TECHNICAL COMMUNICATION FOR ENGINEERING STUDENTS - RELEVANCE IN THE INDIAN CONTEXT

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Abstract- Engineering profession is highly dependent upon communication skills. Engineers must be able to report their ideas and designs clearly and succinctly to their subordinates, coworkers, supervisors, and clients. Effective communication skill is an important life-skill required not only in one's academic and professional career but also in one's personal career. Technical communication is a type of communication that has a specific purpose with a well-defined audience. The present paper attempts a study on the importance of technical communication for Indian Engineering Students for better Job prospects.

Keywords- Communication, Technical Communication, Engineers, Skill

I. INTRODUCTION

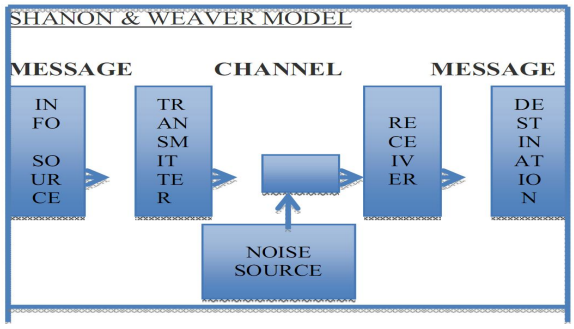
Communication

"Developing excellent communication skills is absolutely essential to effective leadership. The leader must be able to share knowledge and ideas to transmit a sense of urgency and enthusiasm to others. If a leader can't get a message across clearly and motivate others to act on it, then having a message doesn't even matter." — Gilbert Amelio President and CEO of National Semiconductor Corp.

The term 'Communication' according to the dictionary goes as-

- the act or process of communicating; fact of bein g communicated.
- the imparting or interchange of thoughts, opinion s, or information by speech, writing, or signs.
- something imparted, interchanged, or transmitted
- a document or message imparting news, views, i nformation, etc.

In order to review the basic elements of the communication process one needs to set the stage for information and message flow through an organization. These elements include: someone to send the message (the encoder), some means for channeling it, someone to receive it (the decoder), and a feedback mechanism. A multiplicity of encoders, channels, decoders, and feedback mechanisms can be used.



There are various kinds of communication models among which Shannon-Weaver's model is easily understandable to one and all, it is specially designed to develop effective communication between the sender and receiver. Also they find factors which are affecting the communication process called "Noise". At first the model was developed to improve the Technical Communication. Later it's widely applied in the field of Communication. This model deals with various concepts like Information source, transmitter, Noise, channel, message, receiver, channel, information destination, encode and decode.

People who are aware ofthe diagrammatic representation of the Shanon-Weaver model, agrees to the fact that the communication channel message plays a significant role in maintaining the quality of the original message in its passage from the sender to receiver. The sender, given the opportunity to weigh the merits of using an oral or written communication, or a combination of the two, selects the most effective for the situation.

II. TECHNICAL COMMUNICATION AND ITS IMPORTANCE FOR ENGINEERS

Technical communication is also a type of communication that has a specific purpose with a well-defined audience. Technical communication has to be correct, accurate, clear, appropriate, and to the point. The language should be clear and easily understandable.

One of the chief objectives of Technical Communication is to provide organized information that aids in quick decision-making. Brookes (1964:115-16) remarks: "A report or paper must be written. Anyone engaged in scientific work who is incapable of making this kind of report is not a scientist but a technician, not an engineer, but a mechanic. Proficiency in his written and spoken dialect is a badge which cannot be counterfeit".

Now the question is what skills do engineers need most to be successful in their jobs? A lot of research studies have come to the conclusion that communication skills are extremely important for engineers.

Studies conducted at Ohio State University, Purdue University, and the New Jersey Institute of Technology have arrived at this finding that problem solving is considered to be the most important skill, but secondary to that are teamwork, communication (oral and written), and management skills Cole & Tapper (1997).

According to Lang, James, Cruse McVey& McMasters (1999) engineering is a rapidly changing field requiring a broader set of skills than was once thought necessary in the engineer's college education.

Engineering work is highly dependent upon communication skills. Engineers must be able to report their ideas and designs clearly and succinctly to their subordinates, coworkers, supervisors, and clients.

The format of engineering communications can vary widely, from order placement letters to letters of enquiry, from technical proposals to summaries of calculations, from official technical memos to analytical reports, from product instructions (manuals) to power-point presentations.

By sound technical communication skills, a person utilizes various visual aids like tables, graphs, charts, drawings, diagrams, photographs and maps in their reports and presentations. And a well designed professionally generated presentation has the capability of increasing audience interest and also to increase the impact of message.

It also helps the listeners to retain information and the speakers to present ideas without depending on any paper notes. In the present era the field of technologists needs skilled communicators.

They need to have the ability to listen, understand, distill, and further communicate information. Effective communication skill is an important life-skill required not only in one's academic and professional career but also in one's personal career. And in this process along with linguistic features paralinguistic features also play a key role.

III. THE ROLE OF ENGLISH IN TECHNICAL COMMUNICATION

In the age of globalization, engineering students and practitioners need to enhance their English communication skills and other soft skills in order to cope with increasingly tough competition in the job market. Mere subject knowledge in the chosen field of engineering is not going to be a guarantee for an engineering graduate to get a good job or excel at the workplace. Multinational corporations (MNCs) and major information technology (IT) companies in India recruit engineering candidates who have good English communication skills. In this highly competitive society, proficiency in English is considered one of the employability skills.

Engineering students need to be able to think critically, solve problems, communicate clearly, be creative and work in a team in order to get placed in a reputed company. In many institutes of technology, English language teachers are involved in placement training.

As there is an increasing focus on and demand for soft skills, the English for Science and Technology (EST) practitioners in engineering colleges are expected to play the role of communication skills consultants and soft skills trainers. There is a shift from imparting mere linguistic skills to multi-skills in an integrated manner.

CONCLUSION

The actual challenge before the Engineering students starts when they cross the threshold of the college and enter their professional life.

In this process they have to go through various entrance tests and interviews. Verbal ability forms a major portion of these tests.

Without sound language/communication skills, the students with engineering background find themselves almost under- prepared for such tests and interviews. Thus to become professionally successful, It becomes imperative for the students to be technically proficient in handling the language skills.

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