



IMPACT FACTOR:3.021

PP:305to318

A Needs Analysis Survey of Engineering Learners Learning English as a Second Language

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Abstract

The present article deals with the details about a survey conducted to gather information about the exposure of English language the Engineering students get till the second year of Engineering. Further, it tries to explore the attitude of the learners towards English language and at the end, it tries to observe the learners opinion on the present syllabus of English in Engineering.

Key Terms: Needs Analysis, Engineering Learners, ESL

Introduction

To discover the attitude of engineering students to English and the status of English engineering colleges the researcher circulated a questionnaire. The objective of the questionnaire was to find out the language exposure the learners got till date. The exposure in terms of four language skills; listening-speaking-reading-writing, i.e. how much time they do spend on these language skills and in what context- educational or social.

The questionnaire was surveyed to 63 the students who were in the second year of engineering and have studied English under the subject title 'Communication Skills' during their first semester. The questionnaire was circulated to the second year engineering students so that they are able to answer the critical questions asked to evaluate the syllabus of the subject 'Communication Skills'.

Questionnaire

This section gives details of the questions asked in the questionnaire. First, a few questions in the questionnaire were intended to find out the personal details of the learners including the name, age, sex, branch of engineering, medium of instruction in school, father's education, mother's education and languages known.

Next part leads to discover the exposure to reading skills in terms of reading- newspaper, magazine and books (prescribed and other than prescribed). The following section was intended to find out the exposure to listening- listening to radio, songs, watching movies, watching TV serials. Next, study the exposure of writing - writing application, chat, letter and email. Last, find out the exposure to speaking- use of language in speaking in routine, taking part in the debate, GD and elocution. All the language exposure questions were further categorized under language preference (ex. which language they prefer to read) frequency of the use of language (ex. how frequently they read English newspaper).

The following portion of the questionnaire was aimed to investigate the objective of the learners to study English language followed by the questions intended to investigate the objective of learning writing to the learners. Here, the questions were formed in a way to find out what learners think about the importance of English language and English writing skills. They were given several options to tick under three categories-very important, important and not-important. The next question focuses to investigate the opinions of the learners on the different types of writing. They were given several types of writing and were asked to categorize them under three categories- very important, important and not-important.

The last portion of the questionnaire leads to the questions on evaluating the current syllabus of the subject 'Communication Skills' of engineering. At last, it was also asked to tick the problematic areas of language and to write the efforts they have made to overcome.

Result of Needs Analysis

1. Gender

The given table indicates the gender distribution of the students who responded to the questionnaire. It can be noticed that there were total 63 respondents to the questionnaire of which 55 were male students which make 87.3 % and 8 female students which make 12.7 of the total number.

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	55	87.3	87.3	87.3
Female	8	12.7	12.7	100.0
Total	63	100.0	100.0	

2. Age

No	Age	Students
1	17.1 - 18	16
2	18.1- 19	30
3	19.1- 20	15
4	20.1 - 21	1
5	21.1- 22	1

Distributing the students according to their age, it can be noticed that in the first age group 17.1 to 18 there were 16 students. There were 30 students between 18.1 and 19. There were 15 students who were in the third age group 19.1 to 20. And, in the last two age groups, there were only two students, one in each. It could be seen that major students were below 20 years of age.

3. Mother Tongue

Mother tongue

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Gujarati	59	93.7	93.7	93.7
Hindi	3	4.8	4.8	98.4
Kutchi	1	1.6	1.6	100.0
Total	63	100.0	100.0	

If the data analyzed keeping in mind the mother tongue of the students it can be seen that there were 59 students out of 63 who had Gujarati as their mother tongue. Whereas 3 students were having Hindi as mother tongue and 1 student having Kutchi as a mother tongue. So, most of the students were having the Gujarati language as their mother tongue.

4. Language use (Medium of instruction)

The title 'medium of instruction' here divided into three parts, at home, at school and at college.

A. At home

Language spoken at home

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Gujarati	60	95.2	95.2	95.2
Hindi	2	3.2	3.2	98.4
Kutchi	1	1.6	1.6	100.0
Total	63	100.0	100.0	

Here the table indicates that 60 students speak Gujarati at their home or we could say they have Gujarati as a medium of instruction at their home. Only 2 and 1 student speak Hindi and Kutchi at their home respectively. The following table indicates the data of the medium of instruction at school.

B. At school

School medium of Instruction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Gujarati	51	81.0	81.0	81.0
	Hindi	1	1.6	1.6	82.5
	English	11	17.5	17.5	100.0
	Total	63	100.0	100.0	

It can be observed that majority of the students were instructed in the school in the Gujarati language, in numbers 81% students were from that group. On the other hand, only 17.5 % students were instructed in English and 1.6% students were instructed in Hindi. So the majority of the students were having the habit to learn in Gujarati. The next table reveals the data of the medium of instruction in the college.

C. At college

College medium of Instruction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	English	63	100.0	100.0	100.0

As all the students were from the same college, all were instructed in English. Nobody instructs or uses either Gujarati or Hindi in the college.

Now if the data of language spoken at home, the medium of instruction in school and medium of instruction in college are compared it can be seen that most of the students did not have a habit of listening and speaking English. Even they don't have a habit of using English at home that is in a social context. Furthermore, English is the most neglected subject in 11th and 12th science as students always focus on the main subjects and try to score only passing marks in English. They were taught keeping in mind how to get passing marks only, that is through repeating grammar rules. They were never asked in schools to speak in English.

Now, that makes it difficult as students who have no habit of using English, and have to use only English in the college. They are forced to speak English and even learn the subjects engineering in English.

5. Languages Known

Languages known

	Understand			Speak			Read			Write		
	Well	Not so well	Not at all	Well	Not so well	Not at all	Well	Not so well	Not at all	Well	Not so well	Not at all
Gujarati	62	-	1	62	-	1	60	2	1	57	5	1
Hindi	60	3	-	54	9	-	58	5	-	51	12	-
English	47	14	2	23	37	3	52	11	-	27	35	1

Observing table it could be depicted that from 63 students 62 students were able to understand Gujarati well and 1 student was not able to understand Gujarati. Same is the case with speaking, 62 students were able to speak Gujarati and 1 was not able to speak Gujarati. Next, 60 students were able to read Gujarati well, 2 students were able to read a little bit of Gujarati whereas 1 was not able to read at all. In case of writing 57 were able to write well in Gujarati, 5 were not well with writing and 1 student was not able to write at all.

In case of Hindi 60 students were able to understand Hindi well whereas 3 were having difficulty. 54 students were able to speak Hindi well and only 9 were not able to speak Hindi well. In case of reading 58 were able to read Hindi while 5 were having difficulty in reading Hindi. 51 students were good with writing in Hindi while 12 were having difficulty in writing.

In case of understanding English 47 students were able to understand English well, 14 were having difficulty in understanding English while 2 students were not able to understand English at all. Furthermore, 23 students were able to speak English well whereas 37 were having difficulty in speaking and 3 were not able to speak at all. In the case of reading 52 were able to read English well while 11 were having difficulty. Last, 27 students were well with writing in English while 35 were having difficulty and 1 student could not write in English at all.

As the researcher was concern about knowing the language competency of English, he found that the students have problems with English. Around 30% students have problems in understanding the English language. Reading, around 80% students were able to read in English. Now, the question of productive skills, speaking and writing, around 63% students face difficulty in speaking in English while 37% students can speak English. Writing which is a most important skill for students as it is the criteria to check their

knowledge and understanding in the exam, to very surprise 57% students were having difficulty in writing in English, only 43% students can write in English.

There are possibilities that the student is not good at speaking and writing, the productive skills, he finds himself inferior and avoids taking part in the classroom discussion. There are possibilities that even if the student knows the answer he could not take part because of the language barrier.

Therefore in the next portion of the questionnaire, the researcher tried to find out the reasons for having difficulty in speaking and writing by exploring the language exposure they were having till date.

6. Reading Exposure

A. News Paper

News paper language- English

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid regularly	5	7.9	9.3	9.3
occasionally	41	65.1	75.9	85.2
never	8	12.7	14.8	100.0
Total	54	85.7	100.0	
Missing System	9	14.3		
Total	63	100.0		

When the students were asked about reading English news paper, the answer was really surprising for the researcher that only 5 students read news paper regularly. Apart from that 41 students read English news paper occasionally, 8 students never read English news paper and 9 students have not responded to the question. So, it could be said that only 7.9% students read the news paper and have exposure of 'reading' through news papers.

B. Reading English books over and above textbooks

Do you read any English books over and above textbooks?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Regularly	9	14.3	14.3	14.3
Occasionally	39	61.9	61.9	76.2
Never	15	23.8	23.8	100.0
Total	63	100.0	100.0	

Further to check the exposure to reading, the researcher asked if the students read books other than prescribed in the syllabus. Analyzing responses the researcher found that only 9 (14.3%) students read other books regularly. The major portion 36 (63.9) students occasionally read and 15 (23.8) students never read any books other than prescribed in the syllabus. So, most of the students have comparatively less exposure of the reading books other than prescribed in the syllabus.

C. Reading book prescribed in the syllabus

Do you read textbooks prescribed in you syllabus?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Regularly	36	57.1	57.1	57.1
Occasionally	26	41.3	41.3	98.4
Never	1	1.6	1.6	100.0
Total	63	100.0	100.0	

When students were asked if they read books prescribed in the syllabus 36 students responded that they read regularly, 26 responded that they read occasionally and 1 student responded that he never reads. So, 57% students read books prescribed in their syllabus.

From the above tables, it can be concluded that most of the students do not have exposure to the reading, which is very important language skill. It does not make any difference if the content of the reading is from the syllabus or out of the syllabus less than 50% students have exposure to the reading only around 10% spend time regularly on reading.

7. Listening exposure

A. listening radio in English

In which language do you prefer? English

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Regularly	4	6.3	11.1	11.1
Occasionally	10	15.9	27.8	38.9
Never	22	34.9	61.1	100.0
Total	36	57.1	100.0	
Missing System	27	42.9		
Total	63	100.0		

The table above reveals the data of the responses when the students were asked if they listen to the radio in English. Only 4 students responded that they listen to the English radio regularly, 10 students

responded they listen occasionally, and 22 students never listen to the English radio. Furthermore, 27 students have not attempted the question.

B. Listening English songs

In which language do you prefer? English

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regularly	19	30.2	30.2	30.2
	Occasionally	30	47.6	47.6	77.8
	Never	14	22.2	22.2	100.0
	Total	63	100.0	100.0	

When students were asked if they listen to songs, 100% students responded positively that they listen to the songs. When it came to the listening songs in English 19 students responded that they listen regularly, 30 students responded occasionally and 14 students responded never. Here also, only 30% students have regular exposure to the listening songs 70% students do not have listening exposure through songs.

C. Watching movies in English

In which language do you prefer? English

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regularly	22	34.9	36.1	36.1
	Occasionally	20	31.7	32.8	68.9
	Never	19	30.2	31.1	100.0
	Total	61	96.8	100.0	
Missing	System	2	3.2		
Total		63	100.0		

The table above describes the analysis of the data when the students were asked if they watch movies in English. Only 22 students responded that they regularly watch movies in English, 20 students occasionally watch movies in English, 19 students never watch movies in English while 2 students did not attempt the question. Here also only 34% students watch movies in English regularly.

D. Watching English movies dubbed in Hindi

English movie dubbed in Hindi

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regularly	43	68.3	70.5	70.5
	Occasionally	17	27.0	27.9	98.4
	Never	1	1.6	1.6	100.0
	Total	61	96.8	100.0	
Missing	System	2	3.2		
Total		63	100.0		

When it came to watching English movies dubbed in Hindi the figures and numbers changed drastically. 43 students watch dubbed movies regularly, 17 students watch occasionally, 1 student never watch and 2 students did not attempt the question. It makes the thing clear here that when students were asked if they watch English movies in English only 34% students responded positively but the same students were asked if they watch English movies dubbed in Hindi 70% students responded positively. They do not have listening practice in English.

E. Watching English movies with subtitles

English movie with subtitles

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regularly	20	31.7	32.8	32.8
	Occasionally	36	57.1	59.0	91.8
	Never	5	7.9	8.2	100.0
	Total	61	96.8	100.0	
Missing	System	2	3.2		
Total		63	100.0		

It came to the question of watching English movies with subtitles only 20 students responded regularly, 36 students responded occasionally, 5 students responded never and 2 did not respond to the question.

F. Watching TV serials in English

In which language do you prefer? English

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regularly	8	12.7	14.0	14.0
	Occasionally	19	30.2	33.3	47.4
	Never	30	47.6	52.6	100.0
	Total	57	90.5	100.0	
Missing	System	6	9.5		
Total		63	100.0		

When the students were asked if they watch any TV serial in English only 8 students responded regularly, 19 students responded occasionally, 30 students responded never and 6 students did not respond to the question. Here also the numbers show that the students have significantly less exposure to watching TV serials in English.

8. Writing exposure

A. Writing letters and emails in English

Which language do you prefer ? English

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regularly	31	49.2	58.5	58.5
	Occasionally	20	31.7	37.7	96.2
	Never	2	3.2	3.8	100.0
	Total	53	84.1	100.0	
Missing	System	10	15.9		
Total		63	100.0		

When the students were asked if they write any Email or letters and which language do they prefer. 53 students responded positively that they write emails and letters whereas 10 responded negatively. When they were asked if they write letters and emails in English, from 53 students, 31 students responded regularly, 20 occasionally and 2 never.

B. Writing application, request or complaint in English

Which language do you prefer ? English

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regularly	37	58.7	72.5	72.5
	Occasionally	12	19.0	23.5	96.1
	Never	2	3.2	3.9	100.0
	Total	51	81.0	100.0	
Missing	System	12	19.0		
Total		63	100.0		

From the 63 students, 51 students responded positively that they write application, request and complaint while 12 students responded negatively. In the next question, when they were asked if they write application, request or complaint in English, 37 students responded regularly, 12 responded occasionally and 2 responded never.

C. Writing – chatting

Chatting

	Regularly	Occasionally	Never
WhatsApp	62	1	-
Hike	41	12	10
Facebook	48	11	4

To know if the students are fond of chatting, 100% students responded positively that they use any mobile application or computer application for chatting. When they were asked if they use ‘WhatsApp’ application 62 students responded regularly and only 1 student responded occasionally. When it came to using ‘Hike’ 41 students responded regularly, 12 students responded occasionally and 10 students responded never. When they were asked about using ‘Facebook’ 48 students responded regularly, 11 students responded occasionally and 4 students never. It makes clear that all the students use one or other application for chatting and use regularly.

D. Writing- Language used for chatting

which language do you prefer for chatting?- Guj-English

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regularly	56	88.9	88.9	88.9
	Occasionally	6	9.5	9.5	98.4
	Never	1	1.6	1.6	100.0
	Total	63	100.0	100.0	

The students were asked which language they use for chatting, in case of English most of the students responded occasionally. But it came to the use of a combination of Gujarati-English, letters are in English but the meaning is in Gujarati, 56 students responded regularly, 6 students responded occasionally and only 1 student responded never. It could be said that chatting which is very common in college students they avoid using English language and developed a new convenient way by using English letter which makes sense in Gujarati.

9. Speaking exposure

A. Speaking- Communication in English

	Most of the time	Often	sometimes	Never
Family members	7	7	27	27
Friends	10	19	31	3
English teachers	35	14	13	1
Teacher of the other subjects	21	20	20	2

When it came to exposure or the use of English language in speaking, first with the family members it was found that 7 students use English to communicate most of the time, 7 use often, 27 use sometimes and 27 students never use English to communicate with family members. Second, using English to communicate with friends, 10 students responded most of the time, 19 responded often, 31 responded sometimes and 3 responded never. Third, with English teachers, 35 responded most of the time, 14 responded often, 13 responded sometimes and 1 student responded never. Fourth, using English to communicate with the teachers of other subjects, 21 students responded most of the time, 20 responded often, 20 responded sometimes and 2 responded never.

B. Speaking- using English in debate, group discussion and elocution

What language do you prefer? - English

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regularly	16	25.4	39.0	39.0
	Occasionally	17	27.0	41.5	80.5
	Never	8	12.7	19.5	100.0
	Total	41	65.1	100.0	
Missing	System	22	34.9		
Total		63	100.0		

When the students were asked if they take part in the debate, group discussions or elocution competitions 41 students responded positively that they take part whereas 22 students responded negatively. When the students were asked if they use English in the competitions, 16 students responded regularly, 17 students responded occasionally and 8 students responded never.

10. Objectives of learning English

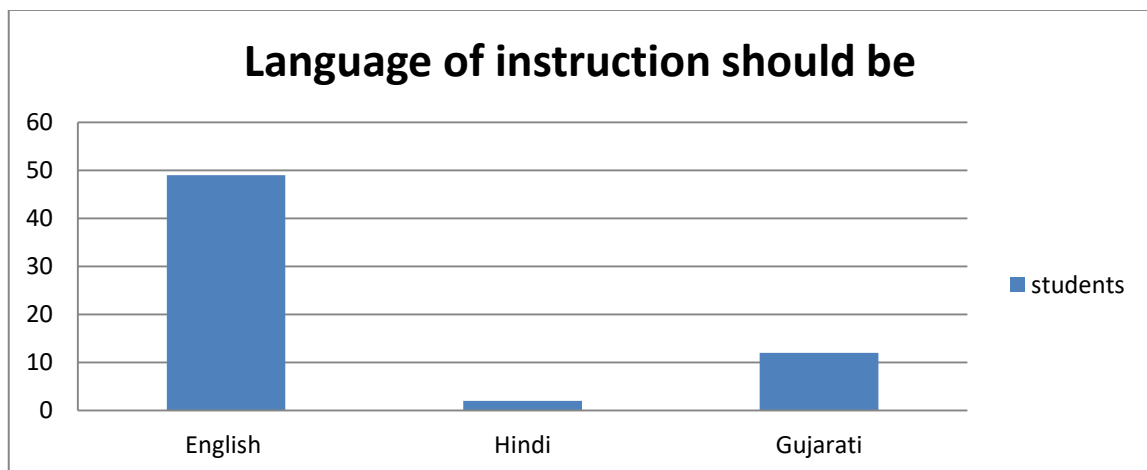
Objectives of learning English

	Very important	Important	Not important
Passing examination/ scoring good marks	38	23	2
Getting job	44	17	2
Going for higher studies	45	16	2
For status	25	33	5
To impress	22	28	13
Learning new things	36	22	5
For pleasure	21	34	8

To find out the objectives of learning English according to the students of engineering the researcher asked them a few options and asked to rate them under the title of very important, important and not important. Analyzing the responses for the first option, passing the examination, 38 students believe that English is very important, 23 students believe that English is important and 2 students believe that English is not important. Next, for getting a job, 44 students responded very important, 17 students responded important and 2 students responded not important. Third option, going for higher studies, 45 students responded very important, 16 students responded important and 2 students responded not important. Fourth, for status, 25 students responded very important, 33 students responded important and 5 students responded not important. Fifth, to impress, 22 responded very important, 28 students responded important and 13 responded not important. Sixth, learning new things, 36 students responded very important, 22 students responded important and 5 students responded not important. Last, for pleasure, 21 students responded very important, 34 students responded important and 8 students responded not important.

Overall it can be observed that most of the students rated all the options under the title very important and important, that shows that they feel that English is significant for them and the ability to use English can be proved beneficial to them.

11. Which language should be medium of instruction in college?



When the students were asked which language they prefer as a medium of instruction, 49 students opted for English, 1 for Hindi and 12 for Gujarati. Most of the students opted for English may be because they know the future prospect and the importance of English in all the fields.

Next, the learners were asked about the subject ‘Communication Skills’ which they have only in the first semester if they want it in more than one semester 45 (72%) students responded positively that ‘Communication Skills’ should be in more than one semester whereas 18 (28%) students responded negatively. Further, they were asked if they want ‘Communication Skills’ in more than one semester till which semester they wish to study the subject. The table below represents the analysis of the mentioned question.

12. The duration of English in Engineering

It should be till the semester...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Semester 2	5	7.9	11.1	11.1
	Semester 3	7	11.1	15.6	26.7
	Semester 4	2	3.2	4.4	31.1
	Semester 5	2	3.2	4.4	35.6
	Semester 6	3	4.8	6.7	42.2
	Semester 7	5	7.9	11.1	53.3
	Semester 8	21	33.3	46.7	100.0
	Total	45	71.4	100.0	
Missing	System	18	28.6		
Total		63	100.0		

It could be observed that 45 students responded to this question as they wanted to extend the duration of the subject 'Communication Skills'. In the analysis it can be seen that 5 students responded that 'Communication Skills' should be until semester 2, 7 students responded till semester 3, 2 students responded till semester 4, 2 students responded till semester 5, 3 students responded till semester 6, 5 students responded till semester 7 and 21 students responded till semester 8.

Therefore it could be said that majority of the students feel that English which is taught in semester one only should be extended till the semester eight. They feel that teaching of English in only one semester cannot make a learner competent in English.

13. Conclusion

From the analysis of the whole questionnaire, it could be said that the students do not have language exposure of English in all the language skills (listening, speaking, reading and writing) but they do know the importance of English. They are aware where and at what stage they will need English but as they were paying attention to other subjects, English was neglected and they were not aware of the importance of English. Now as they know they feel that English should be given more importance and should be taught till semester 8 in engineering.