Migration Letters

Volume: 20, No: S8(2023), pp. 1557-1575

ISSN: 1741-8984 (Print) ISSN: 1741-8992 (Online)

www.migrationletters.com

Pedagogy of Communicative and Technical English for Engineering Students at Tertiary Level: A Case Study in Bangladesh

Zawad Rami[1], Dr. Mohammad Kamrul Hassan[2], Hosam Shatnawi[3]

Abstract

Pedagogy refers to the manner and exercise of teaching, emphasizing an academic subject or theoretical concept. This paper explored the Pedagogy of Communicative and Technical English for Engineering Students at the Tertiary Level in Bangladesh. Furthermore, this paper investigated to demonstrate the holes between students' existing level of competence and intended needs. This study imitated the quantitative approach to collect data using questionnaires. Beneath the simple stratified sampling method, the study collected data from 52 undergraduate and graduate engineering students and 12 ESL/EFL instructors from several government engineering universities in Bangladesh. This study's findings disclosed a deficiency of practical communicative skills in engineering students. The findings also addressed the lack of engineering students in Technical English. In addition, the offered courses were not satisfactorily meeting the students' demands. Furthermore, the class conducting approaches were inadequate to correspond to engineering students' needs. Considering the findings, this study formed a few suggestions to diminish the holes in the engineering students' existing and target needs of communicative and Technical English.

Keywords: *Pedagogy, communicative skills, technical English, need analysis, teaching approaches.*

1. Introduction

Pedagogy, the term is often emulated and several varieties of definitions have been pointed out. The top-most operable pathway is to define it (Murphy, 2003) as the study of the science of teaching techniques. Therefore, this is the methodology of education. Methodology explores the paths and (Howell, Kerry E., 2012) exercises that can be used to determine the aims of education. Patricia Murphy (2003) states that a complete recollection of the sense of pedagogy is significant; nevertheless, several theorists often use it in diverse ways. Occasionally, irrelevant assumptions concerning the nature of learning are also inserted in its definition. Pedagogy is compactly related to didactics; however, there are some exceptions. By and large, didactics is a narrow term that relates the teacher's function and responsibilities, for instance, how their attitude is favorable toward the education process. This central aspect of pedagogy considers the learner's

[1] Dept. of English, Aligarh Muslim University, Aligarh, India, englishtoniczawad@gmail.com, https://orcid.org/0009-0003-5654-4648

[2] Dept. of Humanities, Chittagong University of Engineering and Technology, Chittagong, Bangladesh

[3] Dept. of Linguistics, Delhi University, Delhi, India

perspective as well. Thus, pedagogy concentrates on "any conscious activity by one person designed to enhance learning in another" (Chris Watkins & Peter Mortimore, 1999).

All the engineering universities in Bangladesh run English language courses for their students in both public and private universities. These English courses aim to expand engineering students' English language proficiency in academic and professional careers, Rahman et al. (2017) state. Nonetheless, the existing English language courses offered for engineering students at the tertiary level in Bangladesh cannot meet the goal as the engineering students' proficiency in English could be better (Sultana & Zakaria, 2019). The principal source of this complication is that the curriculum must facilitate good pedagogy before running such courses. Consequently, this study attempts to sketch the essentials of engineering students learning Communicative and Technical English. It also tries to identify the current position of engineering students' communication level. The study also explores the specific skills engineering students may require for effective professional communication for success in their careers. This research has inspected data for the exigency of engineering students from various universities. The study encircled the following objectives:

1. To evaluate the English course syllabus of engineering Universities in Bangladesh and how far it completes the student's needs.

2. To evaluate the academic and professional needs of engineering students at different engineering Universities in Bangladesh.

3. To explain the attitude of teachers of different English courses at engineering universities with polite regard to existing materials, methodology, syllabus, and students' needs.

4. To generate recommendations in the existing curriculum and pedagogy so that it could fulfil the academic and professional needs of the students.

Concerning the aforesaid objectives, this study estimated the following questions:

1. How can the implication of proper pedagogy improve the English language proficiency of Engineering Students?

2. How does learning Technical and Communicative English benefit engineering students?

3. How can proper pedagogy make the teaching and learning process accessible and effective?

2. Literature Review

Plenteous literature relates to English language pedagogy and the needs of students of various disciplines. Nevertheless, most covered the humanities, business, and non-English major studies. Elsewhere, few studies regarding the pedagogy of communicative and technical English of engineering students have been conducted abroad, though pedagogy and need analysis, as well as English language competency and communicative English, are interrelated. Therefore, the research on communicative and technical English pedagogy for engineering students at the tertiary level in Bangladesh needs to be more extensive.

Talif and Noor (2009) identified the English language needs of non-English major students at tertiary level edification. Mognhode and Woldemariam (2015) also examined the English learning needs of Business major students. In contrast, Lestari, Syahrial, & Suwarno (2017) detected the needs, including language skills, sub-skills, and vocabulary for engineering students. Nonetheless, both the studies of Mognhode & Woldemariam

(2015) and Lestari, Syahrial & Suwarno (2017) identified a domination between the current needs and target needs of non-English major students. In addition, Mognhode and Woldemariam (2015) and Lestari et al. (2017) emphasized learning empirical vocabulary and implementing learning of English language competence.

K. Sasirekha and K. Rathiga (2018) conducted a study to examine the classroom expertise in the choice of language facts and figures adapted to improve the language competencies of engineering students. According to them, the alliance of LSRW, the four language skills and linguistic competencies is one of the logical pathways of the teaching-learning process. Their study focuses on need analysis on material choice and methodology for engineering students, identification of needs analysis requirement materials based on recent research, the purity and usefulness of LSRW for language pedagogy, and so forth. In addition, the author et al.., (2018) suggested that using Digital Subscriber Line (DSL in teaching can implement proper pedagogy to teach Technical English to engineering students.

In the field of ESP, Experts emphasized accurate need analysis before course designing, forming a syllabus, and initial instruction in ESP (Hutchinson and waters, 1987). Chaudhury, T.A. (2009) researched the particularized English Language needs of the teachers and the students of different departments of the Faculty of Arts of the University of Dhaka. She stated that needs analysis works as a tool to identify and justify ESP course values. According to her work, it helps to find other particularized language needs that could be labelled in expanding a particular language program's objectives, goals, and contents. The particularized needs of the target learners should be guided before regulating the outlines and contents of particular language courses.

To encapsulate, there are deliberations on the utility of English courses for non-English major students (Sultana et al., 2019, Chaudhury, 2009), the needs for language skills and sub-skills for the engineering students (Lestari et al., 2017), business administrative studies (Mognhode and Woldemariam, 2015), industrial vocabulary programs (Talif and Noor, 2009), the particularized English Language needs of teachers and students (Chaudhury, T.A., 2009) and the classroom expertise in the choice of language materials and the methodologies (K. Sasirekha and K. Rathiga, 2018). Nevertheless, there needs to be distinctive research on the Pedagogy of Communicative and technical English for engineering students at Bangladesh's tertiary level. Consequently, there continues to exist an experimental gap in this area. This research aims to eliminate the gap with an integral attitude.

3. Methodology

3.1 Approach to Research

This study engaged a mixed-method approach as a collaboration of quantitative and qualitative research. Creswell et al. (2008) introduced five classical research models of mixed-methods study viz. the triangulation model, explanatory design, concurrent embedded design, exploratory design, and sequential embedded design. This research followed the triangulation model. This particular model refers to implementing and collaborating various research methods in studies (Bogdan, R. C., and Biklen, S. K., 2006).

3.2 Sampling and Population

The intended population of this study was engineering students at the tertiary level in different Government Engineering Universities in Bangladesh. Furthermore, guides who are actively teaching English to engineering students at the tertiary level in Bangladesh participated in this research. This study engaged in stratified random sampling (Brown, 1988) in view of the sampling method. Hence, the engineering students at the tertiary

level in different Government Engineering Universities of Bangladesh were split into subdivisions into their departments namely; Computer Science and Engineering (CSE), Naval Architecture and Marine Engineering (NAME), Civil Engineering (CE), Mechanical Engineering (ME), Electrical and Electronic Engineering (EEE), Petroleum and Mineral Resource Engineering (PMRE), etc. Samples were collected at random from each subdivision. Underneath the stratified random sampling method, the sample intensity involved 52 engineering students and 12 guides of tertiary level in Bangladesh.

3.3 Data Collection

Quantitative data were gathered from 52 engineering students and 12 guides of tertiary level in Bangladesh with the help of questionnaires. The questionnaires followed a four-point Likert scale (Likert, 1932) to estimate the responses. A literature review part was put through in order to pattern the research questionnaires. Different questionnaires were structured to gather data from the students and the guides. Additionally, qualitative data were gathered with the help of Interviews and Focus Group Discussion (FGD) reports. Concerned students and guides were involved to complete this part.

3.4 Data Analysis

Collected quantitative data were evaluated with the help of IBM SPSS Statistics. The statistical measurements involved were particulars, frequency, and percentage to analyze and interpret the gathered data. The statements evaluating the anticipated responses of the participants were collected via a four-point Likert scale (Likert, 1932). The scale was worded with several items likewise; always, often, rarely, never, to a greater extent, to some extent, no idea, not at all, etc.

4. Results and Findings

This research involved descriptive statistics to analyze and assess data. Moreover, to impart more credibility to data analysis and interpretation, this research used frequency and percentage which provide a simple summary of population and central tendency.

4.1 Results of the Student's Data

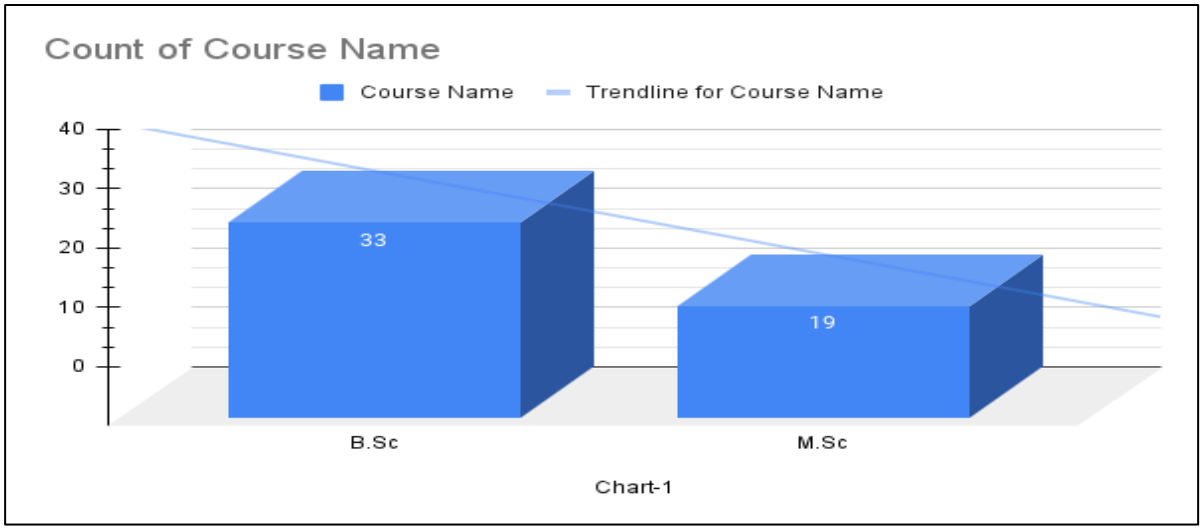

Chart-1: Course Name

The above-given chart shows the count of course names for this research. Students mentioned their course names while answering the questionnaire. Here, 63.5% of students were in B.Sc and 36.5% of students were in M.Sc.

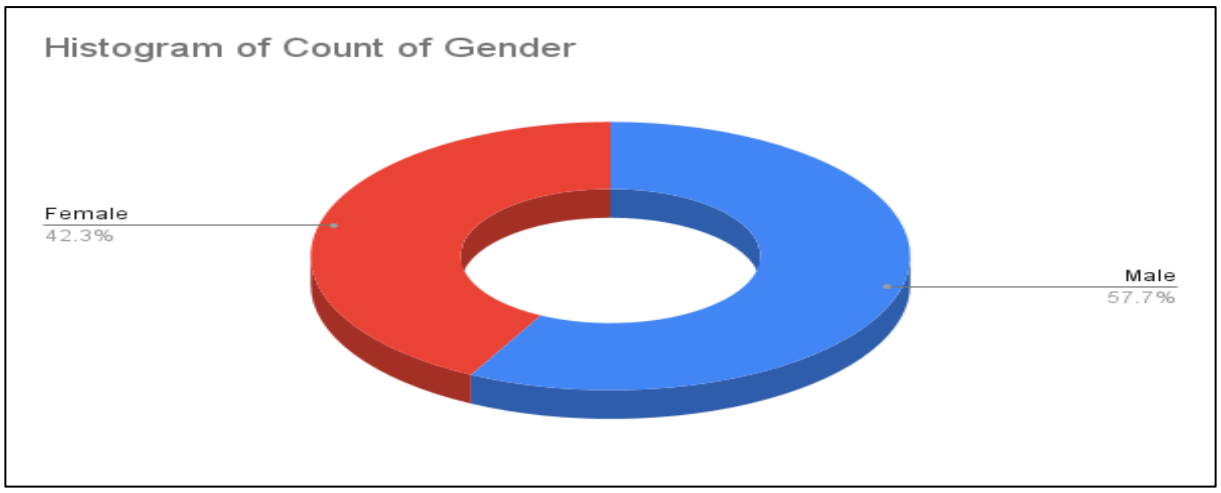

Chart-2: Gender Count

The above-given chart shows the count of genders for this research. Students mentioned their genders while answering the questionnaire. Here, 57.7% of students were male, and 42.3% were female.

Table-1:

Student's attitude toward improving Communicative English and Technical English

Particulars	Frequency	Percent
It facilitates the teaching-learning process	32	61.5%
It helps increase motivation	19	36.5%
It distracts our attention	01	1.9%
It does not help at all	00	0%
	Total- 52	

The results in Table 1 show that among the four attitudes, the first option (It facilitates the teaching-learning process) has the highest percentage (61.5%), while the last option (It does not help at all) has the lowest percentage (0%). The results indicate that students' attitudes toward communicative and Technical English are straightforward and responsive.

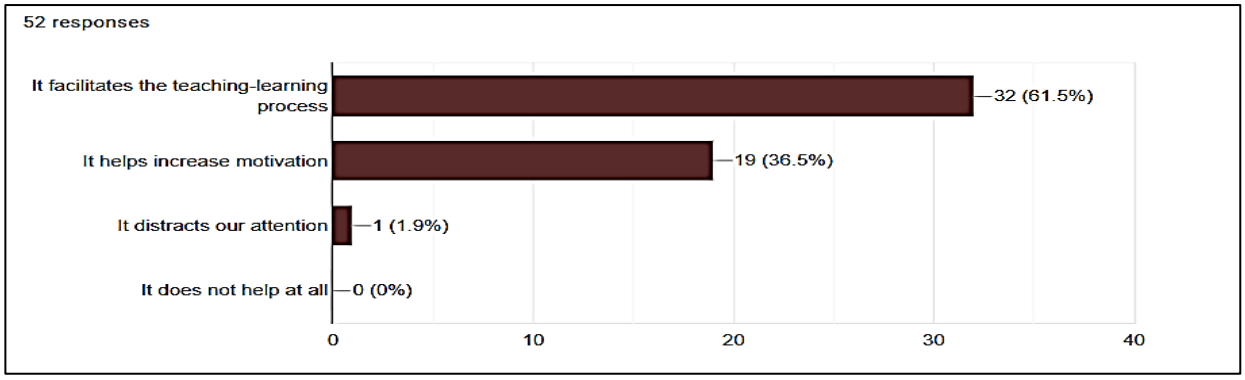

Chart-3: Relate Table 1

Table-2:

Frequency of studying English per day (Hour)

Particulars	Frequency	Percent
1 Hour	31	59.6%
2 Hours	17	32.7%
3 Hours	03	5.8%
4 Hours	01	1.9%
	Total- 52	

The results in Table 2 show that among the four particular hours, the first option (1 Hour) has the highest percentage (59.6%) while the last option (4 Hours) has the lowest percentage (1.9%). The results indicate that students need to increase their study hours for English.

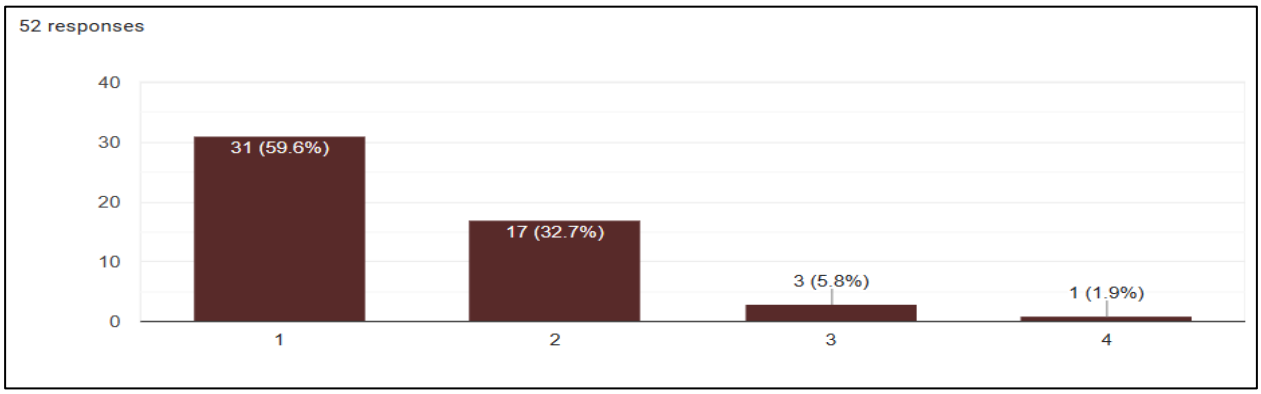

Chart-4: Relate Table 2

Table-3:

English Language skills practice both inside and outside the classroom (Combined answer)

Particulars	Frequency	Percent
Speaking	27	51.9%
Listening	25	48.1%
Reading	27	51.9%
Writing	22	42.3%
	Total- 52	

This table shows a combined answer result where students choose multiple skills while answering. The data in Table 3 demonstrate that within the four language skills, the first option (Speaking) and the third option (Reading) have the highest percentage (51.9%) while the last option (Writing) has the lowest percentage (42.3%). The results indicate that students mostly focus on speaking and reading skills, though listening and writing have good percentages. Students usually read and write while studying their own majors. However, Speaking and listening should be in top priority for communicative purposes in practical.

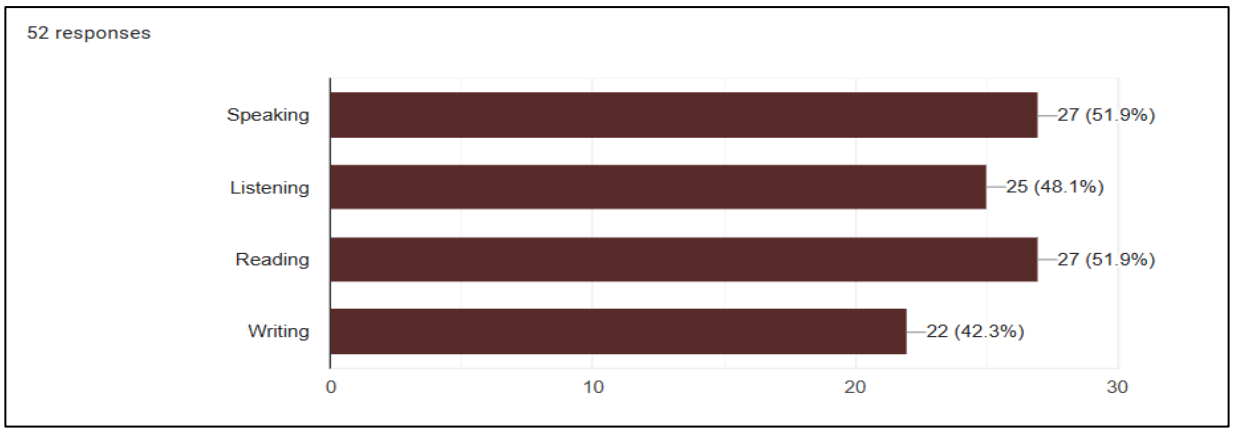

Chart-5: Relate Table 3

Table-4:

Frequency of English Classes students attend in a week, including Communicative and Technical English

Particulars	Frequency	Percent
0-1 Class	20	38.5%
2-3 Classes	13	25.0%
3-4 Classes	05	9.6%
Above 4 Classes	14	26.9%
	Total- 52	

The data in Table 4 demonstrate that within the given four options, the first option (0-1 class) has the highest percentage (38.5%) while the third option (3-4 classes) has the lowest percentage (9.6%). The results indicate that most students don't attend English classes regularly. There are very few students who attend more than four classes in a week. They need motivation and proper guidance to be regular in classes.

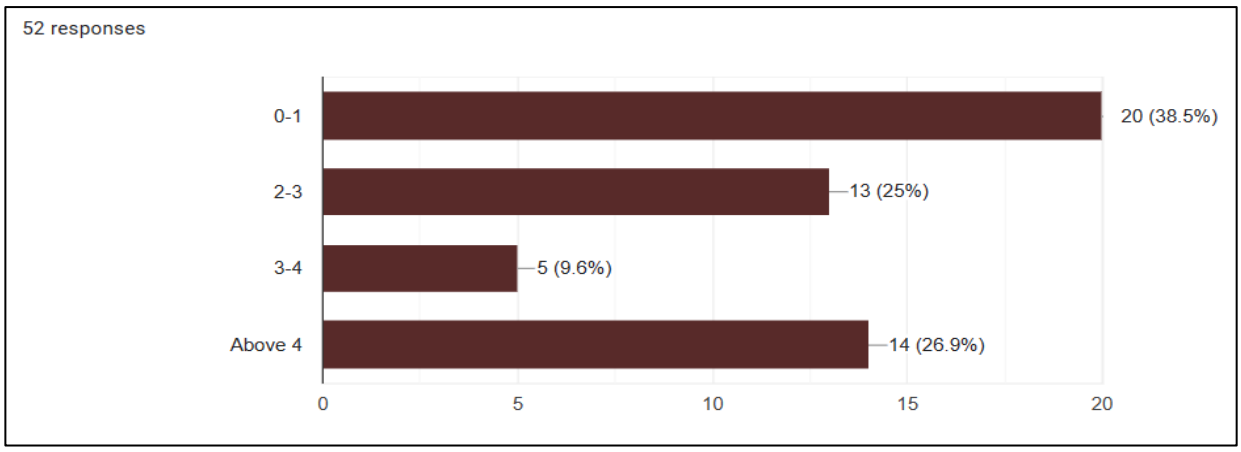

Chart-6: Relate Table 4

Table-5:

Frequency of putting emphasis on Speaking and Listening skills while teachers conduct English classes

Particulars	Frequency	Percent
Always	05	9.6%
Often	23	44.2%
Rarely	26	50%
Never	01	1.9%
	Total- 52	

The data in Table 5 demonstrate that within the given four options, the third option (Rarely) has the highest percentage (50%) while the last option (Never) has the lowest percentage (1.9%). The second option (Often) has a percentage of 44.2 and the first option (Always) has a 9.6% frequency. The results indicate that teachers don't put proper emphasis on speaking and listening skills (major communicative skills). Therefore, teachers should be instructed to put proper emphasis on speaking and listening skills.

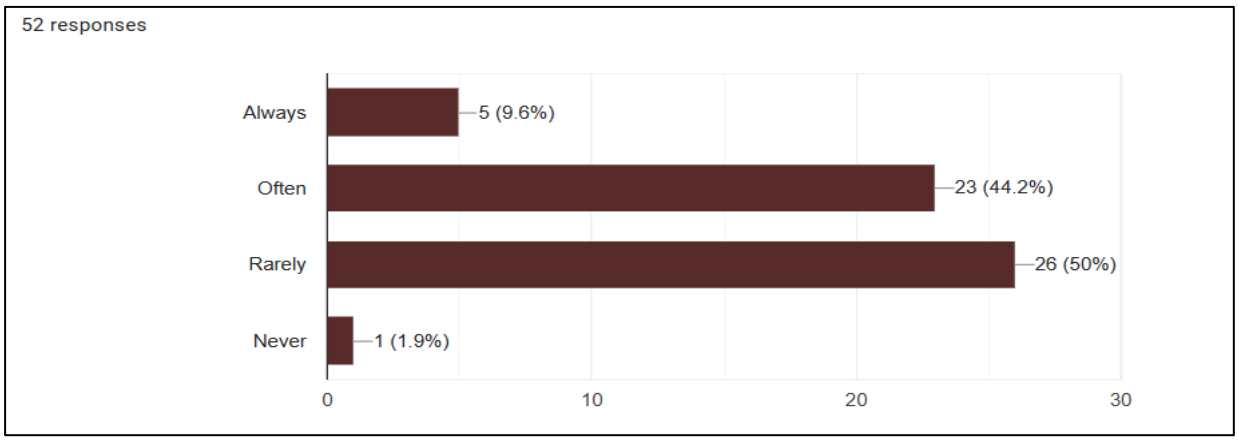

Chart-7: Relate Table 5

Table-6:

Communicative skills are important for engineering students (the extent of believing the following statement)

Particulars	Frequency	Percent
To a great extent	08	15.4%
To some extent	27	51.9%
No idea	10	19.2%
Not at all	08	15.4%
	Total- 52	

The data in Table 6 demonstrate that within the given four options, the second option (To some extent) has the highest percentage (51.9%) while the first (To a great extent) and last (Not at all) options have the lowest percentage (15.4%). The results indicate that most students have less idea about the importance of communicative English. Therefore, they should be made aware of this particular subject.

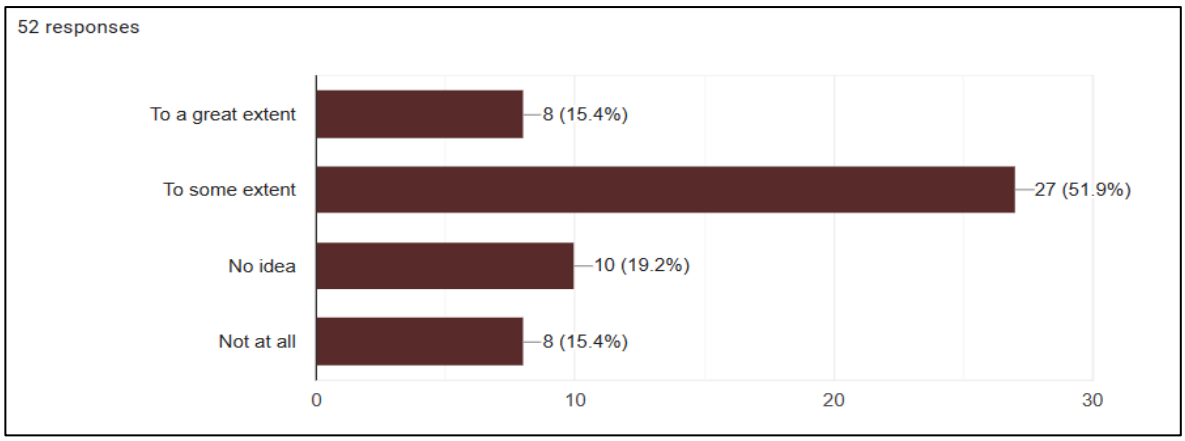

Chart-8: Relate Table 6

Table-7:

Communicative and Technical English skills will help engineering students in the professional field (the extent of believing the following statement)		
Particulars	Frequency	Percent
To a great extent	15	28.8%
To some extent	16	30.8%
No idea	14	26.9%
Not at all	07	13.5%
	Total- 52	

The data in Table 7 demonstrate that within the given four options, the second option (To some extent) has the highest percentage (30.8%) while the last option (Not at all) has the lowest percentage (13.5%). Moreover, the first and third options have average answers. The results indicate that only a few students know about the professional field in engineering sectors, and most of them are in a haze. Therefore, they should be made aware regarding the professional fields and efficiency of Communicative and Technical English.

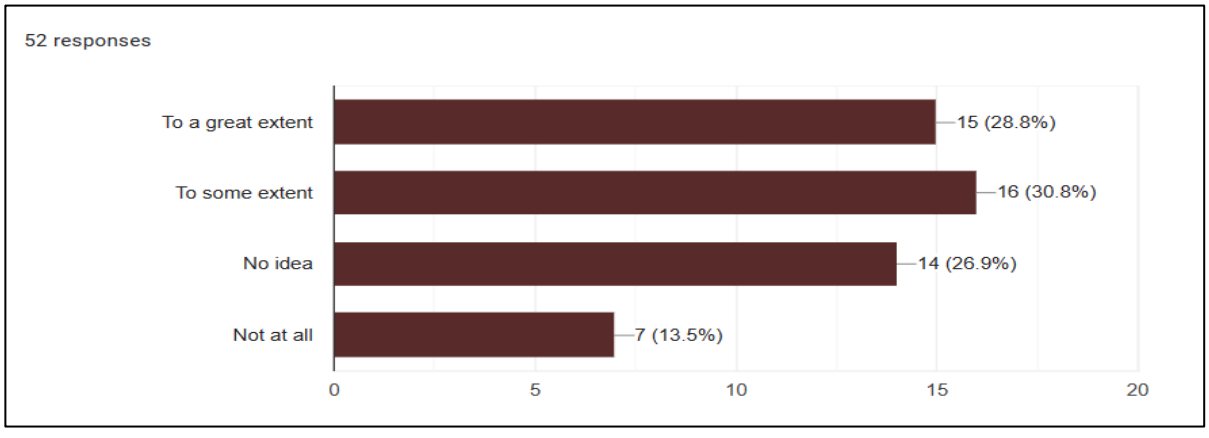

Chart-9: Relate Table 7

Table-8:

Students were told to choose one suitable option for their learning process.

Particulars	Frequency	Percent
I am able to decide my own pace of learning English	05	9.6%
I am able to choose the tasks to be done while learning communicative and Technical English	16	30.8%
My English teachers allow my class to choose how we approach English learning	26	50%
My English teacher let me freely practice English in the Classroom	07	13.5%
	Total- 52	

The data in Table 8 demonstrate that within the given four options, the third option has the highest percentage (50%) while the first option has the lowest percentage (9.6%) and second and fourth options have respectively 30.8% and 13.5%. The results indicate that, sometimes, students choose their own tasks and most of the time teachers allow student's approach to the learning process. Therefore, proper scaffolding is needed in the English classes.

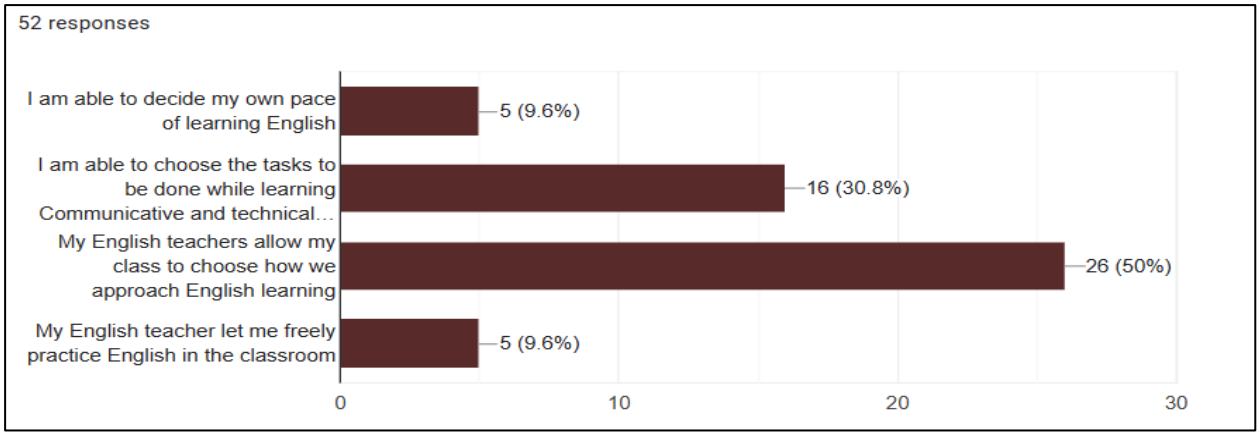

Chart-10: Relate Table 8

Table-9:

The engineering university syllabus covers all terms of communicative and Technical English.

Particulars	Frequency	Percent
Agree	04	7.7%
Strongly agree	06	11.5%
Disagree	23	44.2%
Neutral	19	36.5%
	Total- 52	

The data in Table 9 demonstrate that within the given four options, the third option (Disagree) has the highest percentage (44.2%) while the first option (Agree) has the lowest percentage (7.7%). Moreover, 36.5% of students were neutral and 11.5% of students were strongly agree in this regard. The results indicate that the syllabus of engineering universities are not included with all terms of communicative and Technical English. Though it is tough to determine only with the student's opinion. However, most of the time, it is proved that students can identify their own needs while instructed implicitly. Therefore, proper curriculum should be designed in respect to the needs of engineering students.

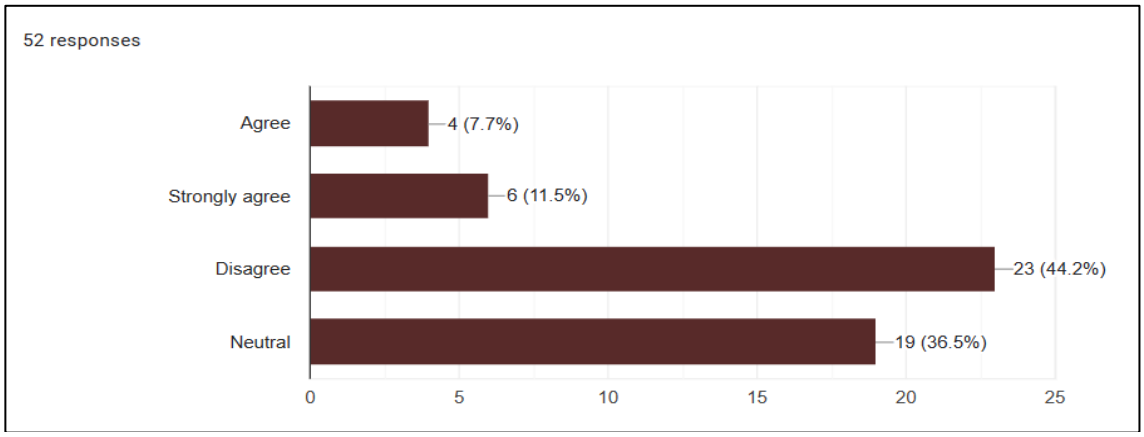

Chart-11: Relate Table 9

Table-10:

Students join the language lab of their department for English classes once a week and it helps them improve their Communicative skills.

Particulars	Frequency	Percent
Agree	16	30.8%
Strongly agree	05	9.6%
Disagree	16	30.8%
Neutral	15	28.8%
	Total- 52	

The data in Table 10 demonstrate that within the given four options, the third option (Disagree) and first option, both have the highest percentage (30.8%) while the second option (strongly agree) has the lowest percentage (9.6%). Moreover, 28.8% of the students were neutral in this regard. The results indicate that generally engineering students attend language lab classes regularly according to their class routine, though it is not determined properly, as same amount of students disagreed with the statement. It actually varied from university to university as results were taken from different universities. Furthermore, a good amount of students were neutral in this regard. Therefore, there could be lack of language lab in some universities. Administration should take care of proper routine design and fulfil the lack of language lab if not available.

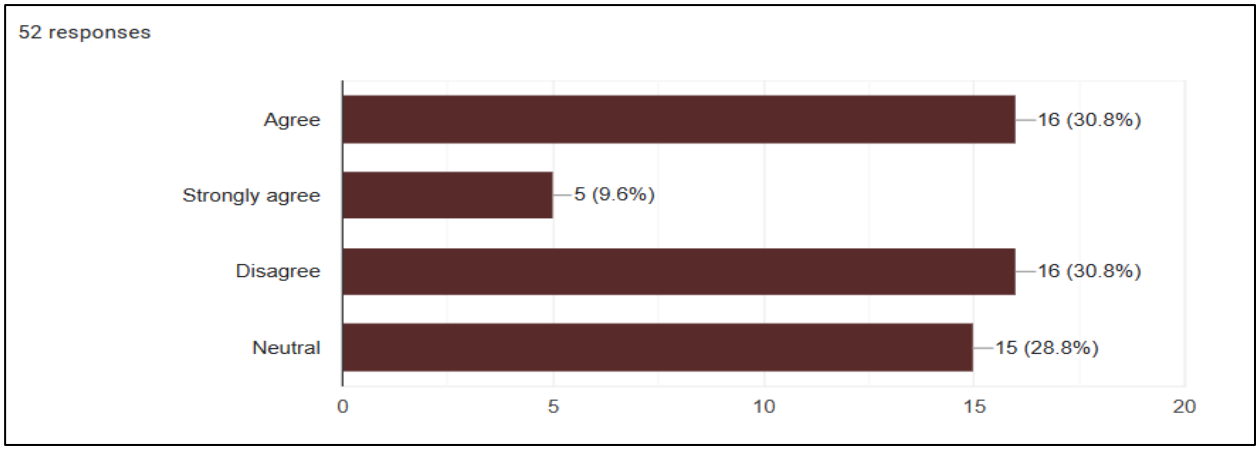

Chart-12: Relate Table 10

4.2 Results of the Teacher's Data

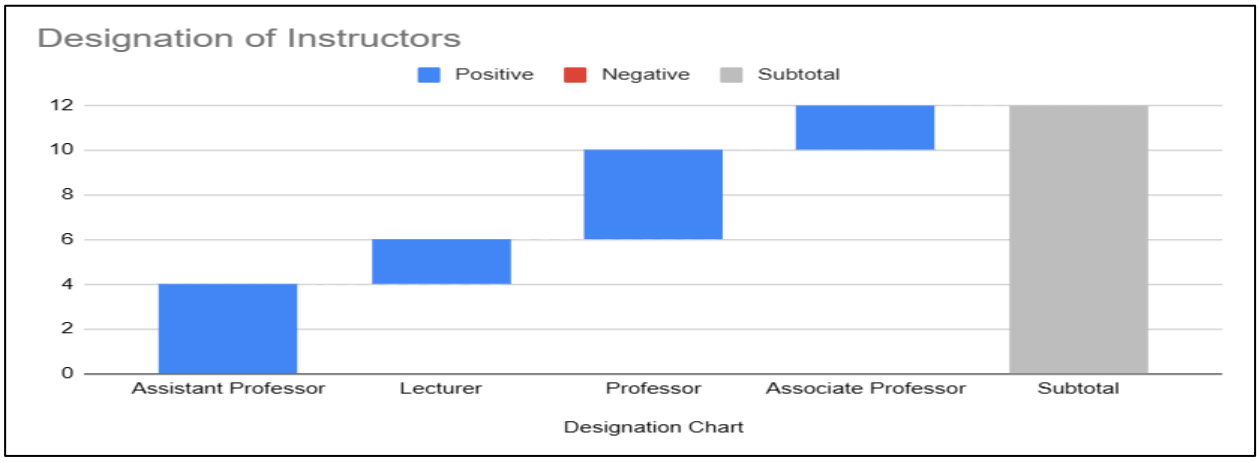

Chart-13: Designation of Teachers

The above-given chart shows the count of designations (Instructors) in this research. Instructors mentioned their designation while answering the questionnaire. Here, 33.3% of the Instructors were Professors and Assistant Professors respectively, and 16.7% of the Instructors were Associate Professors and Lecturers from Different Government Engineering Universities in Bangladesh.

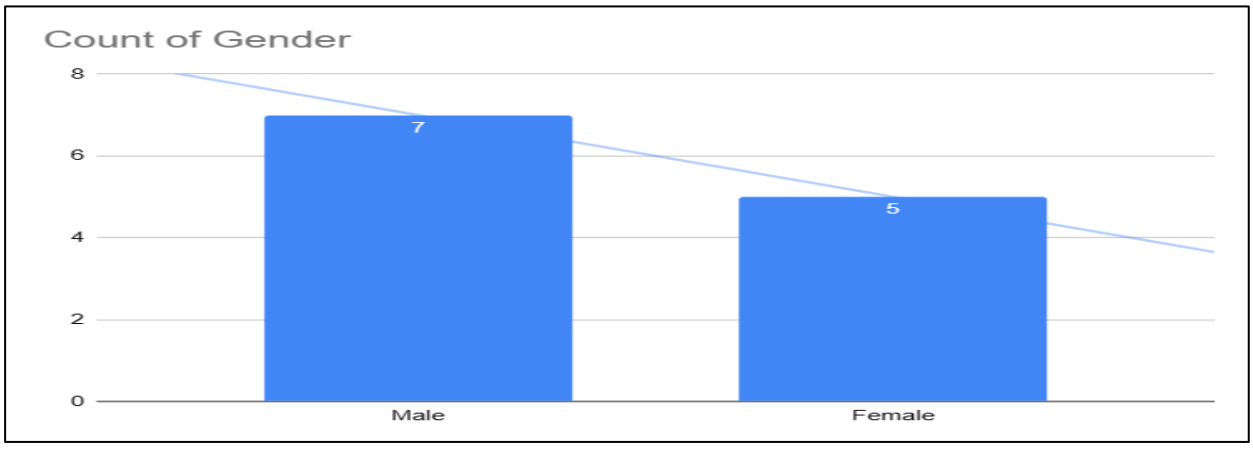

Chart-14: Count of Gender for Teachers

The above-given chart shows the count of genders (Instructors) for this research. Instructors mentioned their genders while answering the questionnaire. Here, 58.3% of the Instructors were male, and 41.7% were female.

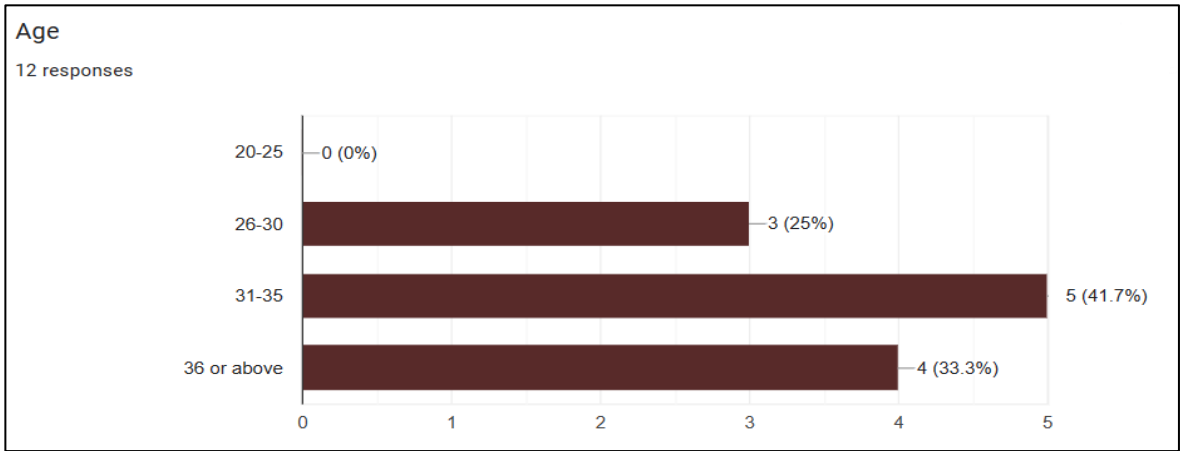

Chart-15: Age count of Instructors

The above-given chart shows the age of the Instructors for this research. 25% of instructors were literally young. 41.7% were middle ages and 33.3% were above 36.

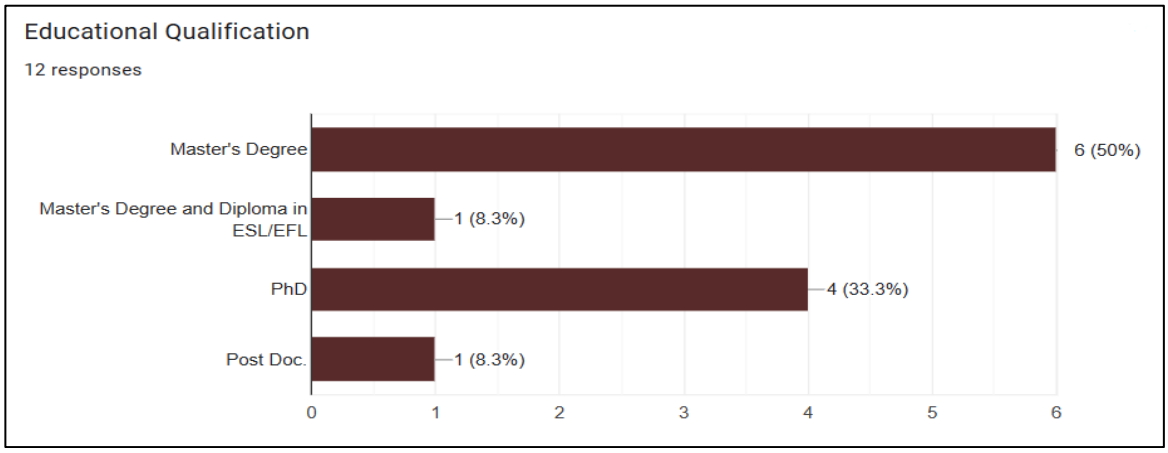

Chart-16: Educational Qualification of Instructors

The above-given chart shows the Educational Qualifications of the Instructors for this research, where half of them were only master's degree holders, and 8.3% had extra qualifications respectively the Diploma in ESL/EFL and Post Doctorate. Moreover, 33.3% were PhD holders.

Table-11:

Instructors' attitude toward improving Communicative English and Technical English (multiple answers)

Particulars	Frequency	Percent
It facilitates the teaching-learning process	11	91.7%
It helps increase motivation	02	16.7%
It distracts our attention	01	8.3%
It does not help at all	00	0%
	Total- 12	

The data in Table 11 demonstrate that within the four attitudes, the first option (It facilitates the teaching-learning process) has the highest percentage (91.7%), while the last option (It does not help at all) has the lowest percentage (0%). The results indicate that Teachers' attitudes toward communicative and Technical English are straightforward and responsive.

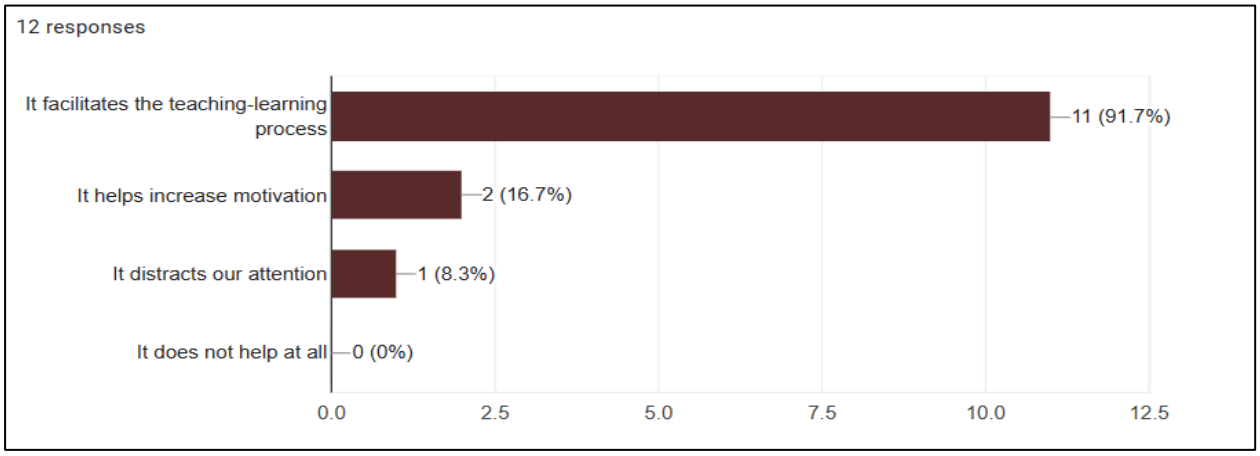

Chart-17: Relate Table 11

Table-12:

Frequency of English Classes teachers conduct in a week, including Communicative and Technical English

Particulars	Frequency	Percent
0-1	00	0%
2-3	00	0%
3-4	01	8.3%
Above 4	11	91.7%
	Total- 12	

The data in Table 12 demonstrate that within the four options, the last option (Above 4) has the highest percentage (91.7%), while the first, second and third options respectively have 0% and 8.3%. The results indicate that teachers of Bangladeshi Engineering universities conduct their classes on a regular basis including communicative and technical English. Therefore, no lack of classes in respect of frequency has been shown here.

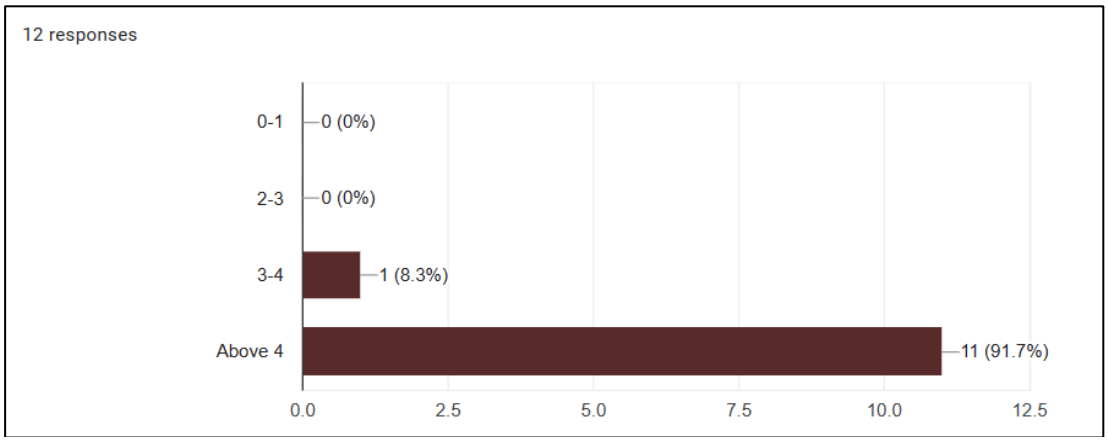

Chart-18: Relate Table 12

Table-13:

Frequency of putting emphasis on Speaking and Listening skills while teachers conduct English classes

Particulars	Frequency	Percent
Always	03	25%
Often	07	58.3%
Rarely	02	16.7%
Never	00	0%
	Total- 12	

The data in Table 13 demonstrate that within the four options, the second option (Often) has the highest percentage (58.3%), while the first (Always), third (Rarely) and fourth (Never) options respectively have 25%, 16.7% and 0%. The results indicate that teachers of Bangladeshi Engineering universities often emphasize on major communicative skills oral-auditory (speaking and listening). Therefore, the frequency of emphasizing these should increase so that students' oral-auditory skills could be improved more adequately.

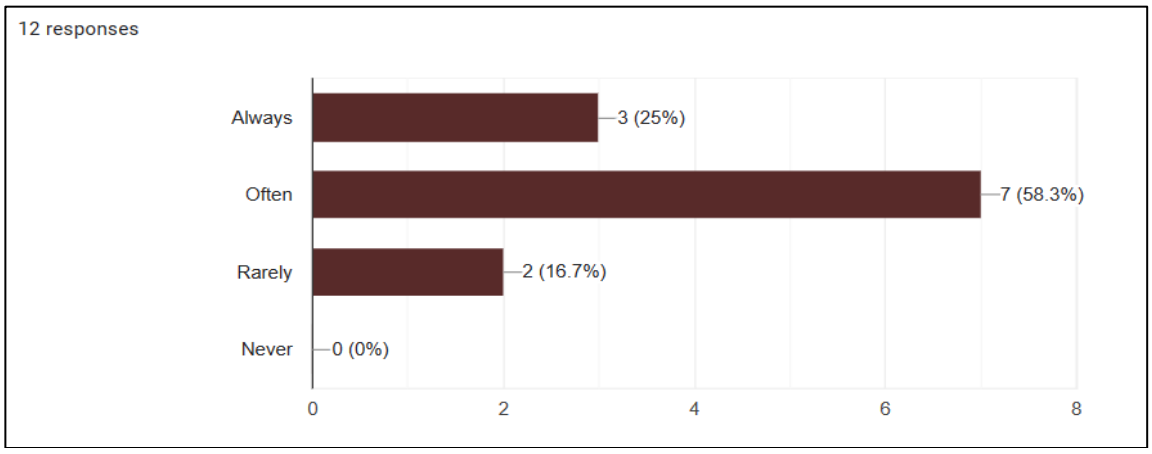

Chart-19: Relate Table 13

Table-14:

Communicative and Technical English skills will help engineering students in the professional field (the extent of believing the following statement)

Particulars	Frequency	Percent
To a great extent	12	100%
To some extent	00	0%
No idea	00	0%
Not at all	00	0%
	Total- 12	

The data in Table 14 demonstrate that within the given four options, the first option (To a great extent) has the highest percentage (100%) while the other options have no supporters. The results indicate that teachers were aware of the professional fields and importance of communicative and technical English for students, however; same questions' answers from students were inconvenience in this regard. Therefore, teachers

should emphasize regarding professional fields and the importance of Communicative and Technical English in their classes.

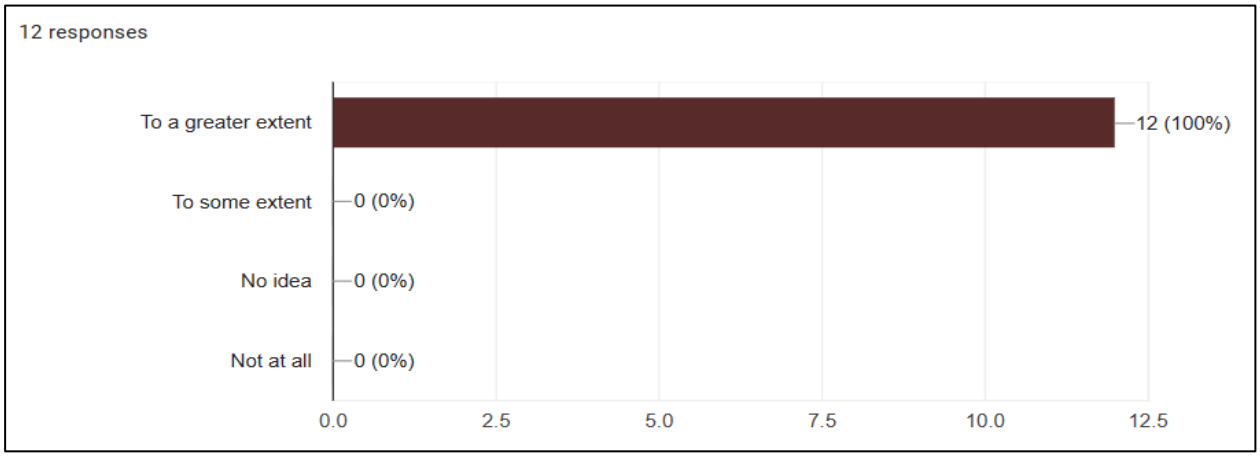

Chart-20: Relate Table 14

Table-15:

The engineering university syllabus covers all terms of communicative and Technical English.

Particulars	Frequency	Percent
Agree	01	8.3%
Strongly agree	02	16.7%
Disagree	06	50%
Neutral	03	25%
	Total- 52	

The data in Table 15 demonstrate that within the given four options, the third option (Disagree) has the highest percentage (50%) while the first option (Agree) has the lowest percentage (8.3%). Moreover, 25% of teachers were neutral and 16.7% of teachers strongly agreed in this regard. The results indicate that the syllabus of engineering universities are not included with all terms of communicative and Technical English. Students' and teachers' answers regarding this question were pretty similar. Therefore, proper curriculum should be designed in respect to the needs of engineering students.

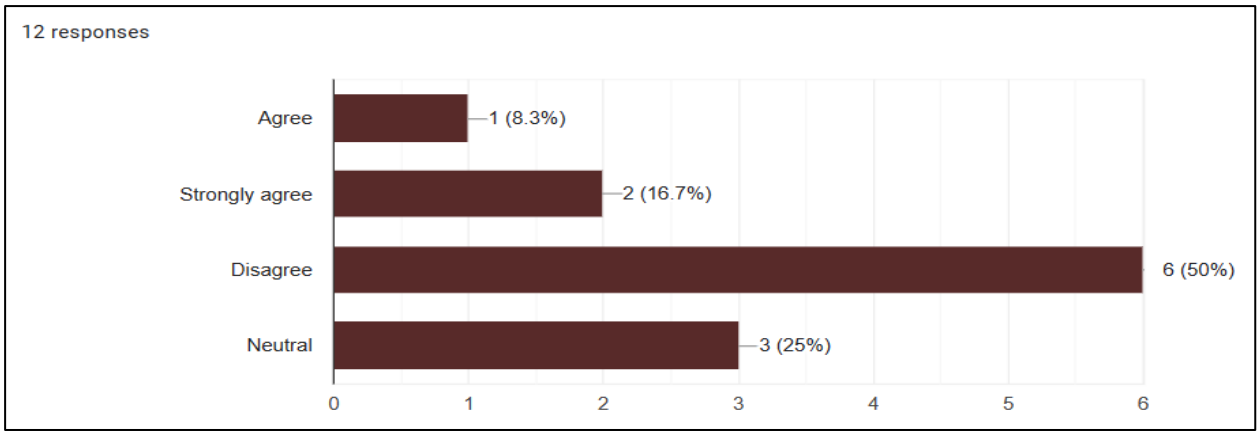

Chart-21: Relate Table 15

Table-16:

Teachers conduct classes in the language lab for English classes once a week and it helps students improve their Communicative skills.

Particulars	Frequency	Percent
Agree	10	83.3%
Strongly agree	02	16.7%
Disagree	00	0%
Neutral	00	0%
	Total- 12	

The data in Table 16 demonstrate that within the given four options, the first option (Agree) has the highest percentage and the second option (Strongly agree) has 16.7% supporters. Moreover, the third (Disagree) and fourth (Neutral) options were no supporters in this regard. The results indicate that generally English teachers of Engineering universities conduct classes in the language lab regularly according to their class routine. It could vary from university to university as results were taken from different universities. Furthermore, a good amount of students were neutral while answering the same question. Some hazes must be there to interrogate. Therefore, there could be a lack of language labs in some universities. The administration should fulfil the lack of a language lab if not available.

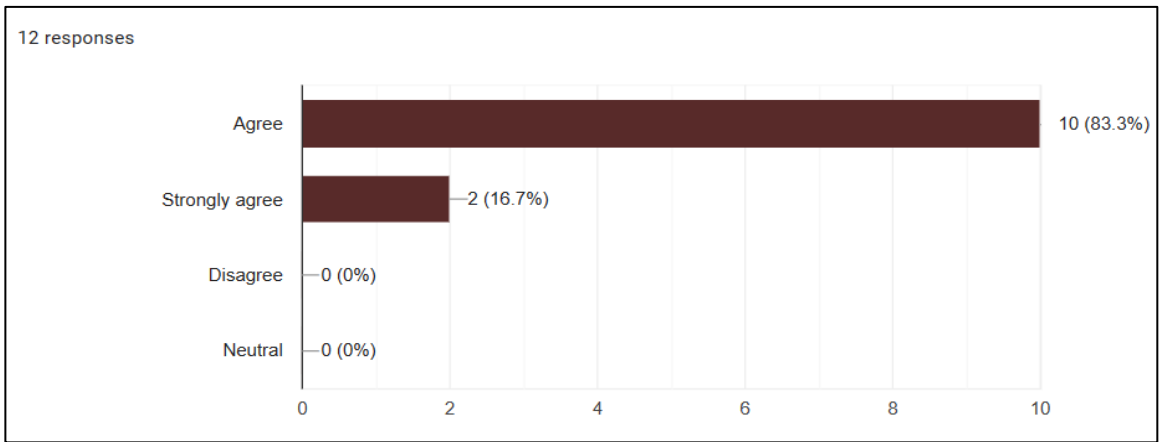

Chart-22: Relate Table 16

5. Discussion on Findings in respect of the Research Questions

The results, findings and discussion of the data written above are all concerned with the research questions. There are three research questions in this paper. The three questions mentioned were convenient for the research questionnaires used to collect results. The collected results simultaneously found the anticipated answers adequate to the research questions. The first research question is "How can the implication of proper pedagogy improve the English language proficiency of Engineering Students?" The study exposed the need for proper pedagogy and communicative competence in English by identifying the problems (see, table-3, 4, 5, 6, 7, 9, 13, and 15). The second research question is "How does learning Technical and Communicative English benefit engineering students?" The study exposed the lack of knowledge and aptitude towards communicative and technical English among the students and teachers (see, table-4, 5, 6, 7, 9 and 11). The third research question is "How can proper pedagogy make the teaching and learning process accessible and effective?" The study exposed that the teaching and learning

processes are still not properly accessible and effective as found in the questionnaire's answers as well as in the qualitative interview question's answers (see, table-1, 2, 4, 5, 6, 7, 8, 9, 10, 13, and 15). Therefore, there is a lack of proper pedagogy design and implementation in Bangladeshi Engineering Universities. Mentioned tables and their discussions and suggestions are next to each other in the results and findings (4.1. and 4.2.).

6. Conclusion and Recommendations

Pedagogy is one of the major tools for the teaching and learning process. It helps the teachers and students as a guide to their recommended subjects. English has become the most accepted lingua franca as well as the trade language worldwide today; therefore, it is significant to learn English effectively to cope with modern civilization. Thus, pedagogy can facilitate this process practically. Therefore, educational administration should focus on designing proper pedagogy with respect to the student's needs regarding the problem. Need analysis is another important process to design proper pedagogy. Not only should the designing of pedagogy but also implementation be focused. Moreover, communicative and technical English are more relevant to engineering students to fulfil their goals. The present study is designed to identify the lack of Communicative and Technical English pedagogy for Engineering Students at the Tertiary Level in Bangladesh. This research identifies that the students are not sufficiently skilled to fulfil the target language needs as the existing curriculum design does not adequately meet the language needs of the students from engineering disciplines. This paper tries to disclose the gap between learners' needs and the existing curriculum.

Based on the findings, some recommendations might come in order to fill the gap between needs and pedagogy. While designing the syllabus, it must be included with the linguistic competence part and afterwards the communicative competence part. Without knowing the structure of a language, it is impossible to meet its semantic aspects. Shared language could be a task in the classroom as it helps the input and interaction. Proper scaffolding is required from the teachers while teaching explicitly. Implicit teaching could include Dual Mode Model (Skehan, 1998) and task-based teaching. Language lab is mandatory for all universities to run English courses and teachers should be trained in order to conduct classes in the lab. For Technical English, vocabulary and other technical terms should be part of incidental learning (highly recommended). Last but not the least, the affective filters (Krashen, 1982) should be removed by creating a student-friendly environment in the classroom.

References

Watkins, Chris; Mortimore, Peter (1999). "1: Pedagogy: What do we know?" Understanding Pedagogy and its Impact on Learning. ISBN 9781853964534.

Murphy, Patricia (2 September 2003). "1. Defining Pedagogy". In Gipps, Caroline V. (ed.). Equity in the Classroom: Towards Effective Pedagogy for Girls and Boys. Routledge. ISBN 978-1-135-71682-0.

Peel, Edwin A. "pedagogy". www.britannica.com. Retrieved 15 August 2022.

Howell, Kerry E. (13 November 2012). "Preface". An Introduction to the Philosophy of Methodology. SAGE. ISBN 978-1-4462-9062-0.

Rahman, M., Hussain, N., & Uddin, K. (2017). Evaluating English language courses of engineering universities in Bangladesh: Insiders' perceptions. NAEM Journal, 12(24), 113-123.

Sultana, F., Sultana, N., & Zakaria, D. A. (2019). An evaluation of fundamental English courses: A scrutiny of their effectiveness at an engineering university, Bangladesh. International Journal of English and Literature (IJEL), 9(3), 47-62.

Kaliappan, Sasirekha & Krishnamoorthy, Rathiga & .M, Sarpparaje & G S, Suresh. (2018). English language pedagogy for engineering students through domain-specific literature – Classroom experiments and experience. Asian ESP Journal. 14. 229-250.

Chaudhury, T.A. (2009). Identifying the English language needs of Humanities students at Dhaka University. The Dhaka University Journal of Linguistics, 2 (4), 59-91.

Mognhode, T., & Woldemariam, H. Z. (2015). The English language needs of business students at Adama Science and Technology University, Ethiopia. Nawa Journal of Language and Communication, 9(1).

Talif, R., & Noor, R. (2009). Connecting language needs in the workplace to the learning of English at tertiary level. Pertanika Journal of Social Science & Humanities, 17(2), 65– 77.

Lestari, S., Syahrial, & Suwarno, B. (2017). Language skills, sub-skills and vocabularies needed by automotive department students of technical high school: A need analysis study. Journal of Applied Linguistics and Literature, 2(2).

Bogdan, R. C. & Biklen, S. K. (2006). Qualitative research in education: An introduction to theory and methods. Allyn & Bacon. ISBN 978-0-205-51225-6.

Creswell, J. W., Plano Clark, V. L., & Garret, A.L. (2008). Methodological issues in conducting mixed methods research designs. In M. Bergman (Ed.), Advances in mixed method research (pp. 66-84). London: Sage.

Brown, J. D. (1988). Understanding research in second language learning: A teacher's guide to statistics and research design. Cambridge University Press.

Likert, R. (1932). A technique for the measurement of attitudes. Archives of psychology.

Skehan, P. (1998). A Cognitive Approach to Language Learning. Oxford: Oxford University Press.

Krashen, S. (1982). Principles and practice in second language acquisition. New York: Prentice-Hall International.

Krashen, S., & Terrell, T. (1983). The natural approach. San Francisco, CA: Alemany Press.

Krashen, S.D. (1985). The input hypothesis: Issues and implications. New York: Longman.

Krashen, S. D. (1988). Second language acquisition and second language learning. Prentice-Hall International.

Abdullah Alamer. "Basic Psychological Needs, Motivational Orientations, Effort, and Vocabulary Knowledge," Studies in Second Language Acquisition (2021).

ijlls.org, www.academypublication.com, www.researchgate.net, en.wikipedia.org, www.elejournals.com, archive.thedailystar.net.