

A Need Analysis of English Learning for Designing English Curriculum and Worksheet

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Abstract

Higher education english learning develops listening, speaking, reading, and writing skills. English is a required introductory course. Engineering students learn English differently than english majors. ESP is purpose-driven English. It attempts to teach students discipline-specific English abilities. It prepares english learners for specific jobs and goals. This research attempts to describe students' need for english learning and the importance of english in engineering workplaces. The study included first-semester Electrical Engineering students in 2022/2023, Electrical Engineering department lectures, and stakeholders. Questionnaires and interviews were utilized to collect data. The research finding is used to construct a syllabus or ESP worksheet. According to the research, English learning should focus on language skills and be adapted to the student's needs for electrical engineering and work.

Keywords: Need analysis, ESP, english learning, an electrical engineering student

Introduction

In the contemporary era of globalization, competency in English is necessary alongside the increasing mobility of people. The high level of mobilization makes English a global language and lingua franca by facilitating international communication between nations. Clearly, English training is tailored to the learner's needs and goals. Learners may or may not need the following four language skills: writing, reading, speaking, and listening. However, the requirement for English proficiency differs based on a person's field of employment. This requires the education community, especially at the postsecondary level, to first comprehend the learner and his English language proficiency needs. Learners and curriculum developers can determine precisely what type of learning program potential students require by conducting a requirements analysis prior to developing a learning program. In the current era of globalization, proficiency in English is required alongside the increasing mobility of people. The high level of mobilization makes English a global language and lingua franca by facilitating international communication between nations. Clearly, English training is tailored to the learner's needs and goals. Learners may or may not need the following four language skills: writing, reading, speaking, and listening. However, the demand for English proficiency varies depending on a person's field of employment. This requires the education community, especially at the postsecondary level, to first comprehend the learner and his English language proficiency needs. Learners and curriculum developers can determine precisely what type of learning program potential students require by conducting a requirements analysis prior to developing a learning program.

Need analysis is a way to find out the difference or gap between what students already know and what they want to know. There are two types of needs, namely Target Needs and Learning Needs. Target needs are what students or learners need to do in a particular situation. In other words what linguistic elements are needed to achieve certain communication goals. Hutchinson and Waters (1987) describes the components included in the target needs, namely necessities, lacks, and wants. Meanwhile, learning needs are what learners or students need to do for learning purposes.

In language teaching, needs analysis is closely related to language teaching with specific objectives or English For Specific Purposes (ESP) which is an approach to designing a curriculum that begins with the question of why learners need to learn English.

At the State Islamic University of Sultan Syarif Kasim Riau (UIN Suska Riau), English courses are taught with a total load of 2 credits of theory and 2 credits of practice, and are taken in semesters or even depending on the curriculum of each study program. As a General Basic Course in non-English study programs, the direction of English learning for non-English study programs should be different from English in English study programs. Therefore, the topics and terms used in the disciplines of each study program are different, so that English learning for non-English study program students needs to be analyzed and later it will be found what kind of English is in accordance with the interests and needs of students. Meanwhile, the application of material for teaching materials is still general (General English) and is not in accordance with the field of science being studied.

Several studies related to need analysis have been carried out, such as Sukarni (2016), Indrasari (2016), Irmawati (2016), Purwanto (2014), Izidi (2017) and Atefi Boroujeni (2013) which describe the analysis of students' English needs in non-English study programs. The research became a reference for researchers to further examine the condition of students at UIN Suska Riau who have not yet implemented ESP-based English learning. Therefore, the author needs to do a need analysis. The purpose of this study is to find and describe the need for ESP learning in students and the importance of the role of English in the world of work.

Methods

This research involved several categories of respondents, such as 35 students in semester 1 (first) of the 2022/2023 academic year, 11 electrical engineering lecturers and 4 stakeholders from industry as research objects. The research method used by descriptive case studies is to describe the problems and needs of students in learning English with a special purpose (ESP). Data sources are primary and secondary data sources. Primary data is taken from the results of questionnaires in the form of questionnaires and interviews. Secondary data in the form of documents in the form of journals and reference books related to this research. Data collection was carried out by distributing questionnaires to students and lecturers of the Electrical Engineering department. Then conduct interviews with stakeholders or industrial companies.

Results and Discussion

In the results and discussion in this study, the authors divided the elaboration of the results of questionnaires and interviews based on 3 aspects, namely (1) Necessities, (2) Lacks, and (3) Wants to achieve goals (English learning goals) (Hutchinson & Waters, 1987).

1. Necessities

Students' needs for ESP-based English learning

Table 1. Question 1

Question	Choice (%)		
	It's very important	Important	Mediocre
How important do you think English is?	65	30	5

Table 2. Question 2

Question	Choice (%)	
	Yes	Not
Do you think English will play an important role in your upcoming work	98	2

From table 1, it can be seen that students who state English is very important by 65%, important is 30% and ordinary is 5%. This shows that English is one of the important courses that can help students prepare for the world of work, as the results of the questionnaire in table 2 explained that 98% of students stated that English is important to equip them to enter the world of work, while only 2% of students stated that it is not important.

Table 3. Question 3

Question	Answer		
	Respondent 1	Respondent 2	Respondent 3
If so, in what ways can English play an important role in your upcoming work?	In case of Design job needs usually there is english word" in file form nor reports and talk to foreigners who Cooperating in the company	Interview and presentation	Specifications component Software Applications microcontroller nor plc and others

Table 4. Question 4

Question	Choice (%)			
	Listening	Reading	Speaking	Writing
According to you, skills in English what is necessary Are you good at it?	20	2	74	4

The above data represents 35 respondents involved in the study. Respondent 1 stated that English is important to master for work needs. Students will often be faced with English-specific terms in the field of engineering in their work environment, so understanding and mastery of English vocabulary is absolutely necessary. This was also conveyed by respondent 3, English needs to be mastered in order to be able to explain the components of microcontoler and PLC. Meanwhile, other respondents stated that English is important for the purposes of interviews and presentations. From the 3 opinions of the respondents, it can be concluded that the ability to communicate with English needs to be mastered by students, as presented in question table 4. The language skills that students need to master are speaking, which is 74%. Meanwhile, listening skills are 20%, writing is 4% and reading is 2%. Similarly, relevant data was obtained from the results of interviews from stakeholders in the following interview table.

The needs of lecturers in the Department of Electrical Engineering for ESP-based English learning.

The results of the needs of lecturers in the Department of Electrical Engineering for ESP-based English learning are presented in Table 5 and Table 6 below.

Table 5. Question 1

Question	Choice (%)			
	Speaking	Writing	Reading	Listening
Of several skills English-speaking, what abilities (skills) according to you most Student Needed Electrical Engineerin	90	10		

Table 6. Question 2

Question	Choice (%)			
	Very important	Important	unimportant	Mediocre
Is it important for college students Electrical Engineering studies How to present in the language English students needed Electrical Engineering	55	45		
Is it important for college students Electrical Engineering studies how to conduct a job interview in English	40	60		

Of the 4 (four) types of language skills, 90% of lecturers stated that speaking skills were the most needed skills, while 10% stated writing skills. This proves that communication skills are needed by students so that they are ready to compete with students who graduate from other study programs to enter the industrial world. Students are able to communicate directly in English with clients or customers. Therefore, the ability to speak is the most significant skill needed by students.

Communication skills needed by students include presentations, discussions and even conducting job interviews according to the results of the questionnaire in question table 2. Lecturers who declare presentations in English are very important by 55%, while lecturers state important by 45%. Meanwhile, 40% of lecturers stated that it is very important for students to learn how to conduct interviews and is 60% important. From the acquisition of this percentage, it can be concluded that the ability to present and interview in English needs to be mastered by students.

Stakeholders/Users' Needs for ESP-based English Language Learning

Table 7 displays the results related to the needs of stakeholders or users for ESP-based English Language Learning based on the interview.

Table 7. Interview Results 1

Question	Answer	
	Respondent 1	Respondent 2
Whether English Important Used in the world industry?	"Important, will but Customize with fields the work that Concerned. Because it doesn't All Staff in all mandatory departments have skills English a good one"	"It's very important, not just for Entrance Selection as permanent staff but also will often Used. They will Meet Customers from the company Other and usually many are from foreign companies to offer services, products and bargaining process. Language communication England needs to"

2. Lack

Lack of English proficiency of students based on student questionnaire results

Table 8. Question 1

Question	Choice (%)		
	Good	Usual	Less
How you rate ability English-speaking	15	50	35

Table 9. Question 2

Question	Choice		
	Respondent 1	Respondent 2	Respondent 3
As long as you study in this study program, What are the difficulties that you met relating to English?	grammar and vocabulary word	pronunciation that less fluent less understand grammar	Presentation language English

From the results of table 8 above, it can be concluded that the percentage of students who assess their English skills is 50%, less 35% and good 15%. Their lack of English skills is due to difficulty following English learning as listed in question 2 table. Respondent 1 stated that grammar is one of the difficult materials to learn, while respondent 2 conveyed that pronunciation that is not yet fluent is the main obstacle in learning English. Meanwhile, respondent 3 experienced difficulties when asked to do an English presentation.

Table 10. Question 3

Question	Choice (%)			
	Very difficult	Difficult	Easy	Very easy
How difficult is it You do presentation in English?	10	60	25	5
How difficult is it You understand Language grammar English?	10	55	30	5

Based on table 10 above, researchers can conclude that the number of students who state grammar is difficult is 60% of students, easy 25%, very difficult 10% and very easy 5%. Meanwhile, communication skills that are considered difficult are presentations, which are 55%, while 30% of students say it is easy, 10% are very difficult and 5% of students say it is very easy. In this case, the learning of grammar has to do with presentation. Some students still think that if they have good grammar, it means that speaking skills are also good.

Lack of English proficiency of students based on the results of the lecturer's questionnaire

Table 11. Question 1

Question	Choice (%)				
	Speaking	Grammar	Vocabulary Mastery	Writing	Reading
Ability (skill) what which according to You need to developed for student of Electrical Engineering		3	8		

From the results of table 11 above, it can be concluded that the ability or language skills that need to be developed are mastery of vocabulary 8 Electrical engineering lecturers stated that students' ability to master vocabulary is still lacking, so there needs to be interesting learning media so that they can improve vocabulary mastery. Meanwhile, lecturers who state the student's grammar skills that must be developed are 3 lecturers.

Lack of graduates based on the results of stakeholder / user interviews

Table 12. Interview Results 1

Question	Answer	
	Respondent 1	Respondent 2
As one of the companies using graduates, which of the 4 English skills still need to be developed?	"Writing, every section exists tasks for creating an email with language English. Understanding they write email and reports with English less".	"Ability speak for market product company"

The data from table 12 above shows that the ability to communicate and write is a skill that must be mastered. From the aspect of lack obtained by 3 categories of respondents stated that the ability to speak was still lacking.

3. Wants

Students' desired English learning desires based on the results of the questionnaire

Table 13. Question 1

Question	Choice (%)			
	Listening	Reading	Speaking	Writing
Skills what languages are Do you like it the most?	20	30	40	10

Table 14. Question 2

Question	Choice (%)		
	Discussion	Lectures	Direct practice in the field
In your opinion, How is it technical learn English what's interesting?	15	5	80

Table 14 data above shows that the most popular skill for students is speaking by 40%. Furthermore, 30% of all respondents like English reading learning, while writing is 10% and listening is 20%. Speaking skills have the largest percentage among other language skills. Meanwhile, as many as 80% of students stated that they like to learn English by practicing directly in the field, while 15% like discussions and 5% lectures.

Table 15. Question 3

Question	Choice (%)			
	More believe self-use right English language	Supporting studies	Prestige	Occupational importance
In your opinion, What is profit which you will obtained after finishing learning English?	60	15		25

From table 15 above, 60% of students are more confident if they have proficient English skills, 25% for work purposes, while 15% to support their studies. None of the students declared for pride.

Table 16. Question 4

Question	Choice (%)			
	Daily activities	Compliance with the discipline	Science and Technology	Work-related
Topic or learning materials English	30		20	50

The topics that are most in demand by students are those related to work by 50%. 30% of all respondents conveyed daily activities and 20% of science and technology.

Wants to learn English that Electrical Engineering lecturers want based on the results of the questionnaire

Table 17. Question 1

Question	Choice (%)			
	Daily activities	Compliance with the discipline	Science and Technology	Work-related
Topic or material that appropriate for student technique		50	25	25

Based on table 17 above, it can be concluded that 50% state that Engineering content is an appropriate topic for Electrical Engineering students, while science and technology and work-related topics have the same percentage, which is 25%. Meanwhile, none of the respondents chose the topic of daily conversational English

Conclusion

Based on the results of the study, it was obtained that (1) the most needed skill is speaking, because they have difficulty constructing sentences based on correct English grammar; (2) the desired learning topic is a work-related topic and tailored to the needs of the industry (stakeholders/users). The result of this study is to compile a syllabus and teaching materials. Therefore, researchers advise English lecturers to compile an ESP-based syllabus for the development of English language skills that can be applied according to industry demands.

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