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## Exploring English Skill Problems of Engineering Students for Evaluating Their Needs

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### ABSTRACT

*Despite the existence of many studies on English skills in the classroom context, little scholarly work reports English skill problems for engineering students. To fill this gap, this current study explores English skill problems of engineering students for evaluating their needs. This study was conducted at a national institute of technology in India. The data were collected through administering questionnaires. The study indicates that the engineering students feel the most difficulty in making presentations individually (speaking). They also have difficulty in listening, especially in understanding lectures. Further, the obstacle in writing reveals that the engineering students more frequently encountered difficulty in transferring information from visual to verbal and using correct punctuation during the writing activity. It is surprising in reading skill that the students do not encounter a big problem in reading. Moreover, they state that reading is very important to success in their courses of study. The findings suggest that although reading is keeping to be taught extensively, the lecturer should foster students more in listening, speaking, and writing skills in the teaching learning process.*

**Keywords:** *English, engineering students, need analysis, problems*

### INTRODUCTION

Among the various factors affecting success in teaching English, such as teachers' qualifications, learning materials, or teaching methods, the consideration of learners' needs by lecturers proves to be important as well. However, the involvement of this factor needs to be explored in a certain context to optimize learning chances in learning English for Academic Purposes (EAP) and English for Specific Purposes (ESP). The aim of investigating these parameters is to determine whether learning objectives are met with students' needs. Thus, it is crucial to conduct a need analysis (NA) in order to meet the needs of the students and ensure that teaching and learning activities operate appropriately. As a result, students' motivation to study increases (Yaumi, 2012).

NA is the identification of what is needed by students in learning the lesson (Sholikhah, 2016). Further, Richards (2001) underlined that NA is the procedures that gather data regarding students' requirements, and then prioritize those needs as the basis for building and evolving a curriculum that satisfies those needs. It was emphasized in this concept that each learner has specific needs, and that what is taught must take these needs into account. NA is also expected to assess the precision and applicability of educational initiatives, including the curricula and the contexts in which English is utilized. Richards (2013) also underlined that NA is a step in the process of developing learning aims and objectives that are dependent on the learning objectives. It is significant to take NA into account in order to fulfil academic requirements and cater to each student's specific demands (Nurie, 2017). According to Sholikhah (2016),

NA can be carried out by identifying the communicative needs of the learner, establishing general and specific objectives, organizing the material's outline in the form of a syllabus, choosing teaching materials and effective teaching techniques, and figuring out the content of the learning material and the English skills.

Concerning English skills, speaking skills ranked first in the list of areas needing improvement in the majority of language skills need analysis studies across the world (Aklilu, 2015; Alqunayeer & Zamir, 2016; Bae, 2017; Boroujeni & Fard, 2013; Wu & Lou, 2018). For instance, Boroujeni and Fard (2013) found that speaking was the skill that learners in Iran most needed. However, some research revealed a different finding. For example, Wu and Lou (2018) explore need analysis of Chinese chemical engineering and technology students in Yangtze university. Their findings indicated that reading skills were the most needed by the students who learn ESP. In contrast to a previous research, Aklilu (2015) indicated that writing skills were most needed by civil engineering students in Ethiopia, followed by reading and speaking skills.

A growing number of studies have contributed to our general understanding of the importance of English skills for students. However, little scholarly work explore English skill problems of engineering students. To address this empirical gap, this research explores English skill problems of engineering students for evaluating their needs at a national institute of technology in India. The findings from this study can be used as guidelines for developing an engineering English syllabus that could lead to the improvement of English skills for students..

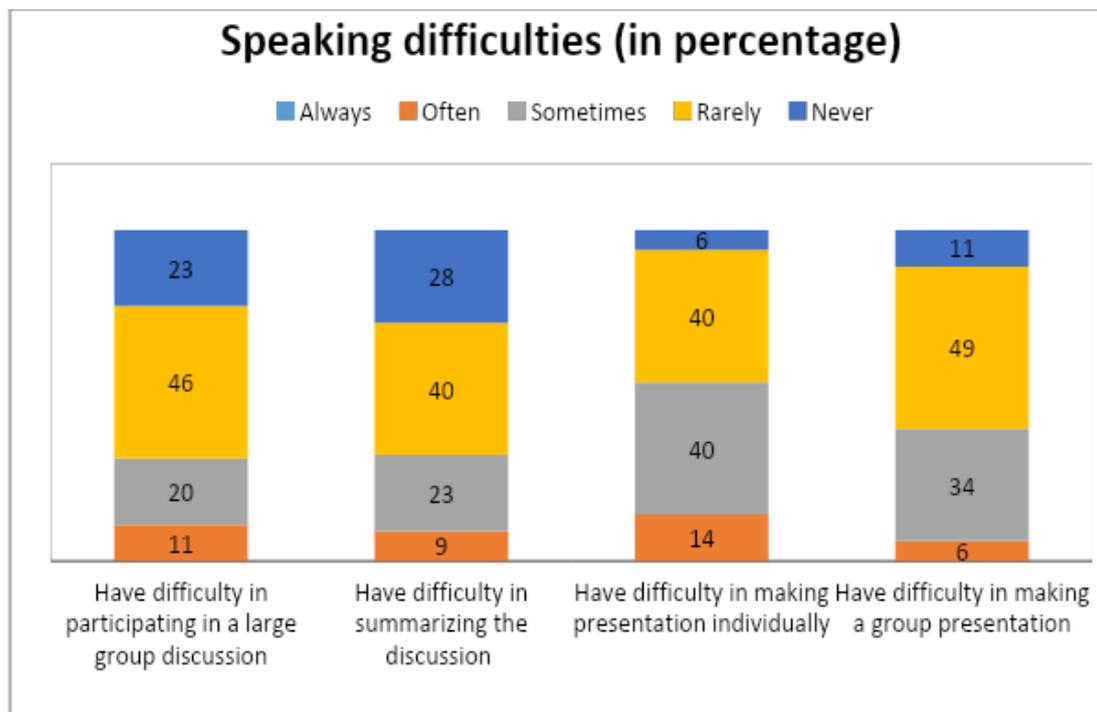
## **METHOD**

This research is a survey study of English for specific purposes, especially English skills for engineering students at a national institute of technology in India. The participants were engineering students pursuing a bachelor of technology in the fourth semester. Thirty-five students were participating in this study. Regarding their age, they are 19-32 years old. Actually, the students are not only from India but also from various countries over the world like Bhutan, Indonesia, East Timor, Saudi Arabia, Nepal, Vietnam, Mozambique, Afghanistan, Turkmenistan, Iraq and so forth. The data were collected through administering the questionnaire to the engineering students regarding English skills consisting of four aspects, these are speaking, listening, writing, and reading. After that, the descriptive and frequency analysis were employed to analyze the data from the questionnaire.

## **RESULTS AND DISCUSSION**

Given below is the data analysis from the needs analysis questionnaires administered to engineering students at a national institute of technology in India.

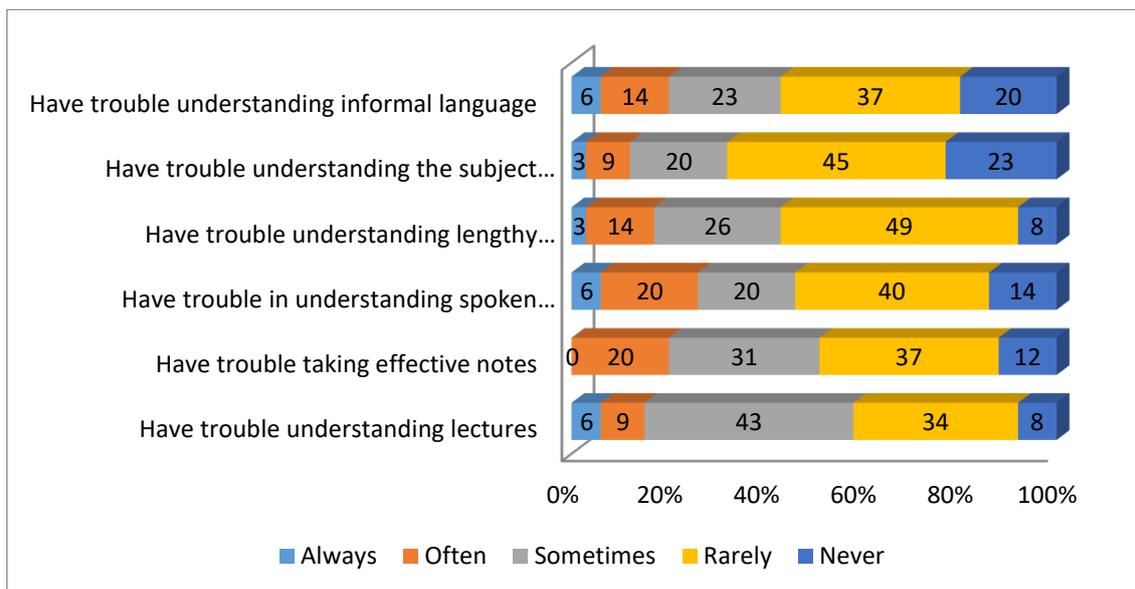
## Speaking Difficulties



**Figure 1.** Speaking Difficulties Encountered by the Engineering Students

Speaking is one of the crucial skills in English because of how it encompasses a wide range of skills and is important for interaction (Tinjaca & Contreras, 2008; Hadfield & Hadfield, 2012). In this study, the figure indicates the level of difficulty in speaking. Out of the various lists of difficulties, it clearly stated that the students felt the most difficulty in making presentations individually. Given previous studies (e.g. Abrar et al., 2018; Andas, 2020; Asworo, 2019; Inayah & Lisdawati, 2017; Mukminin et al., 2015; Noprival, 2017; Songbatumis, 2017; Wahyuningsih & Afandi, 2020), the problem of speaking is not only encountered by engineering students but also other students. For example, Abrar et al. (2018) scrutinized Indonesian EFL student teachers' challenges in speaking English. They found that they faced various problems speaking English, such as language problems (vocabulary, pronunciation, grammar, and fluency) and psychological factors (anxiety, negative attitude, and lack of motivation).

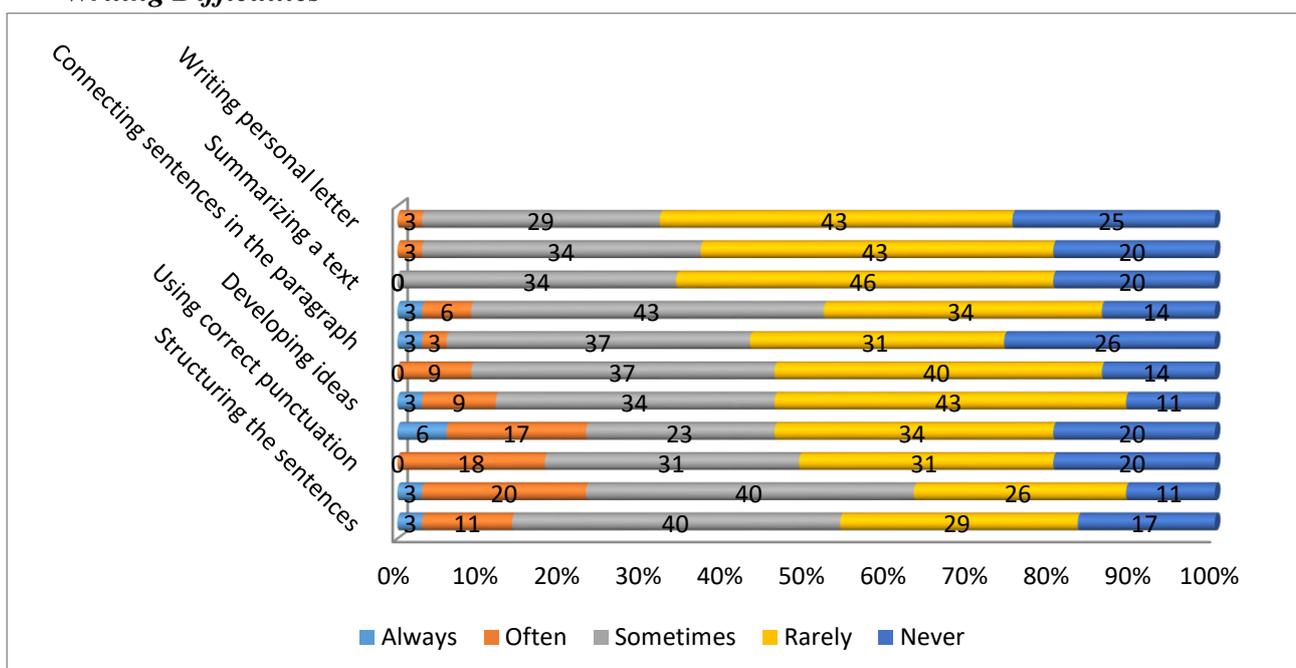
### Listening Difficulties



**Figure 2.** Listening Difficulties Encountered by the Engineering Students

This figure shows how often students have difficulty in listening. From the graph above it can be seen the highest percentage marked by students for each question is 'rarely'. Out six of the questions, the highest percentage of difficulty is in understanding lectures. Whereas, the point that students feel the easiest one is to understand lengthy descriptions in English. It means that the students face a little problem on listening. This finding is in line with what Hasan (2000) found in his research on students' perceptions of listening comprehension problems. The findings of the study show that EFL students experience a range of listening barriers.

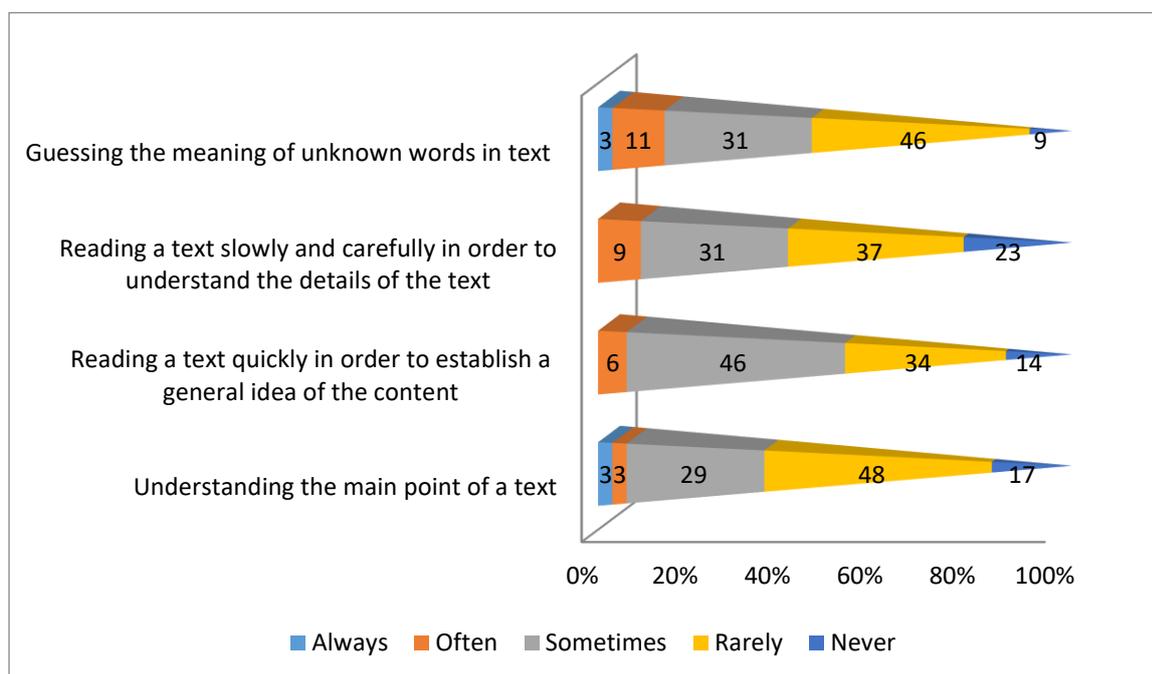
### Writing Difficulties



**Figure 3.** Writing Difficulties Encountered by the Engineering Students

This section is to seek out the difficulty in writing skills. The graph above clearly indicates that the engineering students more frequently encountered difficulty in transferring information from visual to verbal and using correct punctuation during the writing activity. The obstacle of writing is not only faced by engineering students but also by other students. For instance, Mukminin et al. (2015) explored the experiences of Indonesian pre-service teachers in English academic writing socialization at one of state universities in Indonesia. An analysis of the interview data revealed five major themes, including no writing cultural backgrounds, needing long-lasting exposure and internalization, lack of academic writing socialization, lack of institutional support, and lack of lecturers' help due to higher power distance.

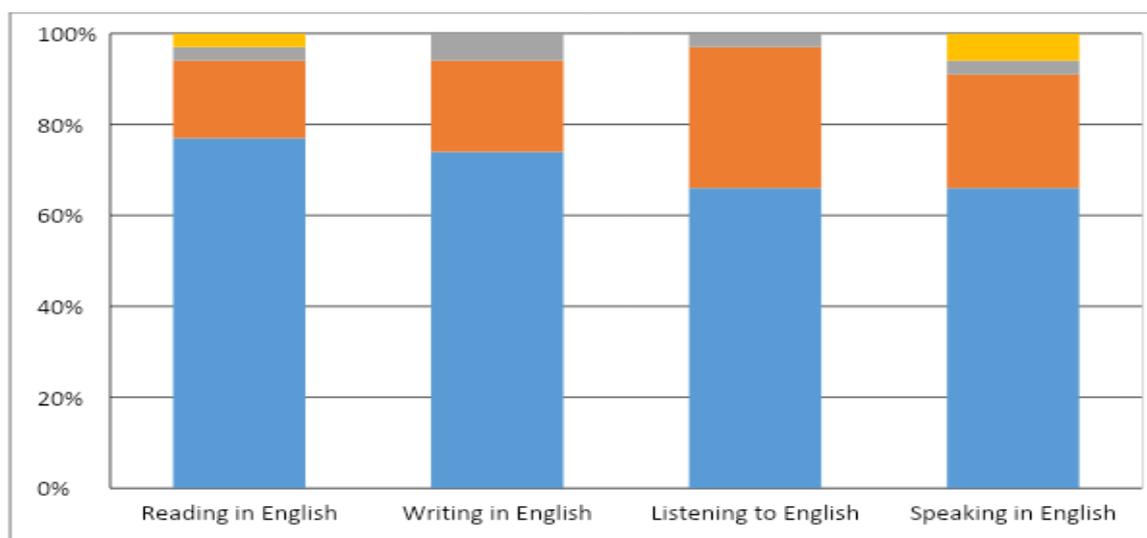
### **Reading Difficulties**



**Figure 4.** Reading Difficulties Encountered by the Engineering Students

This section is to find out the reading difficulty. The graph above, it shows that the students do not encounter a big problem in reading. Mostly they marked the question 'rarely'. Only in the point of guessing the meaning of unknown words in a text, they felt that a little bit problem. Fact in this case, 31% of respondents marked 'sometimes'. This study is relevant with a previous study, Tsai et al. (2016) explored engineering students' English reading comprehension errors. They found that if the students produce one specific error pattern in one step, similar error patterns will be produced in other steps as well.

### The Most Important Skill



**Figure 5.** The Most Important Skill to Success to the Students' Course of Study

From the figure above it can be seen that 77% of students state that reading in English is very important. Then, respondents respond 74% writing, which is very important. While listening to English and speaking in English marked the same percentage by students ('very important' is 66%). It means that reading is the most important skill compared to the others. As previous studies revealed that reading is relevant to the other skills. For example, how reading is in line with writing as conducted by Al- Mansour and Al-Shorman (2014) exploring the effect of an extensive reading program on the writing performance of Saudi EFL university students. The results revealed that the experimental group outperformed the control group on the measure, indicating that the reading activity may have a significantly positive effect on students' writing performance.

### CONCLUSION

In short, this research is conducted in order to provide insight into the needs by identifying English skill problems of engineering students. The study shows that the engineering students have difficulty in speaking, especially in making presentations individually. They also have problems in listening, especially in understanding lectures. In addition, the obstacle in writing indicates that they more frequently encountered difficulty in transferring information from visual to verbal and using correct punctuation during writing activity. Additionally, it is noted in reading skill that they do not encounter a big deal in reading. Moreover, they state that reading is very important to success to their courses of study. The results suggest that despite reading is keeping to be taught extensively, the lecturer should foster the students more in listening, speaking, and writing skills. The findings of this study is expected to provide a baseline for gaining a wider range of input into the content, design and implementation of an English programme by involving students. Despite the present investigation does not intend to represent all the stakeholders, the researcher trusts that the sampling frame might give a relatively good representation of the engineering students at a national institute of technology in India. These findings are part of the curriculum development and are required before syllabus development for English language teaching.

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