



Need Analysis For Architectural Engineering at UIN Alauddin Makassar

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Abstract

This research investigates the English language needs for students of Architectural Engineering Department at UIN Alauddin Makassar. The researcher involved 25 respondents in conducting this study. A closed-ended questionnaire was used to collect data. The findings showed that the students' level of proficiency in all components of English (reading, writing, speaking, listening, grammar, and vocabulary). Is at an adequate level. The students preferred to learn the components of English sequentially: (1) speaking average 3.84, (2) vocabulary average 3.56, (3) reading average 3.44, (4) listening average 3.44, (5) grammar average 3.28, and (6) writing average 3.04. The problem experienced in learning is "Afraid to make mistakes" with an average score (3.02). In addition, the students' most preferred learning method is Speaking with an average score of (3.64). The students are also interested in some of the most preferred learning styles such as, Partner Study with an average score of (3.88). The objectives of this study are 1) to help students improve their English language skills and 2) to help students have a good understanding of English texts on Architectural Engineering course topics. This means that the materials that will be developed and provided as a result of the needs analysis will be able to meet the needs of students.

Keywords: *Architectural Engineering, Need analysis, Material Development, English Language Teaching*

INTRODUCTION

English for Specific Purposes (ESP) is a language learning approach designed specifically to meet the needs of specific fields or professions in terms of communication (Hutchinson & Waters, 1987). ESP is important because it helps students develop language skills that are relevant to their professional situations. With a focus on the work context, ESP assists employees in understanding and communicating information that is specific and pertinent to their line of work. This makes them more self-aware and considerate when speaking with coworkers, clients, or in public presentations. In this way, ESP emphasises the need of improving student communication skills in a professional setting. Through specialised English language instruction focused on specific job-related needs, students can more easily adapt to changing circumstances and succeed in situations requiring proficient English language skills. Along with that, ESP also helps students understand the vocabulary and expressions that are frequently used in their professional lives, enabling them to communicate more effectively and lancariously in the workplace.

In contrast to general English, which focuses on language learning in a comprehensive manner, ESP is focused on developing proficiency in English language skills that are relevant to specific contexts, such as technical terminology, presentation skills,

and writing structure (Dudley-Evans & St John, 1998). With a focus on specific needs within their current profession, ESP students can develop more work-related skills that are more in line with their job requirements. This makes them more cautious and self-aware when dealing with situations at work that require specific fluency in English. In this way, ESP not only gives students a competitive advantage but also increases their motivation to succeed in their future endeavours.

Need analysis is a crucial step in developing an effective ESP programme (McDonough & Shaw, 2013). This analysis aims to identify the needs and learning objectives of the participants in a specific way. Through needs analysis, educators can identify the type of language proficiency that needs to be developed (needs analysis of skills), as well as vocabulary and technical terms that are relevant to the level of proficiency of learners (needs analysis of content) (Dudley-Evans & St John, 1998). As a result, an ESP programme that is designed based on needs analysis can provide students with the best possible results because the material being taught will match their learning objectives and needs. In addition, needs analysis helps teachers design relevant and effective curricula so that students can significantly improve their English language proficiency

This study focuses on ESP implementation at UIN Makassar's Architectural Engineering department. The requirement for mastery of English language skills is reflected in the department specific application to architecture. Master of Architecture students are expected to comprehend English-language literature, create design presentations, and collaborate with clients or foreign consultants. Through the ESP programme, which is based on needs analysis, students can improve their English language proficiency in areas related to education and architecture in the future. By participating in the ESP programme arxhitectural Engineering department , students can significantly improve their ability to speak English. This will assist them in understanding architectural literature, which is typically written in English, as well as in communicating with clients or foreign consultants.

METHOD

The method used in this research was the survey method. The survey data collection method is a quantitative approach that is used to gather information from each respondent group by asking follow-up questions. This method enables researchers to collect data from a large population in a way that is both economically and efficiently sound. The research design used by the researcher is quantitative. The researchers involved 25 respondents. The researcher employed quistionnaires and Close Ended Question to collect the data.

RESULTS AND DISCUSSION

Table 1. Perceptions of The Importance of English

Respondents	Level of Importance				N	Total Score
	Not Important	Less Important	Important	Very Important		
Students	0	1	6	18	25	3.68
Σ	0	1	6	18	25	3.68
0-1.50 = not important			2.51-3.50= important			

1.51-2,50= less important	3.51-4.00= very important
(source: primary data processing)	

The table shows that most respondents chose very important as an answer to the importance of learning English, with an overall score of 3.68, meaning that they confirmed that learning English is important for Architecture Engineering majors.

The data from Table 1 can be said that currently English plays an important role in today's world. Its wide use and relevance across multiple domains make English an essential skill for personal and professional development. As globalization continues to connect people and economies, the demand for English proficiency is likely to remain strong.

According to Dr. Louis Goossens, Director of the British Council: "English is a key skill for success in the 21st century. It opens doors to education, employment and cultural exchange. English is not just a language; it is the key to unlocking the doors to opportunities and success in the 21st century. By mastering English, you can improve the quality of your education, develop your career, expand your network of friends and enrich your cultural experience.

Perception regarding the objectives of learning English language skills

Table 2. The purpose of Learning English

Objectives	Respondents (Students)
To get a scholarship	3.02
To get good grades	2.88
To get a job easier	3.52
For personal needs	3.56
To socialite with Tourists easier	3.16
To improve English language Skills	3.04
Can keep up with the times	3.32
To understand technology easier	3.48
To continue Education higher	2.08
0-1.50 = not important	2.51-3.50=important
1.51-2,50= less important	3.51-4.00=veryimportant
(source: primary data processing)	

Based on the table above, there are nine main objectives of learning English for the participants. The table shows that the goal related to personal needs has the highest score with 3.56 followed by the goal related to easily getting a job with a score of 3.52 which is included in the very important category. And some other goals that can be seen in the table.

In this era of digitalization, English has become an essential language to master. Learning it opens up various opportunities and benefits, both in the aspects of education, work, and self-development. English opens the door to new opportunities and experiences in life, such as joining a student exchange program, volunteering abroad, or building an international business (MalalaYousafzai, 2014).

Perception of required components in English

Table 3. The Importance Level of English Components

Respondents	English Components					
	Reading	Writing	Listening	Speaking	Grammar	Vocabulary
Students	3.44	3.04	3.44	3.84	3.28	3.56
Σ	3.44	3.04	3.44	3.84	3.28	3.56
0-1.50 = not important				2.51-3.50= important		
1.51-2.50= less important				3.51-4.00= very important		

(source: primary data processing)

The results in the table show that the highest value on the English component according to respondents' perceptions is speaking skills which reached 3.84 which means very important. Then followed by vocabulary (3.56). reading, listening skills, reached (3.44). Grammar skills reached a score of (3.28). and the lowest value is in writing skills with a score of (3.04). The findings in this table indicate that Architectural Engineering majors explained that English language materials need to be prioritized first for "speaking" because it has a higher value than others.

According to Jack Ma, English is not just a language; it is a tool for communication and a window to the world. By mastering the various components of English skills, you can improve the quality of your education, develop your career, expand your network of friends, enrich your cultural experience, and improve your cognitive abilities. Therefore, learning English is an invaluable investment in your future.

Perception of student's level of English Proficiency

Table 4. Students Perception of Their English Proficiency Level

Level	English Components					
	Reading	Writing	Listening	Speaking	Grammar	Vocabulary
	F	F	F	F	F	F
Poor	1	1	2	2	2	2
Fair	6	6	6	9	10	7
Good	15	15	12	12	11	15
Excellent	3	3	5	2	2	2
Σ	2.08	2.08	2.08	2.56	2.52	2.72
0-1.50 = poor			2.51-3.50 = good			
1.51-2.50 = fair			3.51-4.00 = excellent			

(source: primary data processing)

Based on the table above, it is known that all components of English are at the 'good for students' level. there are 3 components of English that score the same, namely reading, writing and listening with a score of 2.08. and the component with the highest score is vocabulary with a score of 2.72. this shows that the level of English language skills of students is at the 'sufficient' level. This is reasonable for non-English majors who technically do not study all aspects of everything related to the components of English.

Asadi (1990) argues that there is a reason why most students feel weak in speaking skills, and the implication is that they expect later learning to focus on these skills, especially speaking skills. There is an assumption that a person's English ability can be seen by whether or not they "speak" fluently in English. They were talking about the learner's language skills level;

Perceptions of learning topics

Table 5. Perception of The Preferred Topics to Learn

Suggested Topics	Respondents
	Students
1. Culture and architecture	3.02
2. Definition of architecture	3.28
3. Architects, architecture and users	3.36
4. Science, technology and art in architecture	3.44
5. Process in architecture	3.36
6. Function in architecture	3.52
7. Communication in architecture	3.68
8. Creativity in architecture	3.24
9. Building function	3.52
10. Structure in architecture	2.08
11. Aesthetics in architecture	3.36

12. Design in architecture	3.28
13. Computers in architecture	3.04
0-1.50 = not important	2.51-3.50= important
1.51-2,50= less important	3.51-4.00= very important

(source: primary data processing)

The table above shows that respondents' perceptions of the suggested topics in English courses ranged from 2.08 to 3.68, meaning that they fall into the less important to very important category. The perception is slightly different for each participant. The topic of "communication in architecture" is the most important with a score of 3.68 and the topic of "structure in architecture" is less important to them with a score of 2.08.

Meanwhile, other aspects such as culture (score 3.02) and computers (score 3.04) are considered less important. In fact, according to Vitruvius, an influential ancient Roman architect, architecture should pay attention to the suitability of buildings to the local culture (*firmitas* - strength, *utility* - function, *venustas* - beauty). Similarly, the use of computer technology now plays an important role in the design process of modern architecture.

The results of this survey are interesting because they show the importance of balancing student interests and expert perspectives. Architecture teachers can use these findings to adjust the curriculum, emphasizing the importance of aspects that students may miss, such as culture and technology, while still accommodating their interest in function and communication in architecture.

Perceptions of student learning problems

Table 6. Students' Perceptions of English Learning Problems

Learning Problems in English Course	Level of Frequency				Σ
	1	2	3	4	
1. Lack of vocabulary	0	9	11	5	2.84
2. Lack of confident	1	5	14	5	2.92
3. Hard to focus	2	8	12	3	2.64
4. Anxious and fearful	2	13	8	2	2.04
5. Afraid to mistake	1	13	7	3	3.02
6. Lack of interest in learning english	7	10	7	2	2.24

Other experts such as Schmitt (2000) also state that vocabulary is an important foundation in language learning. A lack of vocabulary can hinder students' understanding of grammar and ability to communicate effectively.

Students' learning styles

English Learning Styles	Respondents	Σ
	Students	
1. Visual	3.36	3.36
2. Auditory	3.36	3.36
3. Kinesthetic	3.32	3.32
4. Visual and Auditory	3.04	3.04
5. Visual Kinesthetic	3.04	3.04
6. Auditory and Kinesthetic	3.32	3.32
7. Group	3.02	3.02
8. Sel-Study	3.28	3.28
9. Partner Study	3.88	3.88

10. Games	3.04	3.04
11. Learning through Pictures	3.28	3.28
12. Film/Video	3.56	3.56
13. Audio	3.02	3.02
14. Doing the Exercise	3.48	3.48
15. Rolling play	3.32	3.32
16. Reading Books	3.36	3.36
17. Making English Conversation with friends	3.44	3.44
0-1.50 = not important	2.51-3.50 = important	
1.51-2.50 = less important	3.51-4.00 = very important	

(source: primary data processing)

The survey in Table 7 shows that students have diverse preferences regarding English learning styles. There is no dominant learning style, this can be seen from the average scores which are in the important range (2.51 - 3.50) for almost all learning styles. This finding is in line with the opinion of experts such as Dunn and Dunn (1978) who state that a person's learning style can be a combination.

Interestingly, the highest score was achieved by "learning with friends" (mean score 3.88). This shows the importance of social interaction in the English teaching and learning process. According to Richard (1990), collaboration and discussion between students can increase their motivation and understanding of the subject matter.

In addition, students also expressed the importance of using varied learning media. Movies/video (mean score 3.56) and doing exercises (mean score 3.48) fall into the important category. This is in accordance with the advice of experts such as Slavin (1994) who emphasizes the importance of using a variety of teaching methods and media to suit different learning styles and make the learning atmosphere more interesting.

Student learning preference

Table 8 Students' Perceptions of Their English Learning Preferences

English Learning Preferences	Respondents	Σ
	Students	

1. Speaking	3.64	3.64
2. Reading	3.28	2.28
3. Writing	3.52	3.52
4. Listening	3.52	3.52
5. Grammar	3.36	3.36
6. Vocabulary	3.44	3.44
0-1.50 = not important		2.51-3.50 = important
1.51-2.50 = less important		3.51-4.00 = very important

(source: primary data processing)

Based on table 8, it can be seen that students have a fairly even preference in terms of English language skills. Speaking (mean score 3.64), writing (mean score 3.52), and listening (mean score 3.52) skills are rated as the most important. This shows that students not only want to understand English passively (reading), but also want to be able to use it actively to communicate (speaking and writing) and understand information conveyed orally (listening).

This finding is in line with the opinion of experts such as Harmer (2001) who stated that effective English learning should focus on developing all four language skills (speaking, reading, writing, listening) in a balanced manner. However, it should be noted that the average score for reading (3.28) was classified as "less important". This could be a concern for teachers to increase students' interest in reading in English. One way is to provide reading materials that are interesting and appropriate to their ability level.

Overall, table 8 shows that students have good motivation to learn English and they want to master various aspects of the language thoroughly. Teachers can use this information to design learning programs that suit their needs and preferences.

CONCLUSION

This study investigated the English language needs of Architectural Engineering students at UIN Alauddin Makassar. A closed-ended questionnaire revealed that students have an adequate proficiency level across all English language components (reading, writing, speaking, listening, grammar, and vocabulary). However, their preference leans towards developing speaking skills first, followed by vocabulary acquisition. Interestingly, the most prominent fear identified was making mistakes while speaking English. To address these findings and achieve the study's objectives of improving English language skills and comprehension of Architectural Engineering texts, the next step will be to develop and provide targeted learning materials. These materials will focus on enhancing speaking abilities and vocabulary development while incorporating partner study

techniques and addressing the fear of making mistakes. This tailored approach ensures the materials directly meet the students' needs, ultimately leading to a more successful learning experience.

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