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Research Paper

Requirements of English Language Courses for Engineering Students in Bangladesh: Teaching and Learning Perspectives

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Abstract

Language helps us to express thoughts, dreams and aspirations. The purpose of this paper is to study the requirements of academic English from the lookouts of teaching and learning for the engineering students of Bangladesh by means of assessing their present condition of English and the subsequent development module of their English language proficiency. The population of this study was 92 engineering students from different engineering universities of Bangladesh covering public, private and military run institutions. 22 academicians working in engineering universities were also interviewed. Here the participants were observed, interviewed personally and also surveyed through a questionnaire to discover their present level of English followed by a suggestive development program. Experienced faculties of English language and other disciplines, involved with engineering students, were also considered to find out a concrete and true fact from ground scenario.

Keywords

Academic requirement, engineering students, English proficiency, development program

1. Introduction

Nowadays, English language has got paramount importance in the academic and professional atmosphere. Keeping that in mind, English is being taught from primary to tertiary level as well as in various professional sectors in Bangladesh. The fact cannot be denied that the requirement of sound knowledge on English language becomes a major role of developing professional students for the world market (Panyawong-Ngama, Tangthonga & Anunvraponga, 2015). International firms and corporate sectors look for new graduates and staffs with a high level of proficiency in English. So, it is well understood that English has become the most important language to the students and professionals not only to excel in their study but also to prepare them for the

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competitive job market. Employers choose the best candidates specially the engineers who have good academic qualifications along with adequate English proficiency to meet the demands of world market.

In this study, many aspects related to learning English for engineering students are being taken into consideration; curriculum, duration, background knowledge, requirement of the course, attitude of the institution, attitude of the faculty and few other facets are discussed to analyze the present scenario of English language courses for the engineering students in Bangladesh perspective (Bhuiyan, 2019).

2. Significance of the Study

English is now considered to be the global platform for business communication and corporate flourishment; consequently, it has become the most dominant language in the world. The necessity of advance technology in our daily life has allured students to enroll themselves in engineering courses with its variety of sub-disciplines for an attractive career choice. Engineering is a discipline that requires its practitioners to learn and use a variety of soft-skills including academic and non-academic written and spoken communication from a different range of sources (Deveci and Nunn, 2018).

Students who undergo their engineering education in English from Bangladesh perspective can face formidable challenges acquiring these skills. Though students have to pursue English courses designed to improve their individual linguistic abilities, often it may not sufficiently satisfy the students' overall needs and well-being in the long term. Keeping this in mind, this paper studies the existing curriculum for reducing this problem in our local context of the engineering students through a long-term innovation effort.

3. Objectives

The study is generally intended to get an insight into English courses of engineering students from the teaching and learning perspectives in Bangladesh. However, the specific objectives of the present study are to analyze the existing English Courses for engineering students with special attention to syllabus, duration and allotted credit, to study the importance of English Courses for engineering students, to study the English proficiency of engineering students during entry level and with the progress of the course and to know the satisfaction and assimilation of engineering students regarding the instruction mode.

4. Literature Review

A good number of studies on English language courses for engineering students have been examined across the world. Regarding motivation and attitudes towards learning English, Al-Tamimi & Shuib (2009) indicated that a high number of the students showed their interest in the culture of the English-speaking world as represented by English-language films.

Gözüyeşil (2014) also conducted a study on the English language needs of the Engineering students that revealed the fact of their needs of improving reading skill in a credible way.

This study also dealt with the language skills of the engineering students where the present researcher has depicted the importance of all the skills. Shrestha, Pahari & Awasthi (2015) depict the importance of learning English for Engineers in the perspective of Nepal. Here the researcher wants to mention that in this era of globalization, engineers have to explore his work field beyond country level. In this context, the engineers will mix up with the experts of other countries. They need to survive with a completion and to win the struggle proficiency in English is a must. This will not only establish engineers in world market, but also fetch honor, dignity, reputation and

social position in own country too. Engineers need to master themselves in the basic skills of English language and that will bring them success over others.

5. Methodology

5.1. Research Design

A multi-method approach has been adopted in the study. Data were collected from the students through questionnaires. Apart from that the students have been observed closely and interviewed personally. Moreover, semi-structured interviews were conducted with faculties to get meaningful perceptions of the practical situation. Experiences and opinions of faculties other than English language have also been considered as a tool.

5.2. Participants

Ninety-two students from different engineering universities along with 22 faculties are the participants in this study. The students' level of English language proficiency ranged from elementary to upper intermediate. The ratio of male and female participants is almost same. In case of faculty, academicians working at engineering universities are interviewed.

5.3. Instrument

Questionnaire, personal interview, survey and observation method have been used as instruments to collect data.

6. Findings and Discussion

6.1. Engineering Students' Status at Entry Level

The student participants of this study before registered themselves in engineering disciplines have been completed their English language education for a period of at least twelve years (Miah & Zhang, 2012). Whether they are from Bengali or English version, twelve year is an ample span of time to build up the foundation of Basic English. But in most cases, students join engineering universities with shallow knowledge on Basic English.

The academicians were asked about the standard of engineering students during the entry level. Among 22 faculties, 59% opined for students' good background whereas 41% said that the students' proficiency in English is below standard. When the students were asked for the reason of insufficient basic knowledge on English, among 92 participants, 73% said that they were not serious about the English courses and 27% said they didn't understand the instruction mode of teacher.

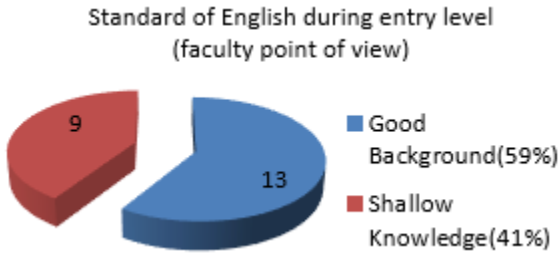


Figure-1: Standard of English during entry level

6.2. Individual Attire for Language Learning

Receiving students from different standards in the same class, the concerned English instructor initially face difficulties to teach them from a common platform. Generally, English language courses are offered at level-I, when students are yet to know each other and get oriented

themselves with a new environment. A sort of anxiety, shyness, discomfort, individual attitude and lack of motivation plays a vital role to accept the English course at a good grace from the students' point of view (Ferdous, 2012).

6.3. Syllabus for Engineering Students

Syllabus of 9 engineering universities/ institutions has been examined thoroughly. It is found that, almost same kinds of lessons are being taught in those universities/ institutions. In the existing syllabus, students hardly get any new lessons to learn. The items they have gone through last twelve years, those things they practice in a different pattern. It is to be mentioned that because of teaching charisma, interest level of students may vary.

The participants of the study narrate that the repetition of same lessons sometimes lessens the interest level. After examining the syllabus of 8 engineering universities/ institutions, following topics are found common and these common items are not new to the students.

Table-1: Lessons and language skills in the syllabus

LESSONS	
Introduction to language	Language Skills
Introduction to Phonetics	
IPA Transcription and variation in accents	
Types of Sentences	Grammar and Usage
Tense in Expressions	
Use of Main Verbs	
Use of Auxiliaries and Modals	
Causatives	
Conditionals	
Active/Passive	
Adverb, Adjective, Conjunction	
Prepositions	
Skimming and Scanning and Analytical Ability	Reading Skill
Comprehension	
Short Stories (Extract from Literature)	
Writing Strategies	Writing Skill
Précis, Amplification and Paragraph Writing	
Writing Strategies	
Formal Communication: Official Letters and e-mails	General Correspondence and Communication/Technical Writing
Report Writing, Business Communication	
Formal Communication: Official Letters and e-mails	

6.4. Individual Attire for Language Learning

Generally, engineering students of Bangladesh have to complete 160 to 165 credits for graduation. But the allotment of credit for English courses is very less in comparison to the total number of

credits. This less amount of credit gives a wrong message to the students which indicate less priority of English courses from the authority. Consequently, students place this course in their less priority list; ultimately, they start giving less importance and do less practice and gradually become weaker. Definitely engineering is a course which requires a lot of study, endurance and patience as new sort of things have to be explored.

On the contrary, proficiency in English is required for implementation of that knowledge in practical field. For getting an impression of allotted credit in different universities/ institutions of Bangladesh, we have collected the credits of English courses.

The actual name of the universities/ institutions is kept in disguised. Following chart will depict the fact:

Table-2: English Credits at different Universities/ Institutions in Bangladesh

University	Credit	Number of Course	Semester	Remark
U1	3	2	1	
U2	3	2	1	
U3	3	1	1	
U4	12	4+3	2/3	T/L/BC
U5	9	3		BC
U6	4	2+1	3	S/BC
U7	9	6+3	3	BC
U8	9	6+3	3	BC/TW
U9	6	6+3	2	
T=Theory, L=Literature, BC=Business Communication, S=Sessional, TW=Technical Writing				

As English is our second language, it demands extensive practice to master on it. We cannot deny this fact of practice. But from the above table, it is noted that most of the universities plan to complete the English packages within second to third semester. That means, after one and half year, the students academically get detached from English courses. Students (41%), join with a poor knowledge on English, gradually getting more away from the usual practice.

6.5. Developing four language skills of engineering students

This study conducted survey on English proficiency level on four skills (speaking, reading, listening and writing) (Gözüyeşil, 2014). It is found that students coming from vernacular medium lacked required skills; on the other hand, the situation for students coming from English version or medium schools is better than the vernacular medium counterparts. A test has been conducted among 40 students to find out their grab on a particular skill. Among these 40 participants 20% are good at speaking, 37.50% are in writing, 27.50% are in reading and 15% are good at listening. The chart below depicts details:

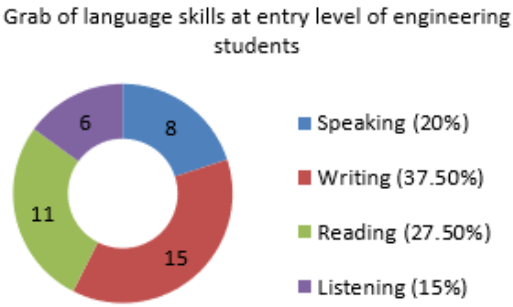


Figure-2: Language skills of engineering students

The English language courses are designed to develop students 'communicative competence in English. Engineering students are expected to develop their ability to exchange thoughts, ideas, and opinions through both oral and written discourses in the target language i.e. English. Students, joining in engineering discipline with insufficient communicative skill, often resort to decoding English into Bangla and then reinterpret their thoughts into English. This results in lack of ability to clearly express their thoughts in both written and spoken forms. Once, students from such a background look for job, they are certainly found themselves in a disadvantaged situation even after good grading and knowledge in engineering field.

6.6. English Exam Policy for Engineering Students

As English courses are foundation courses, students should not get promotion to the next level/ term without completion of this package. It has been observed that few institutions allow students' promotion to the next term/ level without required grading. This also creates a scope for giving less importance on foundation courses like English. It has also been witnessed in different universities/ institutions that students are given with the opportunity to sit for the improvement exam of English courses (theory) at final term, which hardly help them to improve their oral or listening aspects. This is for merely getting an overall good grade in final exam.

6.7. English in Engineering Communications for Global Context

In the present context of globalization, the importance of the English language is increasing at a rapid pace as there is no alternative language as widespread as English. People all over the world have begun to use this language for numerous purposes. The number of English-speaking people reaches 1.8 billion in the world and the number is still rising. It is considered as the foremost language of international business, diplomacy, research and professionals. English often serves as the global language for communication among whose native tongue are different. Engineers are the professionals who have the access to explore international job markets. Obtaining an engineering degree from a university of one country, they may have an entrance opportunity to seek job in another country. When engineers go abroad for job or education, they may come across with many professionals who are culturally and linguistically different. At this moment, they need a common language that is English.

Engineers need high caliber and communication skills to compete with their rivals and to justify their professional supremacy. Those who fail to communicate perfectly will lose out. Bangladeshi engineering students require learning English language for academic enhancement as well as for future career. Apart from the presently studying engineering students, those who have started their engineering career and even those who are going to start studying this discipline for being engineers, in the future, proficiency of English language cannot be under projected for them.

6.8. English in Engineering Communication in Bangladesh

Bangladesh has become a role model of development in different sectors including engineering. Our engineers are planning and constructing mega projects in coordination with foreign experts. For these mammoth collaborating engineering tasks, a very cordial and mutual understanding is a required, which can be done through well maintained communication. English is the only bridge to establish that communication. The engineering education in Bangladesh has conceived this message well ahead and trying to prepare professional engineers with good communication skill. The effect of globalization is now appearing in Bangladesh (Shrestha et al., 2015).

The quality and competence are the prime issues now. Unless Bangladeshi engineers prove to be capable and competent in the global market, the situation is going to be much harder for them now and after. From the very beginning of engineering education in Bangladesh, English courses are

incorporated as compulsory subjects. The contents of English courses have been changed for keeping that with the pace of world job market. But it has never been discarded from the curriculum, because there are strong evidences that the English language is still a very essential means of communication in both academic life and the future career of the engineers in Bangladesh (Shrestha et al., 2015).

7. Recommendations

The whole world has apparently been shrunk to a small village due to the rapid expansion of communication gateway. Bangladesh, being an emerging nation, should not drop behind. The skill and achievement of engineers need to be focused to the world market where sound communication proficiency is a prerequisite. Following aspects may be taken into cognizance, for developing the proficiency in English for engineers:

a. Basic knowledge on English has to be taken in acquaintance while enrolling intact for engineering disciplines at entry level.
b. Placement test may be arranged after admission to find out the weakness in specific skills.
c. Individual negative attitude and lack of motivation for learning English to be addressed for counseling.
d. English syllabus to be modified or changed basing on the standard of students or requirement of global need for engineers.
e. Credit for English courses may be distributed to the total tenure of study.
f. Non-credit English language course of engineering communication may be introduced as foundation course.
g. Course on presentation skills for engineers may be introduced in the curriculum (if not).
h. A low stress, friendly and supportive learning environment to be generated.
i. Instructional material should be relevant to life, goal and career oriented.
j. English movies and other positive cultural aspects can also enhance the students' learning abilities as Al-Tamimi and Shuib (2009) also agreed.

8. Limitation

There are no perfect research designs, there are always trade-offs (Patton, 1990, p.95). This is also applicable for the current study. The first constraint was the time. The survey was conducted within a short span of time. Another limitation was the selection of limited number of samples for the survey. Had there been more participants in the study, the study would have been more accurate in its findings and recommendations.

9. Conclusion

The engineering students of Bangladesh need to complete English language courses as a part of their academic curriculum. The study finds that the level of proficiency of the students at entry level to engineering courses is below than the required proficiency for academic success and basic interpersonal communication; especially for the students who belong to the vernacular medium. But students express their positive attitude to improve their English. They believe in the fact that those who speak English can create good impression to persons around. Engineering students also admit the fact that knowledge of English offers advantages in this era of globalization for getting a good job, securing a better social position and personal establishment.

The respondents have fingered out that the lessons designed for them should be changed partially for learning English well. The students give more emphasize for the conduct of practical session on four skills like reading, writing, speaking and listening. The students wanted an increase in the use of English, but instead of conventional way of learning and teaching methods, they preferred

to deal with differently; like learning with the help of music, movie, newspaper, debate, discussion or similar pattern. The engineering students' perceptions of their specific needs are identified. Their opinions about the present English language courses are also determined in the study and at the same time it discovers the rooms for improvement.

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