

Indian engineering students must complete a case study on the English language training requirements.

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Abstract

The efficiency of English language training at Indian engineering institutes is investigated in this study. Due to a lack of confidence and poor communication skills, many Indian engineering graduates are unable to find work. Engineering graduates in India continue to struggle with weak communication skills despite several studies stressing the significance of enhancing their employability skills. Engineering schools in India are the focus of this investigation, which aims to shed light on why so many of the country's graduates struggle in English-speaking classes. Many third-year students still lack the courage to tackle their final-year campus assignments, according to research. It was also discovered that faculty members' approaches need to be improved since many students seek more involved sessions to develop their language abilities. Engineering students' low self-esteem and low degree of trust in English teachers, as shown by the survey findings, highlight the need for better engineering education.

Keywords: the importance of being able to communicate well in the field of engineering

1. Introduction

For many years, English has been an essential element of Indian school curricula, and it continues to play an important role in securing employment with reputable companies. As a result of British colonialism, the English language has been ingrained in the minds of many Indians who are well-educated. As a result, it has become a common language among educated Indians, who speak a variety of regional languages. A large number of well-educated Indians learned English in the 1700s because it helped them rise through the ranks of government. As time went on, English's impact on India continued to grow. Currently, the English language plays a significant role in higher education and the media, as well as in the management of corporate and public organisations. In India, English has grown to be a significant force for positive development (Graddol, 2010). In the past ten years, the number of engineering schools in India has grown at an astronomical rate. Hundreds of thousands of engineering students are graduating from India's 3393 colleges every year, according to a news report in India Today. Engineering graduates have flooded the

job market, and their employability has become a major concern in both the school and business sectors. Because of the high standards of today's Indian job market, engineering graduates are expected to have a variety of transferable skills when they go on job interviews. Candidates are required to speak clearly and confidently in English. In today's India, English language proficiency is a must-have talent for every job seeker. Unfortunately, an increasing proportion of Indian engineering graduates find it a frustrating challenge to communicate clearly and accurately in English. Most Indian colleges, public and private, require students to take two semesters of English as part of their first two years of engineering education. students' ability to communicate effectively in all four areas is the major goal of this course (LSRW). Professors in these programmes have advanced degrees such as the M.Phil. or Ph.D. English literature is the field of study for most of these academics. Professors in India are unfamiliar with concepts such as ESP or CLT since they were not educated in the methodology of English language teaching (ELT). As a result of the British Council's introduction of professional development programmes for English instructors in

schools, research in ELT approaches has emerged in India (Padwad& Dixit, 2011). Due to a variety of factors, despite the numerous conferences and workshops on novel methods of language education, classroom reality presents a quite different image. Professors of English are woefully underprepared. Students from varied educational backgrounds in the same classroom. Third, the total number of pupils in each class (60 per class). Lack of time to finish the curriculum. 5) Written examinations are given more weight (traditional method in India). As a result of this, there is a great deal of stress on instructors. A dearth of high-quality textbooks. 7) Exercises from prior university exams may be found in workbooks used by students. Failure to get help from the administration of colleges and universities 9. 10) Treating English as a separate academic discipline. Irrelevant syllabus design, number eleven on this list.

Insufficient techniques (P'Ryan, 2008). Many English teachers at engineering institutions still use the old-fashioned techniques of teaching. For the most part, English lecturers are pressed to finish the prescribed curriculum in three months, and students are evaluated by written tests at the conclusion of the semester. This form of evaluation robs the study of a language of its sparkle and makes the sessions tedious and pointless. As a consequence, many engineering students never develop the necessary skills to find work after graduation. There is a third-year class called "Communication Skills" that requires students to listen to English discussions in communication laboratories. Group conversations are an important aspect of students' education. Despite their best efforts, many engineering students in India continue to struggle with the language barrier.

2. The Issue of Unemployability

Approximately one-quarter of engineering students, according to a research by the education, employment, and training evaluation firm "Aspiring Minds," are unable to comprehend written English. In 2011, the Aspiring Minds Computer Aptitude Test (ACMAT) was used to test 55,000 engineering graduates, and the results showed that more than a quarter lacked the English comprehension abilities necessary to grasp the curriculum of an engineering school. Only 57% of engineers can correctly write English sentences, according to the research. Some 42% to 44% of engineers exhibit proficiency in English that is essential for knowledge-based industries, whereas only 27% of engineers demonstrate proficiency in English for commercial purposes (Seetha, 2012). The inability of Indian engineering graduates to obtain work in the United States is often cited as a major drawback in company surveys. According to Azam, Chin, and Prakash (2010), men's hourly salaries are increased by a whopping 34% when they are fluent in English. The internationalisation of Indian business necessitates a fluent command of the English language. Consequently, the high ranking of English-language engagement might also be attributed to the fact that there has been an increasing necessity for Indian software and ITES experts to provide English-language services to customers in the UK and the US (Ferrari & Dhingra, 2009). As a reaction to a dearth of information about what skills Indian engineering graduates need to get a job, this research examines the English courses and methods used by English professors at India's colleges and private universities during the first year of engineering courses. The primary goal of these courses is to help students improve their communication skills so that they are

more prepared for job interviews and group discussions, both of which are common in India's hiring process. International commercial transactions need the use of English. The ability to speak and write in English is essential (M. Pandey & P. Pandey, 2014). Companies in India prefer individuals with a higher degree of English proficiency since poor language abilities may cause a lot of misunderstanding in commercial negotiations. Aside from that, English is the language of choice for most scientific publications all over the world (P'Rayan, English Language Teaching, Vol. 8, No 2, 2015 118 2007; www.ccsenet.org/elt). Students in India must study interviewing, presenting, group interaction, and telephone and teleconference communication skills in order to become qualified engineering graduates. Riemer (2002) argues that a global engineer must be able to communicate across national and cultural barriers, and that only fluency in the English language will allow the engineer to do so. The key concern is whether engineering students in India are taught to improve their language skills relevant to the profession and if correct approaches are used in English classes. The following questions are addressed in this article: How well have students learned to speak and write English as a result of taking this course? Are English instructors able to prepare their pupils to succeed in the workforce? When it comes to job interviews and group talks, how comfortable are engineering students with these situations? 4) Do the students feel that they are well-prepared for the workforce?

3. Methodology

First-year engineering students were surveyed and semi-structured interviewed to determine the suitability of the English courses they had to choose from. Survey questionnaire, interviews, class observation, and written comments from students are all part of this study's methodology. 3rd-party Participants, Setting, and Equipment Review Saveetha University in Chennai, India, hosted this research. Saveetha University's Saveetha School of Engineering hosted an engineering workshop for participants from other institutions. Private and government-affiliated institutions in the Indian city of Chennai were represented by students. Only those who agreed to participate in the survey were asked to complete it, and from the 200 total replies, 160 completed forms were randomly selected for analysis. During interviews and group discussions, the students were asked a series of questions on their experiences in the classroom, their perceptions of English language teaching methods, and their level of confidence in their ability to improve their language

abilities. Participants came from all around India, representing many different ethnic groups. On average, the participants spent around 10 minutes. As an added bonus for the researchers, students were encouraged to write down their thoughts on the English class they had just taken, in their own words. The participants' demographics are shown in Table 1.

Table 1. Participants' demographic information (total number of participants: 160, nationality: Indians)

Gender	Age Group	Qualification and number of participants	Engineering Branches	States
Male (85%) Female (15%)	18-24	B. Tech II Year (10.6) III Year (88.1%) IV Year (1.3%)	Computer Science, EEE, ECE, Aerospace, Civil, IT, Mechanical	Tamilnadu, Gujarat, Andhra Pradesh, Jammu and Kashmir, Bihar, Uttar Pradesh, Kerala, Delhi, West Bengal

Note: EEE—Electrical and Electronics Engineering. ECE—Electronics and Communication Engineering. IT—Information Technology.

Around 25 engineering students were interviewed during and after the completion of the questionnaires in order to get insight into their educational experiences and the methodology employed. Appendix A has a comprehensive collection of interview questions and answers. Questions and semi-structured interviews were analysed in a pilot study to determine the clarity of responses necessary for this research. It was decided to conduct a pilot study with 10 fresh engineering graduates and to make any required adjustments based on the input and expert assessment. The 10 recent engineering grads were left out of the study group since they were not part of the official one. In Section 3.2, we will discuss data analysis. For the survey questionnaires, data collected from the engineers was examined statistically and qualitatively. The 160 surveys that were completed and returned were used to gather data. There is a lot of information here.

4. Results

The responses of 4.1 Engineering students Survey surveys, semi-structured interviews, and written comments follow in the next section. A Questionnaire for 4.2 Engineering Students—Survey I: Background This section of the questionnaire was designed to gather information on the participants' demographics and background. Participant age ranged from 18 to 24; the bulk of the participants were male (85 percent). They come from various parts of India and are enrolled at prestigious technical

schools in the city of Chennai. 4.3 Learning Experience: Questions 1–6 First-year English classes were examined in questions 1 to 6, with the goal of determining whether the students' language abilities had improved following two semesters of English courses given at engineering universities. Students were polled to see whether they were prepared for job interviews and conversations in groups. Many students were found to be lacking in English language proficiency, and they hoped for more effective and creative ways of teaching the language. Table 2 provides an explanation of the replies of students in engineering.

Table 2. Responses of students about their learning experience

Questionnaire Item	Agree/Strongly agree (%)	Disagree/Strongly disagree (%)	Indecisive (%)
Learnt new language skills	39.4	45.6	15
Confident to face job interviews	17.5	58.7	23.8
Trained to participate in group discussion	50	30	20
Improved my presentation skills	29.3	43.2	27.5
Got sufficient opportunities to practice language and methodologies were student-centered.	33	40.1	26.9
LSRW skills were sharpened	37.5	38.1	24.4

This survey's most important aspect is that a larger percentage of participants attended English-medium schools and were able to compare their school's curriculum and methodology to that of their college's. ELT Approaches and Methodologies—Questions 7 to 13 Questions on teaching methods and techniques were then asked of the students after they had given their replies about their own learning experiences. We did this so students may be able to offer an honest assessment of the first-year English course, as students often gave positive assessments of their favourite teachers despite their own bias. The participants were able to distinguish between rating their own methods of improving their language abilities and evaluating the methods of their lecturers. Table 3 provides the specifics of replies to questions concerning English teaching techniques.

Inquiries with Students in 4.5 Semi-structured Interviews Semi-structured interviews with students featured a total of 9 questions and 25 participants. Conversational interviews were conducted in the classrooms and the staff area to enable pupils to freely express their thoughts. A typical 15-minute interview lasted from July to September of this year. In Appendix B, you will find a list of interview questions. Question No. 1–4 of the Interview As part of the first four questions, we wanted to know how confident students were in dealing with group discussions and interviews. In the absence of adequate feedback or instruction, many students were found to be lacking in their understanding of group discussions and presenting abilities. First-year English students were urged to create teams of five or

six people and debate a subject, but there was no structured group discussion. As a result of the conversations, which were not supervised by the professors, a single student from each group gave a presentation in front of all the students. There was no particular treatment or encouragement for the quiet ones.

4.5.2 The Fifth Interview Issue It seems that the professors spent more time on grammar, such as tenses, voice, prepositions, etc., in response to question number 5. Students complained that the teaching methods used to teach grammar were boring and that they learned nothing new since they had already studied grammar in school. As soon as the instructor had finished a subject, the pupils were expected to complete the worksheets. In addition, it was discovered that a greater proportion of students did not engage in the learning process since many students considered that subjects such as tenses and active/passive voice were basic. In addition, many students believed that the first day of class was the only time communication skills were discussed. Questions 6-8 of the Interview According to the last set of questions, most students were only interested in passing English because they didn't want to fail. In addition, pupils of the Central Board of Secondary Education, India (CBSE) said that their school curriculum was more demanding and entertaining since they were able to study books, poetry, and plays. According to the report, the average class size was 60 kids, and some instructors had a hard time keeping order in the classrooms because of this. During these talks with third-year engineering students, it became clear that college teaching methods needed to be reexamined and that students' poor performance in campus placements and other employment interviews was warranted. Many pupils were observed to be apprehensive about writing, thus writing was not given additional attention. Students said they memorised the example letters in their textbooks and used them in their examinations, despite the fact that letter writing is a recommended element of the English curriculum in universities. Creative writing was not encouraged at all. In their English sessions, many pupils were unable to recall the language exercises they had participated in.

Class Observation

An investigation of select first-year engineering classrooms was carried out in order to verify survey findings. For security reasons, the institutions and professors' names have been suppressed. There were four faculty members that were found to be spending more time teaching grammar, such as tenses, active and passive voice, types of adjectives, etc. Engineering colleges in India haven't yet adopted the

technique of contextualising grammar education (Clandfield, nd; Tennant, nd). Furthermore, the sessions were judged to be more teacher-centered and less student-centered. Because much of the time was spent filling out the answers in the prescribed workbooks, many kids were reported to be disinterested. Reading and answering questions seems to have worn out the students' excitement. The instructor, in accordance with Bayram Pekoz (2008), should bring grammar education to life, inspire interest in the topic, and improve awareness by giving students a purpose to understand the subject matter. Furthermore, the workbooks were discovered to be a collection of former university test questions without significant substance relevant to English for employment. First-year students were not stimulated by the exercises since there were no engaging things to participate in. Another time, the instructor was praised for his ability to talk clearly and enthusiastically. And it was discovered that the pupils were excitedly reacting to the instructor. In contrast to the majority of pupils, a few kids who were adept at speaking engaged the instructor in conversation and asked further questions, while the majority of students just listened. It was fun to watch the class go by, but the instructor had all control of the proceedings, thus the student-centered approach was squandered. First-year students gave individual presentations on themes of their choosing during a presentation session watched by the researcher. Many presentations were given throughout the session, and there were excellent, middle-of-the-road and awful ones. Students were reluctant to give presentations because they were afraid of speaking in front of their peers, which made it difficult for the instructor to get them excited about it. No assessment mechanism was in place to analyse students' performance in terms of language correctness, sentence structure, intonation, gestures, etc. The instructor gave comments to some of the students. This supports the findings of the study, which found that students lacked confidence in their presenting abilities. As a result of students' lack of interest in soliciting recommendations for improvement, marks were assigned arbitrarily. As a result, most students prepared their presentations on the basis of their own preconceptions, and there was no pre-session instruction on successful presenting skills from the instructor. While low student motivation might be discouraging for English professors, Dr. Bayram N. PEKZ (2009) suggests that instructors can consider their students' interests and motivations when picking a motivator. According to government and private university English syllabuses, students should learn basic communication skills and the habit of writing, but it

was found that the teaching-learning process followed by teachers in first-year English classes needed a complete overhaul and many teachers needed ESP training to prepare engineering students for the workforce. In order to bridge the gap between academia and the workplace, Paul Spence recommends that English courses include English communicative events inside a curriculum (Spence & Liu, 2013).

Written Comments of Engineering Students

Many of the children who participated in the survey were reluctant to speak out, so they were asked to write down their thoughts about the program's efficacy. They were able to think freely and without any restraints once they had written down their evaluation and expectations. The following are their thoughts: "Teachers need to be more engaged in the classroom. They need to put more effort into improving their communication abilities.. Rather than instructing us, my lecturer was more concerned with finishing the curriculum." "In order to keep students engaged, English teachers need to experiment with novel teaching methods." "They need to pay close attention to each and every one of their pupils. Teachers of English must cope with the inhibitions of their pupils. It's imperative that we prioritise the use of cutting-edge presenting techniques. To pique students' interest in learning the language, teachers should use real-world experiences. So that students have time to fix their mistakes, interview and group discussion training should begin in the first year of engineering education." "The quality of English instruction in the first year of college did not match the standard of English instruction in high school. Furthermore, college's English instruction was not relevant to our future demands." "Teachers need to be reevaluated on a regular basis to ensure that their approaches are effective. Instead of teaching from a curriculum, English instructors should focus on engaging students via hands-on activities. Presenting skills should be taught in a hands-on manner by professors." "It's not enough to merely sit and listen to lectures. To overcome stage fear, professors need to assist us. Grammar was the primary emphasis of our first year English studies. The workshops need to be more participatory. Writing and doing business in a professional manner must be taught. The importance of good presentation abilities in the business and in meetings should be highlighted in English education. "Professors need to keep their students up to speed on the latest company news." At the first year of college, the English course was the same as the English course in school. The techniques of assessment were

less effective. We should have done better with the activities we used to help students improve their writing. Students should be given an assignment to write material for a company that is looking to sell or utilise innovative ideas for goods" in order to instil professional writing principles. In order to increase communication skills, the theory/paper exam in English should be abolished and additional assessment activities should be added. First-year English lessons are anticipated to undergo a major overhaul. The English department must undertake a SWOT analysis of communication abilities. "Reading and discussing about books should be a priority." "I asked my professor why I received a grade for my presentation, but he never replied. I'm sure he informed me about my good and bad points. "For English classes, written tests must be eliminated. "More creativity is needed in the process of evoking excitement." "It is necessary to introduce newspaper reading and discussion of current events". "We were able to develop our vocabulary and linguistic abilities as a result of the many tales, plays, and poetry that were part of our school curriculum. Grammar was king in English class at the university, on the other hand. The written remarks of students in engineering courses demand for more systematic ELT techniques. In light of these remarks, English instructors need to be educated in the methods of English for Specific Purposes. Teachers of English at engineering schools should be well-versed in the language's pedagogical approaches in order to better serve their students.

Conclusions

This research looked at the English language abilities needed by Indian engineering students and the discrepancy between the training methods and the harsh reality of students' language skills. Many engineering students in India are struggling to find work because of a lack of self-confidence, according to the results of the study by the Indian Institute of Technology, Delhi (IIT-D). A further finding of the research was that English academics need to be trained to help engineering students get jobs. The outcomes of this research demonstrate the need of rigorous professional development programmes for English teachers in engineering colleges. Furthermore, instructors must work closely with students to identify their requirements and devise an effective training strategy. Teaching should transcend beyond textbooks and classroom boundaries, professors must do so. For students of engineering, there is a large divide between their academic and professional environments. By exposing English teachers to the realities of industry, this divide might

be narrowed, and students' employability skills could be improved.

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