Teaching English as a Second Language to Engineering Students

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Abstract

Because of the international nature of the engineering profession and the growing need for efficient communication in both technical and business sectors, English Language Teaching (ELT) plays a critical role in India, especially for engineering students. English acts as a bridge language in India, a linguistically varied nation, in addition to being a primary language of teaching in higher education, particularly in technical fields like engineering. In India, the desire for high-quality education and active participation in both domestic and global concerns is symbolized by English. Since early childhood schooling, learning English has been required. In India, English as a Second Language (ELT) is developing and has changed the face of education. The development of English Language Teaching (ELT) in engineering education in India is examined in this article along with comparisons to other settings where English is the primary language. It also looks at different methods and strategies for teaching engineering students English. The history of English Language Teaching (ELT) in engineering education, the factors that influenced its development, and the current state of ELT in this setting will all be covered in this study. It will also look at the challenges and opportunities faced by teachers and students. This study will examine ELT developments in Indian engineering education, taking into account issues and efforts to enhance students' English language proficiency.

Keywords: Engineering, ELT, Technical, English Language Proficiency.

Introduction

Since English is the most widely used teaching language in India, it plays a crucial role in controlling both socioeconomic mobility and access to higher education. English was developed in India to achieve colonial goals, and this history is still visible in the way it is taught now. The basic functions of language include social interaction, communication, representation, and expression. These enable people to represent ideas or thoughts,

communicate, express emotions, and form relationships with others. Every educational system has specific goals aimed at influencing pupils in the desired ways. Educational institutions set up learning experiences to effect these transformations. Changes brought about by this experience are the only way to gauge successful learning. This is an assessment and learning opportunity. Since English is now the most widely spoken language in the world, teaching it as a second or foreign language is becoming more and more popular.

Every language has distinct structures that provide users varying interpretations. Our brains apply our initial language experience and concentrate on familiar cues when learning a native tongue. Learning a foreign language entails gaining a fresh perspective on the distinctive meaning hints that the language offers. The way the two languages work determines how easily knowledge, abilities, and tactics may be transferred between them. Handwriting, listening to music, watching TV in the target language, interacting with teachers and other language learners online, switching up the language settings on social media, traveling, and speaking freely are all ways to learn a new or foreign language.

English as a Second Language

English proficiency is defined by the Council of Chief State School Officers (CCSSO) as the ability of students to read materials, comprehend instructors, ask questions, and accept test ideas in English. This covers speaking, writing, listening, and reading comprehension. Assessing appropriate age levels, comprehending instructor and classroom language, and comprehending and interpreting material are all components of reading comprehension. Understanding teacher and classroom terminology, drawing conclusions, and keeping up with class discussions are all components of listening. Writing entails developing structure and content that address age and grade level obstacles in the classroom. Speaking entails making efficient use of oral language in social situations and educational pursuits.

Teaching English is an ongoing process that changes in tandem with new technology. There are now eight major trends in English as a foreign language learning that support educators in achieving particular learning objectives. These patterns are essential for teaching English effectively. The goal is to create proficient bilinguals who understand English, emphasizing the language as a tool for communication rather than as a stand-alone language.

Using the Content and Language Integrate Learning (CLIL) methodology, English is viewed as a tool for learning subjects like science and math rather than as a goal in itself.

In many nations, introducing new technologies, such as computer-based games, into elementary schools can be beneficial and yield encouraging outcomes. To make learning English more efficient and stress-free, English language classes should emphasize using students' home tongue as a communication technique or teaching aid rather than just teaching native English. English language classes are dominated by both local and foreign cultures. The efficacy of an English teacher is influenced by their linguistic, instructional, and intercultural competency in addition to their proficiency in native English.

Teaching Content and Test Design

Native language usage, local texts, English translations, accents, listening exercises, and creative assessments are all encouraged in English schools. The World Wide Web has greatly enhanced our access to information, and the emergence of tablets, smartphones, and paperless Kindles is changing how we obtain knowledge by making it more adaptable and portable (Paul, 2006). Teaching English has a strong emphasis on learning activities, content, goals, and student thinking. Because it increases relevance and engagement for the younger generation and strengthens the intricate relationships between students and teachers, the gamification of learning is becoming more and more popular (7). In order to be competitive and marketable, teachers are expected to participate in ongoing professional development activities throughout their careers (8). Additionally, they are more accountable for their own professional development, always enhancing their expertise.

Technical English for Engineers

By substituting simpler substitutes for complex vocabulary, Technical English streamlines the intricate rules of Standard English and facilitates reader comprehension of documents. Engineers need to be able to successfully interact with clients, comprehend their requirements and expectations, and convey complex ideas into language that is easy to understand. Successful project outcomes are a result of clear and succinct communication, which also increases client satisfaction and builds trust. Reading, writing, listening comprehension,

taking notes, summarizing, producing reports, grammar, and vocabulary are all covered in technical English. Technical language, sometimes referred to as jargon or industry-specific terminology, makes difficult ideas and procedures easier for experts to understand (Gardner, 9–11). Four skills are developed by students: speaking, writing, listening, and reading. In the engineering department, first-year students teach the theoretical course "Technical English" and the practical course "Communication Skills Lab," while second- or third-year students teach the laboratory course.

Use of Technology in Classroom

English Language Teaching (ELT) in India has seen a substantial transformation because of technology, which has made education more participatory and accessible. Students can now practice speaking, listening, reading, and writing at their own pace thanks to digital platforms, online courses, and language learning applications, which offer a customized learning experience. The way educators educate and learn to teach has changed dramatically as a result of the incorporation of information and communication technology (ICT) into classroom procedures in universities and schools. Given that English is now a widely used language in many different fields, this has benefited both educators and learners (12). Students were first exposed to English as a topic through traditional techniques, although each had pros and cons. Due to a lack of a supportive environment, students frequently learnt English as a topic rather than a language and found it difficult to apply what they had learned. Furthermore, some Indian English teachers are not up to date on the most recent advancements in ELT pedagogy.

Challenges English Language Teachers' face in Engineering Colleges

Challenge 1

Fighting for an equitable place in the professional academic world is a problem for English language teachers. disciplines like English language are given the least amount of value, whereas engineering disciplines are seen as more significant by everyone (including students and other teachers). When compared to other technical subjects, less English classes are offered. Additionally, only the first year of engineering is required to take an English

language course. It must be understood that the knowledge gained in the core topics can only be expressed in English. Therefore, improving the standing of English courses in engineering universities should be the top priority. "Over the years, the emphasis in the educational system has shifted to chemistry, math, physics, and technical courses," says UB Desai, director of IIT Hyderabad. Soft skills are no longer as important. Since many firms visit schools for global opportunities as well, students may lose out on strong employment possibilities. For this reason, English should be treated on par with other engineering topics if students' employability is to increase.

Challenge 2

Given the stepmotherly approach of English language lessons in engineering universities, encouraging pupils to acquire the language presents another difficulty. "The combination of effort plus desire to achieve the goal of learning the language plus favorable attitudes toward learning the language" is how Gardner described second language motivation (Gardner, 2010). The students believe that core topic classes should take precedence over English classes, which can be disregarded. The students believe that core topic classes should take precedence over English classes, which can be disregarded. As a result, the students attempt to skip these sessions in order to complete assignments, study for their primary subjects, or just to avoid going to class altogether. Although there are students who come from good convent schools and are quite fluent in the language, the teacher finds it difficult to get these children to pay attention in class. The teacher finds it more and more challenging to get these children to focus in class.

Challenge 3

There are at least 60 students accepted into each engineering branch. It's a big class for a language teacher. It is challenging to ensure that every student is developing their communication abilities. Therefore, managing big class dynamics—which also involve heterogeneous groups—is a difficulty. Others will get inferiority complexes and emotions of envy if you concentrate on only one area of the class. For the teacher, allowing each kid to participate fully in class becomes an enormous undertaking. To ensure that everything goes smoothly, the instructor decides to ignore certain parts of the lesson. As a result, the teacher cannot provide every student in the class with an engaging learning experience at the same time.

Challenge 4

The English curriculum for engineering students is yet another matter of worry. The majority of engineering colleges' curricula do not guarantee that students will acquire language skills; rather, they are primarily intended to help students achieve high scores on semester exams. Its nature is more theoretical than practical. There is no opportunity for student involvement or interaction in the syllabus. To meet the requirements of the job marker, language instruction should be more realistic and practical. However, because of time constraints, language teachers find it difficult to finish the syllabus and catch up to other subject teachers. Professional schools are supposed to generate professionals, yet they only accept students with strong cumulative records. The findings show no relationship between the students' language skill levels and the grades they receive. "When presented with material that is relevant to their experiences and gives them the impression that they are co-creators of knowledge alongside the teacher and the book, adult learners learn better" (Prakasham V., 2011)

Challenge 5

A diverse class presents difficulties for the English teacher as well as a roadblock in the process of teaching and learning. Students in the class come from a variety of sociocultural origins and have varying degrees of language and communication skills. Students from all over the world have moved to colleges and universities in search of better educational and career prospects since technical education has given professionals new career paths. Not every applicant to engineering schools is fluent in the language. Teachers today are very concerned about mixed ability groups since linguistic competencies differ. The teacher may face disciplinary issues if some talented pupils complete the assignment more rapidly than the others. Teaching languages should be approached differently from teaching other technical courses. Teachers must take a comprehensive and distinctive approach to helping students develop the confidence they need to express their emotions, ideas, and opinions in a clear and concise manner (Prema, A. 2016).

Solution 1

There is a connection between pupils' attitudes and motivation. Students' attitudes toward the target language group and the learning activity itself have a significant impact on how motivated they are to learn (Lambert and Gardner, 1972). Therefore, these two elements are

crucial for language acquisition. The teacher should have a well-thought-out plan, such as splitting the class up into teams to complete the exercises, to encourage pupils to attend English language sessions. The solution to many issues lies in teamwork. Students will become more competitive as a result, which will encourage them to pay attention in class. These days, teamwork is ranked as one of the top ten job abilities that employers value. An engineer is expected to work in a team on numerous projects. "A cooperative process that allows ordinary people to achieve extraordinary results" is how Scarnati (2001, p. 5) defines teamwork. An engineer can gain real-world experience by practicing teamwork from the graduate level, which helps to mitigate the problem of big and diverse classes.

Solution 2

The most effective way to address the problem of a diverse class is through peer group learning. Students can engage in a variety of learning experiences through peer group interaction. It gives kids the chance to express themselves freely and confidently without fear of mockery or laughter. "The way that students approached tasks and their subsequent language development were predicted by their attitudes toward interaction."(Philip and others, 2013). In a language classroom, students' views toward the group also affect how well they complete the assignments. Skills such as leadership, persuasion, and analysis are observed to come from the peer group. The students' encouragement of one another encourages them to participate actively and effectively in class.

Solution 3

For the pupils to be exposed to the language as much as possible, interactive teaching techniques should be used. The teacher must plan ahead and prepare properly for this. The teacher should, for the most part, make the teaching and learning process a two-way process in which students have more opportunities to speak and engage with one another in the classroom. Promoting student seminars and presentations could help address the issue of a diverse class and the completion of the program. The entire class can benefit from a rich and diverse experience when students are actively involved in their language learning. It makes the learning process more applicable and provides students with the chance to conduct research on a variety of subjects. Students must learn how to solve problems, apply prior information to novel circumstances, and apply concepts to address real-world issues, particularly in engineering studies. Therefore, it's critical to establish an atmosphere that

allows for the acquisition of real-world experience. The learning process can also bring out the creativity of the students. In order to bridge the gap between theoretical knowledge and real-world experience, the classroom should be transformed into a workshop.

Solution 4

The process of evaluating students' linguistic proficiency should be ongoing. Lesson planning should be done by the instructor to allow ample time for evaluating the learning that is occurring. If necessary, the syllabus might be revised for this as well. Assignments should be thoughtfully designed to assess students' linguistic proficiency rather than their knowledge or recall. Students may be given group assignments that allow them to visit businesses and sectors to gain practical work experience. To carry out such projects, engineering schools should collaborate with businesses and industries. In order for the teacher to determine how much the students have learned, testing and evaluation are essential. The written exam given at the conclusion of the semester is not a true assessment of the students' language proficiency, in contrast to other engineering courses. Additionally, the student's spoken and listening skills should be evaluated. According to Nunan (1991), "the ability to carry out a conversation in the (target) language is the measure of success." Students may thus become demotivated and lose interest in learning if they are not given the opportunity to speak the language or even learn how to do so.

Conclusion

Our daily lives now require effective communication abilities. Thus, mastering a language is essential for surviving in both the social and professional spheres. Teachers of English must place a strong emphasis on helping pupils become fluent in the language as their future is determined by both their language skills and the knowledge they have learned. Therefore, the focus should be on helping students improve their communication skills throughout the learning process rather than on helping them get good grades on the final exam. It cannot be disputed that the difficulties listed above accurately reflect the experiences of English language teachers at these institutions, even if the university has made the ELT lab exam mandatory for all engineering students in the state of Telangana for the past few years. Similarly, several engineering institutions have fewer English teachers than the number of students enrolled in the program. Since teaching languages differs from teaching other

courses in engineering education, universities should only assign one teacher for every twenty students. Only then can language learning be an effective educational process.

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