

Teaching English Writing Skills to Engineering Students: Challenges and Approaches

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Abstract

The globalization of English and a growing demand for good English Language skills in the job market in particular have been placing a greater emphasis on the teaching of English language. At present, in India, English language is the widely taught second language, and in all Engineering Institutes medium of communication is English. All engineering subjects are being taught in English language, but still the major problem of student is poor speaking and writing skill in English language.

In second language contexts, the situation has considerably improved with the wide use of audio-visual mass media. Teachers of English in India toil desperately to find suitable methodologies to facilitate the students in acquiring the writing skills and are intended to analyze the multifaceted use of Internet as an interactive teaching medium to impart writing skills to the Indian learners. Although teachers are putting all efforts, yet the improvement in writing skill is not satisfactory. This paper is an endeavour to explore the possibilities of integrating Internet in the field of English language teaching in India and to describe several models for communications—instructions, methods, techniques and approaches to develop writing skills of Engineering students.

Keywords: globalization, multifaceted, technical, communicate, skills

Introduction

Today's engineers need English language skills that are far above the skills that most engineering graduates have. Improved English language skills enable engineers to keep abreast with recent developments in concerned areas. This is important, as it may enable engineers to develop competences needed in new areas of engineering and for job opportunities in international market. It is equally important for engineering companies to have an engineering staff with good English language skills. Such staff members become an important asset for meetings and negotiations with foreign companies. In education, most of the text materials relating to the subjects of Science, Engineering and Technology and Medicine also are available only in English. Moreover, all over India, there is no single language to unite the whole country and globalization in all the fields,

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necessitates the learning of a language which is international. Considering the above facts, learning English, the universal language, becomes inseparable and unavoidable in Indian education system.

Importance of English Language to Engineering Students

Prof. Jacob Tharu says, "*English is no longer some remote but a powerful mystery, lying hidden in the world of textbooks and examination.*" English is a compulsory subject (in maximum universities in India) for the first-year students of Engineering and Technology studying at colleges in India. Candidates with good communication skills and soft skills taste success and those who lack such skills become depressed and get frustrated. Very often recruiters complain that about 70 per cent of students do not have employability skills. When they mention the word 'employability skills' what actually they mean is 'communication and soft skills'.

In the introductory chapter to *Technical Writing and Professional Communication for Nonnative Speakers of English*, Thomas N. Huckin and Leslie A. Olsen, state: "Scientists and engineers may be technically brilliant and creative, but unless they can convince co-workers, clients, and supervisors of their worth, their technical skills will be unnoticed, unappreciated, and unused. In a word, if technical people cannot communicate to others what they are doing and why it is important, it is they and their excellent technical skills that will be superfluous. From this perspective, communication skills are not just handy; they are critical tools for success, even survival, in 'real world' environments" (Huckin, Thomas N. and Olsen, Leslie A., (1991), *Technical Writing and Professional Communication for Nonnative Speakers of English*, McGraw-Hill International Editions, p. 3).

Each year, universities across the country grant thousands of undergraduates their engineering degrees. After completion of their course, these talented, intelligent youngsters are expected to move into industry to display skills and abilities in various fields. Despite many project reports writing and many presentations made throughout their studies, most of them are unable to communicate their engineering skill via written communication. This article seeks to highlight the importance of writing skill in engineering education and approaches to teach in effective manner.

Writing Skill: An Essential Skill for Engineers

Writing skill is the key into the internal communications networks that most companies have developed for disseminating information throughout the organization efficiently. Engineers are often expected to report on their work and share information with their colleagues; for that a good and effective writing skill is necessary. Alan Rossiter, Ph.D., a chemical engineer and president of Rossiter and Associates, a consulting firm based in Bellaire, Texas, observes—"It depends on what you want to do with your career", he says, "If you get your satisfaction from doing calculations and want simply to do just that the rest of your life, then you don't need writing skills." He adds, however, that not investing the time and effort to develop good communication skills can be a self-limiting decision. "A lot of good ideas never see the light of day because the engineers who have them are unable to communicate their ideas", he says. "So, if you want to advance beyond

just being a number cruncher, then you need to be able to communicate effectively." And that includes acquiring a minimal proficiency in writing. "Our engineers must communicate clearly—and often simply—with other employees, suppliers, distributors and customers,"

Among the four skills, the writing skill is considered to be the most complex and difficult skill to acquire. Norrish (1983) emphasized that writing is of course, not easy and in some way, more difficult than speaking. While speaking we can use simple, repetitive words and incomplete sentences. Speaking does not have a standard form. But written language has standard form of grammar, syntax and vocabulary, etc. Usually writing is less spontaneous than speaking. As writing is a permanent record of knowledge accessible to any reader, the writer has to be cautious all the time about whatever he writes.

Writing Skill in Engineering Curriculum

The engineering academic world has increased its understanding that it must encourage strong language and written communication skills in its curriculum to generate competitive professionals in today's global market. But the setting of an engineering class in which the technical writings are of the students' choosing based upon their subject matter is not interesting.

Further, students may not see the need to hone their language and communication skills because this need has not been communicated to them. Most of engineering curriculum is built around the language of mathematics. Students are taught to explore difficult problems in terms of equations and applicable mathematical principles and operations, with answers expressed numerically. Students participate in laboratory courses, with the requisite at the completion of an experiment that they write a report, but these reports are rarely assessed for the level of writing skill displayed. For most of the students, mastery of proper English grammar and construction is a secondary or tertiary considering other subjects. Therefore, because their understanding of English composition is rudimentary, they instead focus on the mathematical substance of laboratory reports, without giving valuable feedback as to the writing style of the work.

Teaching Writing Skill to Engineering Students

Good writing conveys a meaningful message and teaching '*how to write effectively*' is one of the most important skill teachers impart to their students. To teach writing, teachers should select resources and support materials that not only aid them in teaching how to write, but also learn to write. Most of the time, teachers adopt the conventional approach to teach writing. They announce the topic and make students produce a piece of writing. Without clear instructions on various aspects, students are trained to use long sentences and idioms when they write an essay or a paragraph. They are taught to impress the readers rather than to communicate factual information to the readers. As a result, they produce ineffective pieces of technical writing.

Since, engineering students have to write reports, paragraphs for a different purpose and for the readers who are familiar with the details, they find it difficult to meet the expectations of a technical audience.

Challenges to Teach Writing Skills and Approaches

In terms of teaching writing for engineering students, teachers should consider about some aspects in teaching writing. They need to think about a variety of techniques, activities and teaching aids to make the course appealing and interesting to the students. Some general identified problems in teaching writing skills and solutions are as follows:

Student's Problems

Lack of Vocabulary: Vocabulary is a basic component of effective writing skill. Due to lack of vocabulary, students cannot communicate right message at the right time. To overcome this problem, teachers should use the electronic tools available around them and can allow the students to open any kind of dictionary during task or assignment. Teachers can offer them a four-part approach to develop vocabularies:

1. Providing rich and varied language experiences through role play and literature.
2. Teaching individual words or course specific/course oriented words.
3. Teaching use of right words at right place through word-learning strategies.
4. Fostering word consciousness through text material.

Grammar Problems: Grammar, in writing skill, determines how a paragraph is build-up and how the ideas can be understood. To teach grammar effectively, teacher can consider to use the grammar translation method to help students in grammar. According to Rabeya Nasrin Khan (2007), based on GMT method, grammar is taught inductively or called the direct method, for example, grammar structures are taught through examples.

Lack of motivation: Many of the students think that writing skill is one of the most complicated skills because it requires better grammar, lots of vocabulary and any other aspect to make it perfect and readable. According to Areej, in his journal about the effect of motivation on students' writing skill (2012), motivation in education effects on how students learn and how they behave towards a subject matter. It can direct behaviour toward particular goals, lead to increased effort and energy.

Unavailability of Conducive Environment: Environment has a great role in nurturing mindset and learning process. It is responsibility of both the teachers and parents to provide conducive environment of learning English language. They should motivate the students as a professional to learn effective writing skills for a better career.

Mixed Ability Students in Classroom: Most of the classes in any institute are mixed ability classes. Students' may have different writing level ability. Some of students have higher intelligences in which they can work faster and do all of activities with good result. In other side, there are some students that cannot work fast and get good score because of their lack ability in English. For the student in low level, teacher cannot give tasks the same as with students who have the higher level because it can pressure those students. In this situation, teacher

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should organize the class and give the appropriate activities with their level. According to Hamilton (2006), Teacher often complaints about the low level of their learners in learning English language skill, this may be due to such internal factor as the motivation level.

Other Approaches

There are many approaches to teach writing skill to Engineering students and teachers have prepared some solutions in order to solve the problems in teaching writing. There are some solutions that can be used to solve the problems in teaching and learning writing skill:

Developing Competitiveness: According to Kelly (1990), reward is defined as materials and intangible values that can be employed to motivate students to learn. While punishment is both a rather unreliable technique that is likely to have unfortunate side effect (Orchid *et al.*, 1985). Rewards and punishments have to be in positive context in order to give positive impact on learners. It has a purpose to make them have motivation to do the best. By giving rewards and punishments, the learners are expected to be competitive to do the task especially in writing skill.

Use of Modern Technology

In modern era, technological advancements have shown new vistas of learning and as a teacher, one can guide the students to use technology effectively and wisely. We can attract them to involve in the classroom activities by using technology. Such as, allowing students to use Internet access in order to make them easy searching the data that they need for their writing task from the Internet. Teacher also can allow the students to use electronic dictionary to help them in vocabulary problems.

Classroom Management: The classroom management also has important role to help student in study. Teacher should manage the classroom to attract students to involve in the classroom activities. Teacher can set up the classroom based on the topic of lessons. Students can work collaboratively on a writing project, but it needs to be carefully organized on that part of the teacher (Linse & Nunan, p. 112).

When students are divided into groups, teacher should divide the class into groups which is each group should consist of different level of student's ability; from the smart student up to the low student. If it is in a pairs, both of them should have the same quality of cognitive in order to prevent the domination from one of them and to maintain the balancing participation of the students.

Student Centred Interactive Approach: Method that is applied in the classroom also affects students' participation in the activities. Teachers should provide the appropriate methods in each topic of the lessons. Method that is used by the teacher has to be interactive which is correlated between the task of writing with the students' real life such as what they can see, listen, and do in the real. For instance, when they have a task to describe about the school environment, teacher can allow them to observe their school environment first before doing the task. If students have a task to make a procedural text, it will be better to ask them

to do the real procedures to make something and then they write what they have demonstrated. Other methods like talking and writing box, and writing centres also can be applied (Linse & Nunan, p. 112).

Practice Approach

It is said that practice makes a man perfect and people learn better to write by writing. The best way to learn to write is to practice. People learn best by making mistakes and correcting them for themselves. This means actual writing, not merely listening to lectures about writing, doing grammar drills, or discussing readings. The more people write, the easier it gets and the more they are motivated to do it. To learn effective writing a better practice is required and teachers can work hard for the same. At first the teacher can assign a writing task on a given topic with a time limit. The students should have to submit the first draft within the given date or time. After receiving the written material teacher should check the assignment and mark the corrections. The editing by the teacher will help students to learn in a better manner. The teacher should mark all the mistakes related to vocabulary, grammar and punctuation, etc. The comments can be inserted for clearing the concepts. For better practice the teacher can assign new task many times in a certain interval. The assigned task should be either of interest area or course specific. The teacher should continuously edit the material and provide the suitable comments with praise and appropriate appreciation. It is possible that the students can ignore the tasks due to their main subject interest but the teacher should not give up the efforts and must have patience. Ask the students to work on their revisions in class so they can ask questions if they need to. In class, as long as they know exactly what to change, the task should be easy for them. The teacher should observe that how well the writing is coming along. Comments like "Did that really happen?" or "That's funny!" will go a long way to boost student's confidence. Make more suggestions to improve the readability of the piece.

Writing is a skill that requires practice. But that practice sometimes needs a little guidance. If a teacher guides the students through one single writing assignment and stays with them from beginning to end, he will be giving them the gift of a lifetime. Not only will he improve the writing skills of a group of young students, but he will be contributing to the betterment of the world.

Conclusion

Teaching writing skill has different challenges than other language skills and teachers should consider about problems that will be faced and they should draw the solutions for the problems. During teaching, the problems faced by the teachers can be overcome. The method offered herein seek to introduce writing into the engineering curriculum for betterment of Engineering Students' writing skills. The well designed tasks have helped the learners to perform better. It also empowers them in the world outside the classroom.

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