



## **Need Analysis of English Learning Materials for Civil Engineering Department Students**

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### **Abstract**

This research analyzes the Civil Engineering department students' needs (wants) for English learning materials and the need regarding the language element by students in English learning material in the civil engineering department. Populations in this research were carried out in the Department of Civil Engineering, at the University of Bengkulu. This research used descriptive quantitative research with questionnaire as the tools in collecting data and interview was carried out to find out in-depth and strengthen the questionnaire. To analyze the data, the writer involved two steps in analyzing the data collected; Give questionnaires to civil students using Google Form and then they were given 2 days to fill out and Analyze and explain the results of the list of answers from the questionnaire. The result of this research showed that the civil engineer students want to improve their English speaking skills and listening skills to communicate in their activities in the field of civil engineering where the material provided is easily understood by the students. In addition, the language element they want is more conversational. The English conversations given are more situational conversations and the texts given are more discussion texts. The last, English is important for professional needs because English is needed for everything such as the TOEFL score and confidence in their English which is one of the requirements to continue studying and to become an employee in a company.

**Keywords:** Materials, Specific Purposes, Students' need (wants)

**Introduction**

English was one of the most important Educational subjects for students in Indonesia because the students study English from elementary to university level. At Bengkulu University, especially English was a subject that must be taught in all majors/departments. In particular, one of the departments that receive English language learning was the Civil Engineering department. Although the department does not have a direct relationship with English, having good English skills was prominent for this profession to face the future. Moreover, the students in this department were demanded to be able to transfer and understand knowledge by using English. Because of that, English language skills were very important for the students to improve their competence and prefer them for being successful in their work after graduation.

In short, Civil Engineering students need to learn English that was designed appropriately for their future work. Before arranging the design of an English language course, a lecturer needs to understand the condition of the student because it informed the special needs in English, such as the skills, competencies, and knowledge that must be achieved by students. Strengthened by Hutchinson and Waters (1987) that analysis of student needs was often described as the first stage before making a course design. In other words, an analysis of student needs means an effort to identify several things from students that consider deciding what material to be learned.

The term "need" shows that there were certain things that need a solution to be done. Lamri (2011) said that the term "need" indicates the existence of certain problems that require intervention and resolution. Certain problems here can be described as things that must be learned, difficulties that must be solved, and the challenges that must be faced, and deciding what should be the main concern.

Intending to enable students to understand and make use of learning theory, it recommends that English instructors need to adjust what students need in the setting or future situation (Long, 2005; Chien, & Kao, 2008). According to Raof & Yusof (2006) when students were given adequate material or training in the context of language use in their fields, they were able to use the language appropriately. Lessons and appropriate tasks make students know the context of language and enable them to communicate effectively.

However, before analyzing the needs of students, teachers were obligated to understand the specific goals of students. These specific objectives refer to a specific goal that should be achieved by students in learning English. For example, students learning English as their aim to master English communication in the field of civil engineering. If the special purpose students were learning English for civil engineering activities, teachers should provide English language materials related to civil engineer activities in the process of learning English.

The material provided must follow the needs based on competence in this civil engineering department. Based on the obtained information, students were required to take two English courses, namely General English and English for Engineering. Then, this research was more focused on the General English course. Based on the informal interview the 7th-semester students of civil engineering on September 25th, 2019 who already learned General English in the 3rd semester said that the book used in this course (Oxford) was too difficult, lacks reading the material, does not suit to work situation, and does not fit the context. It causes the course to be more focused on academic reading and helps the students in making reports and theses. The same statement was disclosed by a lecturer who taught them in this course. Therefore this research was more intended for the General English course to help lecturers to complete the needs of students in their academics to find out the Civil Engineering department students' needs (wants) for English learning materials and to know

the language elements needed by students in English learning material in the civil engineering department.

For this reason, it was important to conduct the needs analysis in English language learning material for Civil Engineering department students. This research explores different content because each subject influences the needs that arise from the subject. Specifically, this research was more to the needs of Civil Engineering students. The researcher conducted a descriptive quantitative study entitled 'Need Analysis of English Learning Materials for Civil Engineering department students'.

The same research with a different title that has been done at the University of Bengkulu was for law school students by Helida (2015) and communication science students by Silalahi (2016). Then for research in the law faculty which was about authentic models and those in communication science about analyzing needs, but what researcher found in the library was only a research department of communication science by Silalahi (2016). Next, research in UPT Bahasa UNIB has a lot of the same research but the research was quite far from the current year. Based on the explanation above, the researcher chose the same title with a different participant. The previous research was carried out namely in the Department of Communication Sciences while in this research the researcher chose a different subject at the Department of Civil Engineering.

### **Research Methodology**

In conducting this research, researchers used descriptive quantitative research methods. Descriptive research was research that focuses on describing situations and conditions, that be explained in a research report. Researchers describe the real situations and conditions of the teaching and learning process of English and the results of students' answers on the questionnaire sheet to determine the needs of civil engineering students in learning English. Based on Leedy and Ormrod (2001) alleged that quantitative

research was specific in its surveying and experimentation, as it builds upon existing theories. The methodology of quantitative research maintains the assumption of an empiricist paradigm (Creswell, 2003). It also means the process of collecting data.

From the explanation above, the researcher concludes that the quantitative research method was the growth of social events. By conducting quantitative methods, researchers can study the needs of civil engineering students in learning English. This research was aimed to describe and analyze Civil Engineer students for finding the students' needs to develop English learning materials at the University of Bengkulu.

Populations in this research were carried out in the Department of Civil Engineering, at the University of Bengkulu. Then, in this research, the populations were taken per generation with a total of 256 students. Populations were taken per batch with a total of 256 students, and the data received is based on respondents from the questionnaire.

The populations in this study also involved English language lecturers who have teaching experience in the Civil Engineering Department and the Head of Civil Engineering study program. The research instrument was a research tool used in the research method. The research instrument determines the validity of the research results. In quantitative research, the writer was an instrument or can be called a human instrument. The researcher was responsible for the focus of research, research sources, data collection, measuring data, analyzing data, describing and summarizing research results.

Furthermore, in quantitative research, researchers play an important role in collecting data because only researchers understand the activities in the teaching and learning process of English. In this study, the researcher used an interview and questionnaire guide. In interviewing the object was held to know deeply about the student's needs on the content of Civil English materials and the questionnaire serves to determine the needs of civilian students in learning

English and it will be an open questionnaire which consists of questions about students' needs. The questionnaire items were adopted based on the Journal of Heni Fatmawati (2017) which was adopted based on Hutchinson and Waters (1987).

The questionnaire was a list of written questions, answers recorded by respondents. Researchers used a questionnaire with multiple choices. The questionnaire was being written in Bahasa Indonesia. It makes the participants easier in answering each question. The questionnaire consists of questions about students' needs. The questionnaire consisted of 14 questions in which the questionnaire was divided into six sections, namely:

- a. Part I: Expectations of students in learning English (question number 1)
- b. Part II: English language skills to be improved (questions number 2)
- c. Part III: Difficulties of students in learning English (questions number 3-5)
- d. Part IV: Students' opinions about the teaching techniques used by the teacher (questions numbers 6-7)
- e. Part V: Students want to learn English in Civil Engineering (questions numbers 8-11)
- f. Part VI: Student need on the language elements (questions number 12-14)

Based on the six sections/parts of the questionnaire above, the first to fifth sections were the first research questions and the sixth section was the second research question.

Here, a questionnaire was given to students via Google Form. The results of the questionnaire serve to study the needs of students in learning English from civil engineering students per academic.

In the interview, the object was carried out to find out in-depth and strengthen the questionnaire about the students' needs for the content of English material for civil engineering students. It consists of several questions

posed to stakeholders and English lecturers who teach English in civil engineering. After that, the researcher analyzed the data from the interviews.

## **Finding and Discussion**

### **Finding**

After doing the research and analyzing the data, the researcher finally found the result of the data. In this chapter, the researcher discussed the result of the research. This chapter was dividing into two parts: the first part was the result of the data, and the second part was the discussion. The discussion was based on the result of the research and some theories related to the research. The main purpose of this research was to find out the Civil Engineering department students' needs (wants) for English learning materials and to know the language elements needed by students in English learning material in the civil engineering department.

Participation in this study was conducted at the Department of Civil Engineering, University of Bengkulu. Then in this study, participants were taken per batch with the number of students as many as 256 people, but of the number of students only 66 people responded to the questionnaire given.

English for Civil Engineering was one of the most important subjects in language education for students of the Civil Engineering Department. Although the department has no direct connection with English, the professional demands it was facing in the future were very prominent. Also, they were required to be able to understand and transfer knowledge in their department by using English. English skills in students were very important to improve student competence in the teaching and learning process and prepare themselves for work after graduation. Therefore, before learning it was necessary to know that the material being studied was following the needs of students. Therefore we need a needs analysis that includes the desired goals and elements of language learning.

Following the questionnaire results, 75% of students of class 2017, 82.1% of students of 2018, and 84.4% of students of 2019 stated that they hope to learn English because they aim to communicate in English well in their activities in civil engineering, meanwhile 25% of students of class 2017, 14.3% of students of class 2018, and 86.4% of students of class 2019 stated that learning English was important for this era. The rest of them finally, 3.6% of students of class 2018, and 9.1% of students of class 2019 stated that they hope to learn English because they want to know English better.

Next, the skills students want to improve were speaking with a total of 93.8% of the 2017 class, 92.9% of the 2018 class, and 90.9% of the 2019 class. Furthermore, writing skills account for a total of 6.3% of the 2017 class and 4.5% of the 2019 class. Then, reading skills account for a total of 3.6% of the 2018 class and 4.5% of the 2019 class. Finally, listening skills were only 3.6% of the 2018 class.

Next, the skills that students find difficult were speaking with a total of 62.5% of the 2017 class, 67.9% of the 2018 class, and 50% of the 2019 class. Furthermore, listening skills totaled 25% of the 2017 class, 21.4% of the 2018 class, and 27% of the 2019 class. Then, writing skills totaled 12.5% of class 2017, 7.1% of class 2018, and 18.2% of class 2019. Finally, reading skills were only 3.6% of class 2018 and 9.1% of class 2019.

Next, students experience difficulties in the process of learning English because English material was difficult to understand with a total of 37.5% in 2017, 32.1% in 2018, and 59.1% in 2019. Students have difficulty in the process of learning English because they were less enthusiastic about a total of 37.5% of the 2017 class, 14.3% of the 2018 class, and 4.5% of the 2019 class. Students have difficulty in the process of learning English because lecturers' explanations were difficult to understand with a total of 18.8% of 2017, 32, class 1% of the 2018 class, and 27.3% of the 2019 class. Finally, students have difficulty in the process of learning English because learning English was boring, only 6.3% of the 2017 class, 21.4% of the 2018 class, and 9.1% of the 2019 class.



Next, the difficulty students experience in understanding the English text was that the text was too difficult to understand, moreover the text was too distorted from our department with a total of 87.5% of class 2017, 82.1% of class 2018, and 81.8% of class 2019. naturally in understanding the English text was that the text was not needed for our majors with a total of 12.5% from class 2017, 17.9% from class 2018, and 18.2% from class 2019.

Next, the main source in teaching and learning Internet English with a total of 50% of class 2017, 78.6% of 2018, and 72.7% of 2019. class 2018, and 18.2% from class 2019. the main source in teaching and learning English English textbooks with a total of 25% from class 2017, 3.6% from class 2018, and 18.2% from class 2019. Then, the rest was only a little or not selected. textbooks with a total of 25% from class 2017, 3.6% from class 2018, and 18.2% from class 2019. Then, the rest was only a little or not selected.

Next, the relationship between the English material used and the target area was "much related", the majority answered that the most answers were 56.3% in class 2017. Then the majority who answered "related" was 50% in class 2018, and 50% in class 2019.

Next, learning English material in the classroom was more focused on "Speaking" and "listening", which answers the two skill materials getting 25% of respondents from class 2017, then the rest answers differently from these answers where the number of respondents in each answer was below 25 %. However, 32% of the 2018 generation focused more on "speaking" material, and 40.9% of the 2019 class answered focused on "listening" material.

Next, the text/reading and writing that students feel was needed was "Discussion Text", which answers this with a total majority of 43.8% of the 2017 class, and the rest answered others with mixed results were less than 43.8%. Likewise with 35.7% of the 2018 class answered "Discussion Text". However, it was different from 40.9% of the 2019 class who answered: "Descriptive Text" which they thought was needed.

Furthermore, the material that you want to focus on was "Transportation", which answers this with a total majority of 37.5% of the 2017 class, 64.3% of the 2018 class, and 36.4% of the 2019 class students, then the rest answered the others with mixed results of less than 36.5%.

Furthermore, the language elements that were felt to be needed were "Discourse", which answered this with a total majority of 42.9% of the 2018 class and 45.5% of the 2019 class students, then the rest answered others with mixed results of less than 36.5%. However, not for the 2017 class, where the majority of 37.5% answered "Grammar" and the rest answered other answers with the same number, namely 31.3%.

Furthermore, the Grammar that I feel needed was "Simple Present Tense", which answers this with a total majority of 56.3% of the 2017 class, 39.3% of the 2018 class, and 68.2% of the 2019 class students, then the rest answered the others with mixed results less than 39.3 %.

Finally, the discourse that was felt to be needed was "Situational Conversation", which answers this with a total majority of 50% of the 2017 class, 53.6% of the 2018 class, and 40.9% of the 2019 class students, then the rest answered others with mixed results of less than 40.9%.

### **Discussion**

Based on the result above, we know that they need English to communicate in their activities in civil engineering where they want to improve their speaking skills because these skills were what they were currently struggling with. According to Tarigan (1983:15), speaking skill is the ability to pronounce articulation sounds or words to express say and express thoughts, ideas, and feelings. Listeners receive information through pitch, pressure, and joint placement. If the communication takes place face-to-face, it is coupled with the movement of the hands and facial expressions of the speaker.

Next, the material provided was difficult for students to understand and this was combined with other activities/learning which made it difficult for them

to learn English because the books given to them were not following their major. Then, most of them learn a lot of English from the internet. Then, the material and their target area were linked because the material they focus on was about "listening". Listening is a process that includes listening to the sounds of language, identifying, interpreting, assessing, and reacting to the meaning contained in oral discourse (Puspayanti, et al, 2012). Next, their text needs a lot to "Discussion text", the discussion text was a text that contains an explanation of a problem, differences of opinion that occur, and solutions that are a way out of differences of opinion in the text (Mulyadi,2015, p. 130). Then, they wanted the English language material to focus more on transportation.

Then, the language elements they want were more conversational and grammatical. Then the grammar material they need was more "Simple Present Tense" and the conversation material they need was more "Situational Conversation".

The above statement was supported by an interview with the Head of Study Program about the needs of students about their need for English during civil engineering activities and the world of work later. Then, the material they got was lacking. They had only a few translations of the books because they were from America, so they needed English and they also needed international certification so they could work abroad. Next, they were more geared towards learning English with a focus on communication/speaking because this skill was used more than other skills. However, everything returns to the student's willingness to learn English, and finally, from civil engineering itself, English has not been conveyed/achieved because the number of subjects given was very large.

Then from the results of interviews with English lecturers who teach English which supports the results of the questionnaire filled out by students, for example, English was needed by them to support their activities and when they graduate. Then, what they need to master was knowledge because it can help

them learn English and what makes it difficult for them to learn English because their lack of confidence makes them obstructed. Then, students were given the four skills and added with language components such as pronounces, vocabulary, and others because students were trained to master the skills and language components according to the university's challenges and also integrate the TOEFL into the materials given. Next, to support students in the future career world, functional language was given so that students can speak English fluently in oral and written materials and according to their study program. Finally, the material given was linear with the vision and mission of the campus so that it can compete globally and the material was appropriate.

### **Conclusion and Suggestion**

Based on the result analysis, it can be concluded: First, they want to improve their English speaking skills and listening skills to communicate in their activities in the field of civil engineering where the material provided is easily understood by the students. Second, the language element they want is more conversational. The English conversations given are more situational conversations and the texts given are more discussion texts. Third, English is important for professional needs because English is needed for everything such as the TOEFL score and confidence in their English which is one of the requirements to continue studying and to become an employee in a company.

Based on this research where the researcher focuses on the needs of the target, some suggestions for lecturers who teach students about English. First, the material given to students is more about communication skills such as speaking skills and listening skills. Second, the material provided is more situational and discussing. The reason why the researcher suggested this is because civil engineering students who are more practical/fieldwork need to communicate a lot in doing work.

Some suggestions can be considered by further research interested in needs analysis. The next researcher can analyze the syllabus material, different subjects/populations, and so on about ESP. Then from research, many things can be developed or gaps that can be taken.

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