This zone starts from 12 feet and may extend to 25 feet or to the range of eyesight and hearing. Events that take place in this zone are formal. Here the audience views what is happening as an impartial observer. The degree of detachment is very high. The audience is free to do whatever it feels like. Here the speaker has to raise his/her voice to communicate to others or use a microphone. Public figures like the prime minister of a country, for example, have to maintain this distance for security reasons.

CHRONEMICS

Chronemics is the study of how human beings communicate through their use of time. How do we communicate with others? What does time mean to us? In order to use time as an effective communication tool, we should understand its impact on the various aspects of our lives and act accordingly. We must attempt to use time as effectively as possible.

In the professional world, time is a valuable resource. When we are late for an appointment, people react negatively. If we arrive early, we are considered either over-eager or aggressive. So, we should always be *on time*. By valuing someone else's time, we communicate our professionalism or seriousness both subtly and explicitly.

People have their own *time language*. To one person who wakes up at 8:00 a.m., 6:30 a.m. may be early; to another, 8:00 a.m. may be late if he/she wakes up at 5:00 a.m. every day!

Time language also varies from culture to culture. In Latin countries, meetings usually begin well after their appointed time. Everyone knows this. It is customary, and no one is offended by the delay. In Scandinavia or Germany, on the other hand, strict punctuality is the rule, and tardiness is frowned upon. In India, *time language* varies according to the occasion. Punctuality is expected for a professional meeting, but it is not insisted upon for a party. People in India are generally liberal with time.

CORRELATING VERBAL AND NON-VERBAL COMMUNICATION

Imagine you are giving a presentation in front of your professor and friends. They all seem to be listening to you, but their non-verbal behaviour indicates boredom and restlessness. Somewhat puzzled and unsure of yourself, you seek their agreement and several of them concur verbally through verbal expressions such as 'Great!', 'Wow!', 'Perfect!', etc. Nevertheless, their non-verbal language conveys the impression that they are far from confident about the presentation. What would you do in such a situation? You should try to understand the non-verbal cues and pause the presentation to ask a few questions. Questions usually get people involved and make a presentation more interactive and meaningful.

'Words conceal but actions reveal'. This is true because when we speak to somebody, we are constantly sending some non-verbal cues as well. The way we use our voice, our body language including our facial expressions, posture, gestures, eye contact, and the distance we maintain add meaning to the words spoken, or modify the verbal message being conveyed. The tone of our voice can change the meaning perceived from positive to sarcastic, and the stress points of our sentences can highlight the specific points and subtly change the meaning of our utterances.

We should learn to recognize patterns of non-verbal language, beginning with our own. We should always be aware of how non-verbal language operates throughout the organization. According to psychologists, people use non-verbal behaviour to express their emotional attitudes: the degree of like and dislike towards others, the degree of dominance and submissiveness, and the degree of responsiveness, i.e., the intensity of positive and negative feelings aroused in them by others.

A good body posture is usually an indicator of confidence and uprightness. However, without mental and emotional confidence, our words will sound hollow to the audience. For instance, a used-car salesman from a dubious franchise may have a great body posture, and greet you with a warm smile and a firm handshake. However, if in his heart he sees you as just another customer he can take for a ride, then sooner or later, his internal conflict between what he says and what he really thinks will cause him to trip up. His movements and gestures will start giving away his real intentions. You will start feeling uncomfortable around him, even though you may be unable to pinpoint why. However, if the same used-car salesman is genuinely interested in helping you find the right car and puts your needs before his own, then his words and actions will be in harmony with his underlying intentions and you will instinctively trust him, even though you might not be able to identify the reason for such trust.

Non-verbal communication can be divided into two categories—conscious and unintentional. When speaking of the former category, one can think of the silent pauses a speaker takes to emphasize on some point. Also when someone does not intend to continue a conversation in the direction it is taking, they play with their key rings or some other accessory or they avoid making eye contact and look somewhere else. In unintentional non-verbal communication, one is not trying to express certain feelings and thoughts but displays them involuntarily. For instance, you might have observed that when people tell lies, they touch their face unintentionally. However, somebody good in interpreting body language may be able to catch this.

Eyes play a very important part in both intentional and unintentional non-verbal cues. When someone gives you a cold stare, you feel unwelcome. When a speaker makes a point and looks at you for longer than usual, he/she might be trying to say that the point is especially relevant to you. Eyes betray feelings that people try to hide. Hand movements are also very effective non-verbal communication. Usually, hands are used more for conscious communication and do not give unintentional cues. However, when people are tensed or worried, their hand movements



give away their real feelings. Even if they utter some confident words, their eye contact, facial expressions, or gestures will reveal the truth. Hence, it is generally said that when your verbal and non-verbal messages do not match, your listeners will rely more on your non-verbal cues.

There are times when we recognize non-verbal cues without putting conscious thought into it. For example, when someone puts their palm up, it is understood that they want to end the conversation. Or when you are speaking, and the listener suddenly jerks their head towards you; you know you have said something of interest.

CROSS-CULTURAL VARIATIONS

'Preservation of one's own culture does not require contempt or disrespect for other cultures.'

-Cesar Chavez

This age of globalization and information technology has entirely changed the face of governments, businesses, and organizations. People are not confined to the geographical walls of their own nations anymore, but have become part of an international network. Communication being the backbone of inter- and intra-organizational coordination, it is essential for people to comprehend the linguistic and cultural differences among organizations to get the desired results at the workplace.

It is not simple to define culture in concrete terms. Culture is a complex concept, with a variety of definitions. The dictionary meaning of the word 'culture' is a group or community with which we share common experiences that shape the way we understand the world. It consists of groups that we are born into, such as gender, race, or national origin, etc. It also includes groups we join or become part of, or the new habits we acquire as we interact with different people throughout our lives. Culture consists of various elements such as language, religion, politics, etc. Let us now discuss each element individually.

Language

Language forms the basis of all communication. It includes spoken, written, and body language. As mentioned, we are no longer restricted to one state or country during the course of our profession, relations, etc. As such, we often have to deal with people who speak different languages.

Religion and beliefs

Another important element of culture is religion. An individual's religious beliefs and norms, sacred objects, philosophical systems, prayers, and rituals are all parts of culture. Religion and belief affect the communication process. For example in India, some religious rites have become integral to our culture and have been adopted by people from other religions. Before starting any important project, it is a norm in India to follow certain religious rites and offer prayers. In conferences, it is observed that before starting the deliberation, prayers are offered and lamps are lit.



Values and attitudes

Different values and attitudes of individuals towards time management, decision-making, achievement, work, change, etc. are also important parts of culture. These attributes affect communication between people with differing values to a great extent. It becomes important

for people of different cultures to respect and appreciate each other's values to be able to communicate effectively without adversely affecting their sensitivities. In the Indian culture, e.g., little importance is attached to the personal space and privacy of an individual. For example, when you meet someone and think of striking up a conversation, you can ask questions about that person's marital status or where he or she works or lives. Some South American and Mediterranean countries also allow this liberty. On the other hand, in Western countries, such unnecessary questions will be treated with a lot of apprehension and be considered highly inappropriate. In India, people do not place much importance on punctuality. It is fashionable to walk into a party late, or acceptable to dial into a teleconference five minutes later. Our Western counterparts may look at these as signs of disrespect. Gradually, in the global workplace, people of various cultures are learning to accept and respect each other better than they could a decade earlier. Knowing these basic differences and shaping our reactions accordingly are essential for overall successful communication.

Politics and law

The political system of a nation consists of national intents, power, ideologies, political risks, sovereignty, law of the country in which the organization works, rules and regulations imposed by the government, etc.

Technology

Technology includes scientific make-up, invention, communication media, urbanization, etc. and these are all essential parts of culture. For example, with the growth of information and communication technology, we have seen a tremendous change in the social and cultural framework of urban India.

Social organization

Social organization is an important element of culture. It consists of social institutions, the authority structure, interest groups, and status systems, etc. All these elements constitute the culture of a nation. For instance, maintaining eye contact with a senior during conversation was considered disrespectful in our culture until a few years ago. However, all this is changing in the professional world. Most organizations are adopting a corporate culture that might take some time to get oneself acquainted with. In most multinational companies, it is okay to address one's senior with his/her first name. It is an American tradition, and does not show disrespect or over-familiarity like we think it does. So, one must be cognizant of the various hidden conventions that are prevalent in the professional world.

Significance of Understanding Culture

There are different cultural groups in the world with different patterns of behaviour, religions, languages, politics, values and norms, etc. Thus, the same action is interpreted differently in different nations. For example, 'thumbs up' in America means approval, but is considered vulgar in Iran and Ghana (see the PowerPoint presentation on body language in the accompanying CD). This makes clear the importance of understanding different cultures. However, when we cross cultural boundaries, we carry our own culture with us. We must understand that our own cultural context cannot be used to judge the standards of another. It is imperative to give importance to another culture and not to judge others' behaviour according to our own cultural values.





Conducting international business requires a good understanding of the concepts of business negotiations and ethics. Understanding varying business cultures and different values of management and behaviour is important for success in the international market. Familiarity with the different business practices of different nations aids in sustaining successful business relations.

SUMMARY

Non-verbal communication plays a very significant role in effectiveness of interaction. It is important to project oneself as positive and professional, not just by words, but through actions as well. Non-verbal communication includes kinesics (body movements), proxemics (space), chronemics (time), and paralinguistic (vocal) features.

It is also essential to respect the differences in thinking and culture while dealing with an audience from a different cultural and ethnical background. Language, religion and beliefs, values and attitudes, politics and law, technology, and social organization are the various elements of culture which should be considered to communicate effectively.

EXERCISES

1. What is non-verbal communication? Do you think you can manage any communication situation just with non-verbal cues? Give situational examples.
2. How do kinesics enhance the impact of your verbal communication. Explain with examples.
3. What factors will you bear in mind while communicating with people from a different cultural or ethnic background?
4. Is it more likely to have communication gaps with people from different cultural or ethnic back-

grounds than with someone from your own background? How would you overcome these gaps?

5. Answer the following questions:
 - a) Explain the role of eye contact in communication.
 - b) What are the four different space zones according to Hall?
 - c) Proxemics play a prominent role in communication. Justify.