

Need Analysis for English Special Purpose in Medical Laboratory Technology Students

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Abstract

The process of learning for English Specific Purposes is not optimal because of planning in learning that could not be relevant to the student's field of science. It is necessary to analyze the needs of students towards learning English with a special purpose. The purpose of this study was to see the students' needs for ESP learning. The object of this research was the students of the Medical Laboratory Technology Study Program, 2019/2020 academic year in Politeknik Kesehatan Muhammadiyah Makassar. This research used descriptive qualitative method. The data collecting techniques were questionnaires and interviews. Data were classified as student needs for learning English identified. The description of the results of student needs was used as a reference for planning the teaching materials.

Keywords

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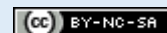
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Introduction

English is an international language which has a very important role as a guide in all fields of science. Therefore English is a compulsory subject in many countries. In Indonesia, English is taught from elementary to high school, while at the tertiary level English is a compulsory subject that is usually included in the MKDU¹ course. Development of English courses is not only general English but also uses English for Specific Purposes. Learning models are carried out according to the needs of students in their scientific fields and professions where English is used, such as the use of English for Medicine, Engineering, Economics, Law and others.

The emergence of English for a specific purpose as an approach to teaching English has been pursued by the increasing need for cross-cultural communication, an increase in science and technology, and the rapid economic growth in all aspects of society which has gradually changed the perspective on various aspects of society including health care.

In previous research, it was reported that need analysis for English specific purpose needs as a provision to enter the world of work, with speaking skills as the main target in learning English, which was then followed by improving other skills such as writing, reading and listening³.

Furthermore, Indonesia's participation in the ASEAN Free Association (AFTA) since 2010 and the North Atlantic Free Trade Association (NAFTA) in 2020 has been taken into consideration because it presents opportunities and challenges for health school students, graduates, and lecturers to demand qualified health school students for qualified health workers. Qualified people who have the appropriate knowledge, skills and attitudes so that they can compete and be aligned with health professionals from abroad.

Therefore, English is not only useful for finding work abroad but in the country itself. Besides, it is used in communicating in the work of colleagues and patients later. Medical Laboratory Technology is one part of workers in the health sector that its learning is oriented towards specific goals or in the fields of academia and professions¹. ESP was developed based on the concept of needs analysis so that the learning pattern of English in the field of Health, especially Medical Laboratory Technology, must be adjusted to what is needed by the world of work so that benefits can be felt.

Method

Population and Sample

The population in this study was students of Medical Laboratory Technology in the academic year 2019/2020 at the first semester. The number of students were 32 students who became respondents. This information was obtained by providing questionnaires and interviews (for students) as a representation of other participants. Researchers used a random sample to select.

Data Collection Instrument

There were two instruments used in this study. The first was questionnaire given to medical laboratory technology students. The questionnaire consisted of 11 questions and consisted of three parts. Firstly, personal information including the age and gender of the participants. Secondly, target information needs included objectives, context, skills and linguistic features, namely lexical, grammar, English proficiency levels and learning problems, and the skills students wanted to improve. Thirdly, information on learning needs includes learning achievement, interest in learning and learning methods. The next instrument used was interview. The results of the interview complemented the questionnaire. It was used to some students and lecturers perhaps they have experiences about their needs in learning English in Medical Laboratory Technology which could not be tracked by a questionnaire.

Data Analysis

Data analysis in this study applied a needs analysis questionnaire to collect information with learning needs analyzed into 2 ways. The first used percentages, where a higher percentage indicates a higher need.

$$P = \frac{F}{N} \times 100$$

P = Percentage

F = Cumulative frequency

N = Total respondent

Secondly, the data were categorized such as level of importance, level of frequency, and level of ability. The data collected from introductory questions was used to illustrate the participants' views on the importance of skills in the subject of English Medical Laboratory Technology. The proficiency score, importance score, and frequency score of linguistic needs and learning needs were obtained by giving each category score from one to four. as identified as follows:

Table 1. Proficiency, Important, and Frequency level score

Scores	Proficiency	Important level	Frequency
1	Poor	Not important	Hardly ever
2	Fair	Less important	Seldom
3	Good	Important	Often
4	excellent	Very important	Always

Sources from Kahar: 2015

The number of respondents was multiplied by the value to determine the frequency and was then divided by the number of respondents in all groups. By multiplying the score group by the frequency, adding up all the scores, and dividing by population, the average score was determined. So the formula from the frequency table for calculating the average was:

$$x = \frac{\sum fx}{\sum f}$$

The average score of the perceptions and desires of respondents of the English language skills needs of the students was then clarified using the following scale:

- 1 refers to 0-1.50
- 2 refers to 1.15 - 2.50
- 3 refers to 2.51 – 3.50
- 4 refers to 3.51 – 4.00

Results

Target Situation Analysis

Table. 2 The purpose of learning English

No.	The purposes of learning English	F	%
a.	Helping to get a job	-	0
b.	To continue education	1	3.1
c.	Visiting abroad	2	6.3
d.	Develop carrier	27	84
e.	Education at present	2	6.3
		32	100

Table 2. shows the goals of ESP learning and is intended to explain what students will need to do with their English in the future. Whereas most respondents have the goal of learning English for career development in the world of work (84%), afterwards visiting abroad and helping the success of education at present (6.3%), continuing education (3.1%), and getting a job (0 %).

Table. 3 Students' achievement in learning English

No	achievement in learning English	F	%
a.	can translate	4	13
b.	to communicate	26	81
c.	can do English test	2	2
		32	100

The data in table 3 shows that perceptions of what students need to achieve in learning English, especially ESPs who are to communicate in English (81%), can translate English scores (4%), and can do English test (2%) . This fact shows that the highest average respondent "can communicate" after students learn English courses. This can help researchers used as a reference for planning the teaching materials.

Tabel. 4. Students' context in learning English

No.	Context	F	%
a.	In the health care institution	13	42
b.	In the private	1	3
c.	Used abroad	18	56
		32	100

The data are presented in table 4. The context of students in learning English, the answers vary, but the dominant answers are used abroad (56%) and in health care institutions with 42% of respondents and in the private (3%).

Table 5. Students' specific skills in using English

No	Skill	Not important	Less important	Important	Very important	Mean
a.	Listening	-	-	6	26	3,8
b.	Speaking	-	-	2	30	3,9
c.	Reading	-	-	5	27	3,8
d.	Writing	-	-	12	20	3,6
		0 - 1.50 = not important	2.51 - 3.50 = important			
		1.51 - 2.50 = less important	3.51 - 4.00 = very important			

Data Table 5 shows that students consider the four skills to be very important, but speaking skills on average are 3.9, and listening and reading skills are on average 3.8 (very important), and writing skills are 3.6 (very important) . This shows that the priority of students in learning English language skills is speaking.

Present Situation Analysis

Table 6. Students' ability in learning English

No	Skill	Poor	Fair	Good	Excellent	Mean
a.	Listening	8	15	7	2	2.09
b.	Speaking	4	16	11	1	2.28
c.	Reading	3	13	8	8	2.65
d.	Writing	3	12	16	1	2.46
0 - 1.50 = Poor		2.51 - 3.50 = Good				
1.51 - 2.50 = Fair		3.51 - 4.00 = Excellent				

Table 6 shows that the level of proficiency of students in students' perceptions of English language skills are around the 'fair' and 'good' level, from the analysis and the average score can be seen from, the level of proficiency in Listening (2.09),speaking (2.28) and writing (2.46) in "fair" category, than , reading (2.65) is included in the "good" category.

Table 7. The students' perceptions on learning problems

Learning Problem	Level of frequency				Mean
	1	2	3	4	
Listening					
a. listening repeatedly	2	11	18	2	2,65
b. get meaning of every word	1	14	14	3	2,59
c. don't know meaning	0	15	13	4	2,65
d. can uderstand slow speech	4	30	36	12	2,71
Speaking					
a. afraid of making a mistake	0	5	18	3	3.12
b. pronunciation proplems	2	4	24	2	2,81
c. vocabulary and grammar proplems	0	11	19	2	2.71
d. unfamiliar topic	0	15	14	3	2.62
Reading					
a. less vocabulary and grammar	0	12	19	1	2,65
b. lack of motivation to read	9	12	11	0	2,06
c. incorrect reading material	0	23	4	5	2,43
Writing					
a. less vocabulary and grammar	1	10	19	1	2,59
b. Punctuation and spelling problems	1	15	16	0	2,46
c. Lack of knowledge on how to write in English	5	13	14	0	2,28
0 - 1.50 = hardly ever (1)		2.51 - 3.50 = often (3)			
1.51 - 2.50 = Seldom (2)		3.51 - 4.00 = always (4)			

Table 7, it can be concluded that students experience difficulties and problems in English skills at 2 frequency levels, namely 'often' and 'seldom'. 'Often' in range score of ranging from 2.59 to 3.12 and 'Seldom' in the range of 2.06 to 2.46.

The problem that most often occurs in learning English and tends to occur repeatedly in students is a lack of understanding of vocabulary and grammar which affects self-confidence so that they are afraid of making mistakes in their English language skills. All this shows the importance of this research to design learning materials based on needs analysis to help students reduce the effects of these problems and maximize their English learning in the Medical Laboratory Technology Study Program.

Learning Situation Analysis

The results of student English learning activities give a Positive reaction > 50 per cent. This is indicated in the learning process of English specific Purpose that various activities are needed that can increase student motivation. It is recommended to apply various techniques such as information gaps, variations in activities, topics or student roles, etc. (Hutchinson and Waters, 1987: 139).

This study shows the choice of student methods in learning English. The highest percentage is learning in groups and learning in pairs (96.8%), learning in class (93.7%), learning outside the classroom (65.6%), and learning individually (62.5%).

Discussion

a. Learning Ability

The identification process is first to analyze the learning ability in English subjects. Learning ability is an analysis of skills at the level of English proficiency of students in learning English, namely Speaking, Listening, Reading, Writing. The results of the analysis show average scores : Speaking (2,28), Listening (2,09), Reading (2.65) and Writing (2,46). The students' proficiency level Fair (Speaking, Listening and Writing) and Good (Reading).

The summary of learning ability: a) Purpose: Develop future carrier, b) Achievement : Able to communicate, c) Context: At abroad, d) Skill: Speaking,

b. Learning Priority

The determination of learning priorities is carried out by analyzing respondents' perceptions of the importance of providing English skills in learning English skills in English subjects. The results of the analysis show average scores:

Speaking (3,94), Listening (3.8), Reading (3,8) and Writing (3,62) "very important". The students have a very significant achievement in all components, so from Speaking, Listening, Reading, Writing, all the things must be taught. The lecture should concentrate on the teaching of English skills in the classroom.

In this study, the overview of learning requirements: learning problems and learning attitude

a. Learning Problems: afraid of making a mistake, pronunciation problems, vocabulary and grammar problems, listening repeatedly, don't know meaning, unfamiliar topic.

b. Learning attitude

- Learning preferences: Practice communicating, Rewrite listening text, Presentation, Specifies the title of the reading text, Write a book review, Describe the picture, Give a sign based on the sentence heard, Role playing, make conclusion of reading, Interview, complete the words in a sentence.
- Methodology preferences: learning groups, paired learning, learning in the classroom, learning outside the classroom, individual learning.

1. Learning Needs English Language Skills

Speaking is an English language skill material that is a priority for learning. In addition, Vocabulary, Grammar and Writing are material skills that are also a priority to learn. Fourteen topics were given to respondents to choose from. However, only nine topics were selected based on the analysis of respondents' views based on the level of importance of the topics:

Occupational safety and health	3,84	Very Important
Duties and roles Health analyst	3,68	Very Important
Important Professional Ethics and Behavior	3.68	Very Important
Instruments	3,5	Very Important
Bacteriology	3,5	Very Important
Clinic chemistry	3,5	Very Important
Parasitology	3,5	Very Important
Hematology	3,5	Very Important
Mikology	3,5	Very Important
Biomolecular	3,46	Important

Biomedic		3,46	Important
Virology		3,43	Important
Laboratory Management	3,43	Important	
Food and beverage analysis	3,31	Important	

2. Grammar Learning Needs

In learning English, students also need to learn grammar to help them with English skills (Speaking, Listening, Reading, and Writing). The results of the analysis of students' views about grammar are as follows:

Verb	3.78	Very Important
Present Tense	3,62	Very Important
Articles (a, an, the)	3.56	Very Important
Modal	3,44	Important
Futur Tense	3,43	Important
Active & passive	3.43	Important
Number	3.43	Important
Past Tense	3,40	Important
Wh-questions	3.40	Important
Singular/plural	3.37	Important
Pronouns	3,34	Important
Preposition	3.34	Important
Conditional sentences	3,34	Important
Demonstrative	3.31	Important
Degree of comparison	3.31	Important
Part of speech	3,25	Important
Yes-no question	3.25	Important
Countable/Uncountable	3,21	Important
Affixes	3,15	Important

Tabel 8. The overall needs inventory from linguistic needs

Linguistic needs	
Learning Abilities	Learning Priorities
1. Fair is Speaking	1. Speaking is the first priority
2. Fair is Listening	2. Reading is the second priority
3. Good is Reading	3. Listening is the third priority
4. Fair is Writing	4. Writing is the last priority
Learning Vocabulary dan grammar for topic	
1. Occupational safety and health	6. Clinic chemistry
2. Duties and roles TLM	7. Parasitology
3. Important Professional Ethics and Behavior	8. Mikology
4. Instruments	9. Hematology
5. Bacteriology	
Basics grammar to use in the topic	
1. Verb, Noun, preposition, conjunction, adjective, adverb	10. Conditional sentence
2. Tenses (Present, past, future)	11. Demonstrative
3. Articles (a, an, the)	12. Degree of comparison
4. Active and Passive	
5. Number	
6. Wh Questions	
7. Singular/plural	
8. Pronouns	
9. Preposition	

Conclusion

Needs analysis is very important in teaching English, especially in ESP. By conducting a needs analysis, ESP lecturers get information about the needs of students who play an important role in designing material that will be given to students. Need analysis helps course lecturers to conceptualize ESP courses with a clear focus. In conclusion, there are several important aspects that have been revealed through needs analysis which are very useful for designing courses, such as: (1) the skill most needed by medical laboratory technology students is speaking, because most students consider speaking to be very important, (2) preference students Medical laboratory technology regarding activities that are useful for learning English is group learning and pair learning, and (3) the topic of Medical Laboratory Technology What most students want to learn Occupational safety and health. In short, course designers or lecturers can design ESP courses in particular English for Technological Medical Laboratory students of Politeknik Kesehatan Muhammadiyah Makassar pay attention to this information in order to achieve the most useful material for students, which can be used to design material for teaching (syllabus design).

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