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The Trajectory of Technical Writing Towards Students at the Tertiary Level

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Abstract

The teaching of writing has assumed a much more central position than it occupied twenty years ago. The important factor behind this is that the good command over English writing is crucial to equip learners for success in the twenty-first century. It is writing, upon which one's work, learning and intellect are judged. In the present era, employees, especially in the corporate sector, have to write a lot of information packets, which need to be clear and informative. When everything gets technology oriented, words alone aren't always the best medium to communicate a concept. The efficient blend of technology and good writing skills is called 'Technical writing'. Most of our institutions emphasize on imparting technological education whereas the fact that without good communication the impact of technology cannot be realized, is ignored. The paper analyses "why does the industry, of late, lay a lot of emphasis on Technical Writing" and "why not we expose engineering students to this kind of writing, which will help them in their educational as well as professional development?"

Key Words: Technical Writing, Knowledge and Skill, Individual and Industry

1. Introduction

Writing is a key element in effective communication and communication is the key in all areas of career and education. "75 percent of engineering undergraduates take jobs in industry, where at least 25 percent of an engineer's time is spent in the reporting process. As the engineer moves up the managerial ladder, this time (time spent on reporting) can increase to as much as 80 percent." (qtd. in Manivannan).Moreover, these days, as everything gets technology-oriented, many software companies also prefer engineers to have the technical writing skills. The idea behind this is that engineers may be able to understand technology better than the language experts.

Employees, especially in the corporate sector, do most of their communication through writing, which need to be clear and informative. 'Technical writing' is the skillful use of plain English with the blend of technology for better communication to happen. It may be applied to any field and it speaks clearly and directly to readers. Well written documentation of software or information packet, not only communicates effectively but also indirectly helps in the product development, making it user friendly. Exposing the engineering students to this kind of writing will help them in their educational as well as professional development. Unfortunately, most of "our institutions emphasize on imparting technological education whereas they ignore the fact that without good communication the impact of technology cannot be realized." (Mishra)

2. Technical writing and its importance

Technical writing may be defined as writing documentation that explains technical issues in ways that non-technical people can understand. Clear, comprehensive, and accessible documentation plays a vital role in enhancing and streamlining communication, aids in improving productivity and lowers the training costs.In short, technical writing is being succinct. Technical writing includes writing and designing of the manual for a software application, proposals, website content for companies, lab reports, newsletters, marketing communications, user documentation, training material, presentations and product brochures, System Requirements, Knowledge Management, and many such kinds of professional documents. Application of Technical Writing is spread over almost all areas of work especially in the IT industry, Electronics, Telecom, Banking and Finance and Equipment Manufacturers etc.,.The skill of technical writing is an ability to write about a complicated technical subject in a way that almost anyone can easily understand.

Technical writing is a skill that makes best use of technology in writing; it is moreover a skill of writing concisely without sacrificing the quality. A good technical writing is not only grammatically correct but also utilizes the richness and variety in English expression to convey ideas in the most efficient and effective manner. "Writers now must (also) know how to use graphics, not as mere embellishment but as ways of solving communication problems." (Keller 56)It is also true that "Electronic technologies have led to important development in work place communication and workplace writers must be proficient in using these technologies." (Dobrin, Keller and Weisser 47)

The American Society for Engineering Education conducted a survey to determine the most needed academic skill for engineering careers in industry. "The results show that communication skills rank above any other type of skill, capturing five of the most-needed skills, out of thirty-eight skills analysed. These five communication skills are: Technical writing (2nd place), Public speaking (4th place), Working with individuals (6th place), Working with groups (7th place) and Talking with people (9th place)." (qtd in Manivannan)

Studies also indicate that the typical college graduate spends "about 20 percent of his or her on-the-job time writing." (qtd in Anderson 4). By teaching technical

writing, students are equipped in integrating writing with the computer. Learning technical writing helps the students in specializing technical skills in addition to writing, and so writing is not studied in isolation.Writing also equips a person to communicate and to think effectively. In an Interview Kim Zetter, a technical writer, says that the flow of thought is much easier on a computer, as she can do lot more revision with computer. She acknowledges that Technology, especially web gives her access to things that she wouldn't normally have access to in terms of research, and plays a big role in what she actually writes. (Dobrin, Keller and Weisser 45) Effective writing will help students not only in their coursework but also equally well in the workplace.

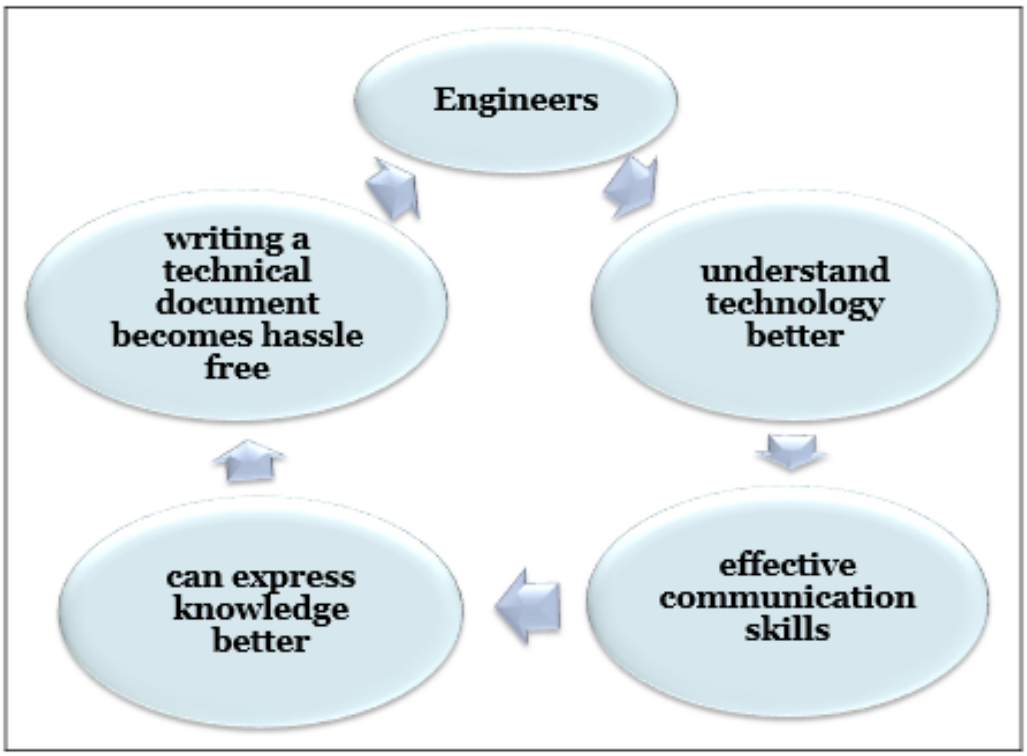

Fig. 1 Significance of writing for Engineers

3. Possible causes for dearth of proficiency

Students of Engineering face certain problems while writing. "Researcher Stephen Reder discovered that college graduates judged to be in the top 20 percent of writing ability earn, on an average, more than three times as much as workers rated in the bottom 20 percent of writing ability." (qtd in Anderson 4). What about the rest of students who are not able to think effectively or write effectively? Various things may be termed as reasons behind this. The main cause for deficiency may be the undue stress on the core subjects and the least on language.

Knowing the importance of writing, companies around the globe are willing to

spend millions of dollars on equipping technical experts in writing. In 2004, the American National Commission on Writing surveyed nearly 8 million people employed in 120 major American corporations. It found that "despite the importance of writing . . . one third of the professionals do not write effectively in their jobs. . . American companies arespending US$3.1billion on training to bridge the gap. State level public sector spends another US$250 million." (James 1)

Many of the students also do not show much concern in building up their language for formal communication, particularly writing. One of the main reasons is that the lack of proficiency in English language does not affect the student's grading. Hence students give least importance to acquire language skills, not to mention the writing skills. The students lack opportunities which encourage them to improve their proficiency in written English. Almost all college going students use the internet for various pastime activities, but seldom do they use the personal computers for writing purposes.

Technical writing demands still more skill and practice. Many students, who are weak in the English language, dread to go beyond and attempt technical writing. Griswold describes students who are afraid of using computers for writing in the technical writing classroom as 'writing technophobe'. It is "just that the idea of incorporating up-to-date word processing into their writing habits is stressful to them." (Griswold).In their article 'Beginning and Endings:Keys to Better Engineering Technical Writing' Marcia Martens Pierson and Bion L. Pierson cite a survey that found that practicing aerospace engineers and scientists spend on an average between 19.6 and 23.3 hours per week writing documents. Even so, they point out that engineers as a group dread writing. (qtd. in McMurrey and Buckley 8).As mentioned earlier, lack of proficiency in the language is one of the major reasons which dissuade them from comfortably writing in English using computers. Even in English labs, more materials are available in the computers on other skills rather than for writing in English and related activities.

Generally, poor written English prevents students from reaching their full potential either at the academic or professional levels. Large classes and limited teaching time allotted for language classes while teaching Engineering students are also factors that have to be taken into account. "Teachers will have to admit what many are now reluctant to admit namely that they are in business to sell a service and can be judged accountable as to where the service works." (Elbow 388)

There remains a misconception among the students that they can do their jobs even if they are weak in verbal communication. "It's much like what's expected of a doctor when he or she comes out of medical school. Yes, most physicians don't do their own x-rays these days. Instead, a specially trained technician does, so the doctor's time is freed for other tasks. But we still expect the doctor to know how the x-ray machine works and what the technician is supposed to be doing." (Griswold)

4. Probable solutions

There has been a general idea that Engineers are not good at writing. "Engineers have never been noted for expertise with the written word. As businesses strive for world's

best practice, engineer's writing skills should be developed." (Iliff).A few initial steps would help the students in achieving excellence in technical writing.

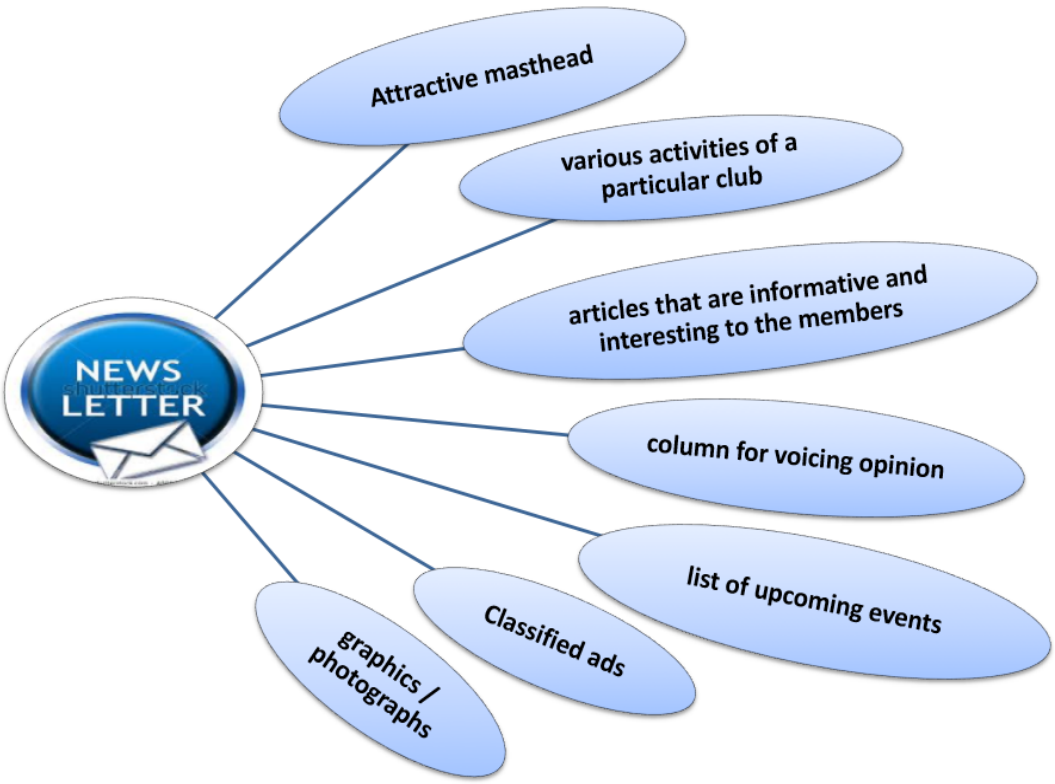

Fig. 2 Ways to Improve Technical writing Skills – Preparing a Newsletter

Writing well is something that one learns and will continue to build upon. The best way to help the students get efficient in this is to help them read books outside of their learning material. The reason for this is to expose them to the different genres of writing. Teaching of technical writing would benefit even slow learners, as word processing programs allow us to create and revise print-based documents.Confidence may be promoted in the students by way of creating opportunities through significant experiences in the classroom. These experiences may even be in the form of activities that make each student participate and show his or her creativity.

Activities like 'Preparing a Newsletter for a Club' may be assigned to groups of students. Each group of students is made to prepare a newsletter on various activities of a particular club/clubs. The newsletter will have an attractive masthead, contain articles that are informative and interesting to the members, graphics, photographs, etc., Students may also be asked to include features such as a list of upcoming events, classified ads, and column for voicing opinion.

'Passages for editing' may be given in disks or through mails, and students

may be asked to edit it and/or write a brief evaluation. They can also be asked to write short papers that they have to submit on a disk or through mail rather than a hard copy. Activities like these would help the students prepare documents free of mistakes in spelling, grammar, punctuation and usage by using computer. Exchange of peer evaluation for these activities among the students would prove to be very effective.

The next best system is socializing. Many of the students entering into university today have grown up with interactive technology. Blogging and tweeting through the social networking web-sites is one of the well-known learning methods. Interacting with the internet pals (e-pals) of native land, through the social networks, would enable them to get to know the language in its true form.

In India, there are almost no university which conducts formal courses in technical writing.There are some private institutes which have recognized the need of the hour, and are offering courses in technical writing. In a pilot study conducted by Kennedy, Pinneli and Barclay, among engineers, to find out the importance of Technical Communication in Aerospace Education, it was noted that 87 percent recommended that undergraduates take a course in technical communication (Kennedy, Pinneli Barclay 4).

5. Conclusion

In the present decade, science and technology are evolving at galloping speed and new developments are creating great opportunities. More importantly, it is an aspect that requires immediate attention so as to enable the students to cope with the current condition and to meet the challenges. The ability to communicate ideas and information effectively through the global digital network is dependent on good writing skills. "Technology can be taught and learnt in a year or two, but learning a good language is the fruit of years learning process and that cannot be given in a packet form" quotes an industry expert. As the early bird catches the worm, the earlier the engineering students acquire the required expertise in technical writing, the better it is for them to scale greater heights. The possibilities are enormous but are equally challenging. Teaching and learning of writing skills must be an indispensable part of the engineering courses. “With initial guidance, a carefully chosen variety of written assignments and sensitive feedback, most students can be expected to master the stylistic demands of the discipline over the four years of the degree course.” (Robinson, Gerard). Students should be made aware of the importance and relevance of developing the communication skills, and especially writing skill. Thus, there is an urgent need and a wide scope for teaching technical writing to the engineering students, the budding engineers,so that on completion of their studies, they are not only much sought after but they also can aspire career progression quicker than many others, who were not taught technical writing in their classes.

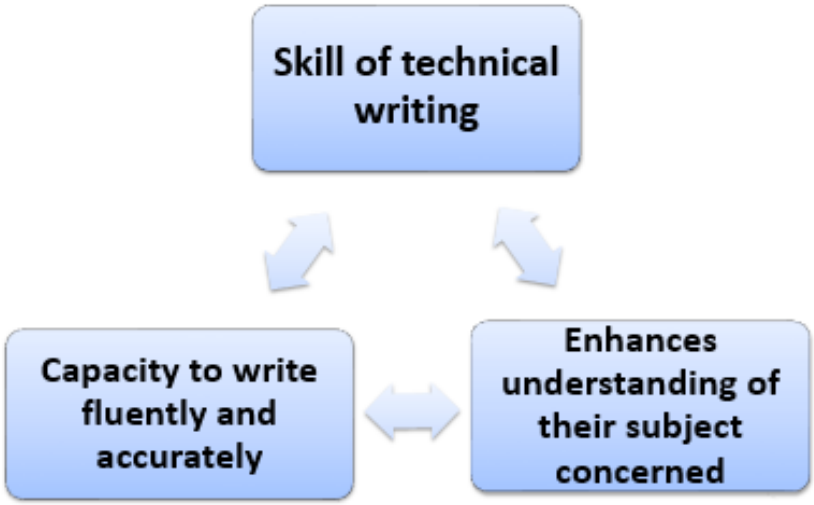

Fig. 3 Why Technical writing is Important

Making students acquire the skill of technical writing not only improves their capacity to write fluently and accurately but also enhances their understanding of the subject concerned. A clear thinking about the subject foregrounds a student's in depth knowledge of the subject and this coupled with the required writing skills enables an engineering student to articulate both correctly and profoundly. So when the engineering graduates acquire jobs they achieve near complete competence because of the adequate blend of knowledge and skill and it must be understood, are mutually inclusive.

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