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TECHNICAL COMMUNICATION - THE NEED AND THE DEMAND OF GLOBAL WORLD

By

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ABSTRACT

The present world is known as Hi-tech world as it is driven by technology. It is the vehicle to get access with this modernized world. However, due to continuous changes taking place in the field of technology, people keep looking for new developments for improving the quality of teaching and learning methodologies. In the fast developing 21st century various innovative technologies are being introduced to teach English in the classrooms. To cope up with this modern trend, communication skills become an essential component in the education of technical students to facilitate not just student's education but to prepare them for their future careers. We have to use modern technologies to teach English to the technical students. The present paper deals with the nature and characteristics as well as the significance of technical communication in various fields, the availability of various technologies as well as the practical uses and benefits of it in technical communication.

Keywords: Communication, Collaborative, Professional.

INTRODUCTION

The word communication has its roots in the Latin word communicane, meaning 'to impart' English being a universal language, communicating fluently in English has become essential for everyone who wishes to communicate well in the academic and professional spheres. Even though the majority of tasks performed by an engineer or scientist are of technical nature, their success depends on the effectiveness with which they assimilate or disseminate technical or formal information. So, it is important for students of science and technology to master over English for their Technical communication. Technical communication is the exchange and transfer of technical and scientific ideas, views and information from one individual or group to another [1]. It includes all the methods, media, network and systems of communication. Technical communication is a set of systems for communicating in a formal and professional manner. It is the process of gathering technical information and presenting it to a targeted audience in a clear, useful, accurate, comprehensive, grammatically correct and understandable form. The term "technical" includes scientific, mechanical, chemical, legal, economic, medical, procedural, or other specialized information [2].

Nature of Technical Communication

Technical communication is a method of researching and creating information about technical processes or products directed to an audience through media. The information must be relevant to the intended audience. Technical communicators often work collaboratively to create products (deliverables) for various media, including paper, video, and the Internet. Deliverables include online help, user manuals, technical manuals, White papers, specifications, process and procedure manuals, industrial videos, reference cards, data sheets, journal articles, patents, training, business papers, and technical reports. Technical domains can be of any kind, including the soft and hard sciences, high technology including computers and software, consumer electronics, and business processes and practices. The origin of technical communication has been variously attributed to Ancient Greece, The Renaissance, and the mid 20th Century. However, a clear trend towards the professional field can be seen from the First World War on, growing out of the need for technology-based documentation in the military, manufacturing, electronic and aerospace industries [3].

Technical communication is a central factor in the emerging knowledge society, where technocrats and

professionals from different areas face new communication challenges. In order to be an effective communicator, one needs to understand the process of technical communication. Effective communication is a dynamic interchange that may evolve a systematic understanding of scientific and technical subjects [4].

The three important requirements of effective technical communication are:

- Subject competence,
- Linguistic competence, and
- Organizational competence.

Subject competence: Technical communication process depends on the sender's subject competence. It is the first requirement of technical communication. That is, his or her knowledge, experiences and abilities of a particular technical subject. An inadequate knowledge or lack of information might lead to incomplete and ineffective communication.

Linguistic competence: It is the possession of appropriate language skills and the ability to present scientific facts or information clearly and objectively.

Organizational competence: Organizational competence is the ability to organize technical information in a logical and structured way. It includes several skills such as the ability to sequence thoughts in a sentence, organize a paragraph according to the needs of the reader and the topic. It is important to use appropriate logical ordering and provide thematic coherence to expression.

Main Characteristics of Technical Communication

Technical communication is the art and science of making complex technical information *accessible*, *usable,* and *relevant* to a variety of people in a variety of settings [5]. To some extent, effective technical communication is an art, because it requires an instinct for clear writing and good visual design. The following principles characterize effective technical communication:

Accessibility: Information is accessible if people actually can get to it and understand it. If documentation for a help system is included on CD-ROM, the people using this information must access a CD-ROM drive in order to use the information. If a set of instructions is being distributed across the globe, these instructions must be written in various languages in order to be accessible to international users. A group of technical editors at IBM have developed a list of "quality characteristics," which help them to determine if their technical documentation meets high standards and is of superior quality. These characteristics suggest specific ways in which communication can be made accessible:

- Accuracy—has no mistakes or errors.
- Clarity—avoids ambiguity.
- Completeness—includes all necessary information.
- Concreteness—uses concrete examples and language
- Organization—follows sequences that make sense for the situation.
- Visual effectiveness—uses layout, screen design, colour, and other graphical elements effectively.

Usability: Usable information is more efficient for your audience, because it allows readers to perform the task or retrieve the information they need. Usability is often measured by studying the design of the table of contents, index, headings, and page layout, as well as determining if the language is written at the appropriate technical level. When technical communicators assess a document's usability, they may want to know how long it took a person using the document to find specific information and whether this information could be located using the index or table of contents. For instance, a manager may consult the company's Employee Handbook for information about vacation time. If the manager cannot find this information and cannot do so quickly, the document would not be considered usable and would need to be revised.

Relevance: Relevant information maintains a focus on the specific audience-the readers, listeners, viewers-who need information, not piles of useless data. Information is relevant if the audience can apply it to the task at hand. For instance, if a person is interested in how to use Internet service provider (ISP) software to connect to the Internet, the documentation should explain how to install the software and dial up the ISP and not digress into a history of how the Internet developed. Or, for an audience of general

computer users who want to install a sound card, overly technical language is inappropriate. Relevant information also maintains a focus on the purpose of the communication. Although the history of sound cards might be interesting to some engineers, the purpose of the communication (how to install the sound card) dictates that this history is not relevant.

Often, technical communication is thought of in relation to the documents and technologies described above; that is, as communication designed to teach a general audience how to perform a specific task involving a common sort of technology—how to set up a Video Cassette Recorder (VCR), install a new sound card in a Personal Computer (PC), or install the mulching blade on a lawn mower. But technical information is also used by technical specialists, managers, and others. A surgeon performing heart surgery must have clear information about how to install a pacemaker. A government research scientist must have accurate instructions about how to write a grant or how to perform a particular experiment. An engineer must have access to the right specifications for designing a bridge or configuring an application. In all settings in which people must understand complex information, there is a need for technical communication.

Technical Communication- A Backbone of an Organization

Technical communication plays an important role in an organization. All managerial or administrative activities involve communication. When the person write reports, give instructions, or read brochures and manuals the person is involved in the process of communication. The success of any organization is largely recognized by the quality and quantity of information flowing through its personnel.

Technical communication in an organization can be divided into two parts: Oral and Written. Both are equally important. Technical oral communication takes place in the form of seminars, paper presentations and reports. This form of communication is essential part of every organization. It requires one to be competent in the use of language as well as in the use of expressions. One should be aware of accent, intonation, and body language. Technical written communication is one of the most indispensable tools of every organization. It is the essence of effective management. It is found in various forms such as technical proposals, scientific articles, notices and technical papers. Clarity of thoughts and expressions is also very important; emphasis should be given on vocabulary, spelling and sentence structure.

It is not necessary that all these forms of communication should exist in an organization. An organization becomes an organized whole because of its communication. Therefore, the importance of technical communication can never be ignored. Technical communication is considered to be a valuable career enhancer. Communication skills are a vital component of this, recognized by academia and industry alike. Such skills are essential for an engineer to carry out the person's professional practice in the global arena. Multi lingual skills are considered a salient element in the make-up of the new global engineer. Technical communication is considered as a backbone of an organization [6].

The importance of technical communication for an individual or an organization cannot be denied. Whether some one are working as an engineer, scientist, executive, technical person in any professional institution, that person needs the command on technical communication in order to be successful. Technical communication plays a significant role in any organization, whether it is an industry, business enterprise, or an academic institution. All the activities such as planning, training, advertising, policy making, marketing, organizing, decision making, recruiting, coordinating involve communication. Technical communication is the essence of organizational life. Communication serves as an instrument to measure the success or growth of an organization. For example, if the chief executive officer has to present the company's achievements, The Chief Executive officer needs to communicate. Communication not only helps an organization but also enable the communicator to develop the required skills.

Technical communication is essential in an organization, because it serves as a medium to share the information. People working in a company should have a mutual

understanding which can be attained by sharing their knowledge. This technical communication turns to be effective when researches are made and they are conveyed to each other. Technical communication is very significant for the practical application of sciences, for learning the mechanics in technology, for the promotion of technological research and for training the technical professionals. Students of today are given practice to apply the basic science and mathematics principles notably. They are being trained well in the theoretical and practically oriented aspects. The world is now confronting serious quandary due to the vibrant knowledge of technology.

Modern Technologies with Its Uses and Benefits

- Language lab
- Video conferencing
- Video Library
- CALL (Computer Assisted Language Learning)
- TELL (Technology Enhanced Language Learning)
- Internet
- web
- Pod casting
- Blogging

Language Lab

Various types of software are available to develop LSRW skills. The students can improve their LSRW skills by using suitable software through computers, which are most essential in this modern world of 21st century. Listening is really where all good communication begins. Listening means to understand what another person speaks. Speaking skills is needed to express the idea of a person in the right way to the other. Reading skills is important to interpret what is given in the text. Writing is used to express our thoughts. By using headphones in the lab the students can work over the subject without feeling boredom .

Video Conferencing

Video conferencing is a communication technology that integrates video and audio to connect users anywhere in the world as if they were in the same room. Each participant must have a computer, a video camera, a microphone, and a sound system mounted on the computer. As the two participants speak to each other, their voices are carried over the network and delivered to the other's speakers. Video Conferencing is not simply a high-tech replacement for the conference phone. This technology is especially popular in the field of business because it allows meetings or conferences to be held without the need for all of the participants to travel to a single location, so it saves time and money. The most notable point in video conferencing is that the students can post questions immediately and get their answers at once.

Video Library

Video Libraries are most essential in modernized world. This is helpful for the students to those who miss some interesting session. In this process the teaching of the faculty will be recorded and made available to the students. Each video explains the detail information in easy-to-understand language. A person can view the video series at their own pace and location. Videos can be viewed on a computer, or any one can be viewed in Digital Versatile Disc (DVD). Whenever it is needed, one can replay it.

CALL

CALL is an essential tool that helps teachers to facilitate the language learning process. It can be used to reinforce what has been already been learned in the classroom or as a remedial tool to help learners who require additional support. This technology can transform the students from passive recipients of information into active participants. A combination of face-to-face teaching and CALL is usually referred to as blended learning. CALL embraces a wide range of Information and Communication Technologies (ICT) applications and approaches to teaching and learning foreign languages [7].

TELL

TELL is the term including hardware, software and the Internet to facilitate teaching and learning of languages. Through this technology, the person can use online dictionary, chat with other all over the world and get the information about the various happenings around the world [8].

Internet

Now-a-days, Internet is widely used by people all over the

world. It is the medium through which one can collect various sources of information. Most of the institutions have internet facilities for teaching and learning process. Students can use Internet in the class to learn English. It seems to be interesting to have Online teaching inside the classroom and makes the students to find out the suitable materials for them. Students are instructed to do the grammar exercises which are available online.

The Web

The web is a huge collection of documents stored in computers around the world. These million of documents are known as web pages. There are many websites available using that the students can do exercise covering language and vocabulary with an English as a Second Language (ESL) teacher. Even many self-exercises are available that one can do without one's help.

Pod casting

Pod casting is a type of media consisting of an episodic series of audio, video, radio, and Portable Document Format (PDF) files. Pod casting makes the teaching learning process free from traditional face-to-face communication. Students can only retain a limited amount of information inside the classroom no matter how good the instructor is. It is possible to make the content available online for the students to read and study it with anyone at anytime. Even an absent student can download the pod cast of recorded lesson [9].

Blogging

Blog is an online journal or diary in which a person can write any information of his interest and any one can read the blog and post their comments too. It can be used for communication between teacher and students for any instruction. The teacher can post his article or the instruction to the students, where the students are allowed to post their comments and queries. The teacher can answer the question through his blog.

Conclusion

The role of technical communication in today's industry has been widely recognized, creating further growth opportunities as well as career prospects in the current documentation industry. Technical communication is recognized as important element in the education of the modern world. Technical graduates require an ever-increasing range of skills to remain relevant with the global environment of the new millennium. The modern tools are the inputs utilized by the teacher that help the students to enhance their good communication skills in a fruitful way as it facilitates for a great number of opportunities to communicate in the target language. Media including newspapers, video, television, magazines, e-learning Compact Discks (CDs) and online sources have adopted technical communication and are thus enabling a faster communication approach. The organization's activities are managed by volunteers, so it encourages, developing and enhancing leadership skills and get recognized in this competitive, growing world.

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