

Technical Writing for Future Engineers

Suvarna Agarwal, Dr. Garima Yadav

Abstract— Communication is one of the most important factors in one's life. Communication is the mode of expressing our ideas, thoughts and skills to others. It can be done in any form, in any pattern but to produce the ideas in the well connected form and style one need to have the exact knowledge to fabricate the ideas in creative and concrete manner. The study of writing imparts proper methodology of developing the message in the form that can be channelize in a manner to reproduce the effective results.

Index Terms— Communication, future engineers, technical writing.

I. INTRODUCTION

Communication is one of the most important factors in one's life. Communication is the mode of expressing our ideas, thoughts and skills to others. It can be done in any form, in any pattern but to produce the ideas in the well connected form and style one need to have the exact knowledge to fabricate the ideas in creative and concrete manner. The study of writing imparts proper methodology of developing the message in the form that can be channelize in a manner to reproduce the effective results.

Communication in any form flows in a direction to make the receiver understand the message communicated in an appropriate manner for further outputs. That can be classified as mentioned below:

II. IDEATION, ENCODING, TRANSMISSION, DECODING, & FEEDBACK

The education of writing in an effective manner can be easily done by the teaching of a subject prescribed by the Uttar Pradesh Technical University for the B.Tech graduates those who would be the future technocrats, and will need to cultivate their ideas in the reputed companies where they will work and represent their opinion. Moreover when the students work in a company they have to follow a restricted pattern of writing of a document, producing the reports, presenting a proposal, sending an email, of drafting a letter to the higher authority and to the subordinates. To save a good image in the minds of the seniors and colleagues and to make a healthy atmosphere amongst the subordinates, one has to know the power of writing. The medium of expressing the views require the careful analysis of the seven C's of effective communication which are applicable to both written as well as oral communication.

Suvarna Agarwal, Assistant Professor, Hindustan Institute Of Technology & Management, 19 Km Keetham, Agra
Dr. Garima Yadav, Assistant Professor, Hindustan Institute Of Technology & Management, 19 Km Keetham, Agra

A. BASIC ELEMENTS OF COMMUNICATION

1. **Completeness:** The communication must be complete. It should convey all facts required by the audience.
2. **Conciseness:** Conciseness means wordiness, i.e. communicating what you want to convey in least possible words without forgoing the other C's of communication.
3. **Consideration:** Consideration implies "stepping into the shoes of others". Effective communication must take the audience into consideration, i.e. the audience's view points, background, mind-set, education level, etc.
4. **Clarity:** Clarity implies emphasizing on a specific message or goal at a time, rather than trying to achieve too much at once.
5. **Concreteness:** Concrete communication implies being particular and clear rather than fuzzy and general. Concrete strengthens the confidence.
6. **Courtesy:** Courtesy in message implies the message should show the sender's expression polite, as well as should respect the receiver. The sender of the message should be sincerely polite, judicious, reflective and enthusiastic.
7. **Correctness:** Correctness in communication implies that there are no grammatical errors in communication.

Without these seven C's the communication becomes irrelevant, to make the document clear and appropriate the writer should remember the use of these basic parts in detail.

Now the students are from different educational backgrounds and they perceive each and every word according to their know-how, to match with the challenges of the corporate world and multinational scenario, the students have to update their skills in all kinds of communication, whether oral, written and non-verbal. One has to be expert of all these to survive in the market of tough competition. To know how to be creative and accurate in writing proficiency the university has prescribed the course for B.Tech students who need to write their projects, thesis and present the reports. The basic emphasis of the subject is on improving the techniques of writing a manuscript by several patterns. The course covers many contents which are really important for a student to write their text even in their examination and in real world.

III. NEED AND IMPOTANCE OF TECHNICAL COMMUNICATION

With the information revolution and socio-economic changes in the new millennium, the importance of effective technical communication skills has increased. The whole world has become a global market and the transfer of technology is playing a key role in economic growth and transformation. As the professional world becomes more diverse, competitive and result-oriented, the importance of

technical communication skills continues to increase. In fact, technical communication skills are crucial to professional success today, because, success in communicating in the technical environment will depend not just on an effective style, but on the ability to organize, analysis, and present essential information effectively for the reasons:

- 1) It not only makes professional interaction possible, but also directs the flow of technical information and knowledge for the guidance of technocrats.
- 2) It stimulates scientists and researchers to act to achieve individual as well as social and organizational objectives.
- 3) It develops information and understanding essential for effective group functioning.
- 4) It leads to unification between the activities of individuals as a work team.
- 5) It helps to foster positive attitude required for motivation, cooperation and other important organizational processes.
- 6) It ensures free exchange of information and ideas and promotes scientific temper and maintenance of professional relations.

Technical communication is helpful for complex organizations, making global business environment, and increasing technological advancement,

IV. ASPECTS AND FORMS OF TECHNICAL WRITING

Technical communication is a central factor for emerging knowledge in society, where technocrats and professionals in different areas face new challenges. In order to be an effective technical communicator one needs the basic requirements of effective technical communication which are-

- 1) Subject competence, (knowledge, experiences, and abilities)
- 2) Linguistic competence, (language skills and the ability to present them)
- 3) Organizational competence. (organize technical information in a logical, thematic & structured ways)

FORMS: 1

Technical communication is divided into in two basic forms ORAL & WRITTEN.

ORAL FORM:

- 1) Face-To-Face Conversation, Meetings
- 2) Telephone Conversation, Conferences
- 3) Dictation, Instructions, Presentations
- 4) Group Discussions, Interviews
- 5) Voice Conferences, Video Conferences

WRITTEN FORMS:

- 1) Memos, Letters, E-Mails,
- 2) News Letters, Faxes
- 3) Manuals And In- House Journals
- 4) Proposals, Bulletins, Brochures
- 5) Circulars, Reports

ORAL communication provides immediate feedback and promotes better understanding with some personal touch. Whereas,

WRITTEN communication is more of impersonal forms with structured, logical and organized messages.

V. ELECTRONIC COMMUNICATION

The electronic communication has added new dimensions to communication with growing use of telephones, emails, text messages, web conferencing, pod cast, and blogs. The use of these techniques can be seen in the globe at the wide range.

VI. CONCLUSION

Thus, to sum up, it can be rightly said that the fast pace growing generation with their inclination to the use of electronic devices it has been observed that the use of writing skills has become of great significance and can be visualized by the technocrats, who use their writing skills for their different documentation. Technical writing helps the students in showing their innovative ideas with the proper use of grammar, pronunciations, visual aids and correct methodology of presenting views in various forms.

It can be aptly said the message can be conveyed but if it is full of errors and ambiguity it will be completely meaningless to both the sender and the receiver.

REFERNCES:

- [1] M. Ashraf Rizvi, "Effective Technical Communication", Tata Mc Graw Hill Education, Pvt. Ltd. 2012
- [2] Meenakshi Raman & Sangeeta Sharma, "Technical Communication, Principles & Practice", Oxford University Press. Second Edition, 2012