

The Contribution of Civil Engineering English Course Material Toward Student Learning Outcomes at the University Level

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Abstract: This study aims to update the teaching materials needed by the industrial world for civil engineering graduates so that civil engineering graduates can succeed in entering the industrial world, such as well-known companies. This research is a research contribution, and the sample is 25 people. The data collection technique was taken in the form of student documentation. The data analysis technique is used by collecting primary data from questionnaires and student interviews, and secondary data collection is taken from students' mid-semester exams. The data collection results from questionnaires and interviews with these students show that the lecturers of this course must update three teaching materials. Those three teaching materials are the terms in the field of English, Occupational Health and Safety (K3).

1 INTRODUCTION

Teaching English in other departments within the University is included in the curriculum. It is helpful for alums who have graduated from this department to be accepted in the industrial world. It is also possible for civil engineering majors. It is hoped that the lessons taught by the lecturers in charge of this course must follow the demands of the industrial world. One of the approaches taught in this course is the English application approach which we know as English Specific Purposes (ESP). We can see this from the quote by Tom Hutchinson and Waters in my dissertation excerpt (1987), namely that ESP materials do not only emphasize vocabulary, grammar, or certain forms of language teaching. However, ESP materials also focus on what students need in the world of work in the future. So that it impacts the purpose of ESP itself is to equip students or students with relevant English skills that can support their professional careers.

Education, especially ESP, is crucial in specific learning at the lecture level (Rofii & Franscy, 2018). One of them is addressed to the Department of Engineering. ESP has a kind of approach needed in development to prepare students for abilities that

will be needed in the world of work later. For example, in the field of reading, where students must understand English texts or readings that are appropriate to their field, then in the field of speaking and listening, where students must be able to speak in public in English according to their field, so, they understand what is being said. They are instructed in an English procedural text.

From the explanation above, it can be concluded that exceptional English learning (ESP) is essential to be taught nowadays. It is reinforced by research that has been conducted by Musikhin (2016), which states that the importance of unique English learning or ESP for scientists and engineers starts from an analysis of their needs to carry out a specific search for suitable, reliable learning materials, how to define appropriate teaching methods, the software, and approaches used in the educational process are developed to develop the necessary language skills to contribute around the world actively.

From the results of interviews with lecturers and students and heads of departments within the engineering faculty at several universities in the city of Padang, West Sumatra, both private and state universities. The reasons are, firstly, the lack of reference materials for learning materials for both students and lecturers. The books lecturers use for

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their students are not sold commercially in bookstores in Padang. Second, lecturers have made teaching materials, but the teaching materials they have made are still in the form of hand-outs adapted from several sources, which are then adapted to the existing curriculum in the department. The material that the lecturer has designed is included in E-learning.

In the explanation above, Kusumawati also explained the same thing (2018). He explained that the needs of non-English study program students for ESP English courses were very diverse, so it could be concluded that they needed English not only for their current needs, such as reading English literature but also for future work purposes.

The third problem encountered in ECE learning is activities in the classroom that do not provide enough opportunities for students or students to actively participate in the learning process. It is because most of the activities are designed for face-to-face meetings only. Meanwhile, the effective allocation of time in ECE learning is minimal. As a result, the learning process cannot provide more opportunities for all students or students who experience the skills being taught and do not understand the material and practice well. In addition, additional in-class activities provided in the LMS where students can access and learn privately or in groups outside the classroom also do not fully accommodate student or student activities.

Apart from the three problems above, there is one more significant problem, namely learning English specifically (ESP) in general has problems regarding time allocation. Meanwhile, many learning materials are placed in e-learning, so they do not get many demands from the industrial world. Therefore, three examples of material will be designed from the interview results above English technical terms, object descriptions, and occupational health and safety (K3).

2 METHOD

Based on the previously described problems, the research type used is correlational research. This study aims to find out how much the contribution of English learning materials in civil engineering majors is to student learning outcomes in the university environment. This research was conducted in the civil engineering department at several universities in Padang. The sample in this study was 25 civil students. The data collection technique that the researcher used was documentation. Meanwhile, in the data analysis technique, the researcher used two

ways: the first analysis using primary data with analysis techniques in the form of interviews and questionnaires.

3 DISCUSSIONS

Learning English in countries that use English as a second language or as a foreign language, such as Indonesia, categorizes teaching English for adult levels into two different groups, namely English for General Purposes (EGP) and English for Specific Purposes (ESP), Liu et al. al (2011) provides the same perception as what is explained by Hutchinson and Waters (1987) that the most crucial goal of EGP learning is to encourage students to feel interested and accustomed to learning English in order to improve general language competence and to improve students' language skills. Accurately and correctly related to daily communication activities. Whereas Lee (2016) said that "ESP learning is not much different from EGP learning except in terms of learning content, ESP can also be used in learning all types of English" (Lee, 2016, p.97). The most fundamental difference is between the learner and the learning itself (Rahman, 2015). Furthermore, Rahman said ESP learners are generally adult learners with experience learning English (EGP). However, they want to go further to learn English to be able to communicate their professional skills and also to be able to carry out various activities. They are related to their profession. In this regard, they need language skills for more specific purposes, for example, English for students, financial managers, nurses, lawyers, hotel receptionists, doctors, engineers, etc. The ESP learning approach can answer this need because of one of the characteristics of ESP, as described in detail by Dudley-Evan and Johns and cited by Rahman (2015), that, firstly, ESP consists of English language instruction designed to meet the specific needs of learners. Both ESP uses methodologies and learning activities that must follow the learner's discipline/profession. Third, ESP is centered on language (grammar, vocabulary, and register), skills, specific genres, and following activities in the learning discipline or profession.

Robinson (1991) agreed from the start to include criteria for the needs of learner participants in defining ESP. He defines that the essence of teaching ESP is based on analyzing the learner's needs, "which aims to determine as clearly as possible what the learner has to do through the medium of English" (Robinson, 1991). Many ESP definitions have been given, each dealing with many aspects of language

learning. However, most of the definitions are always related to the needs of learners in learning a language. Because according to Hutchinson et al., "ESP is a language teaching approach in which all decisions regarding content and methods are based on students' reasons for learning" (Hutchinson and Waters 1987). In line with that, ESP-based learning must be developed based on an analysis of learner needs, such as an example of learning English for civil engineering, namely learning English aimed at civil engineering students where the content and learning methods are based on an analysis of the English language needs of civil engineering students with the aim that later be able to communicate using English related to their field of study and work in the field of civil engineering correctly and correctly.

The results of the identification obtained with a survey conducted on graduates and users (users) of The Civil Engineering major is material related to the use of communication in the world of work, among others that: Material, Safety rules, Safety equipment, Identifying tools, and instruments, Identifying materials and containers, Numbers and Math symbols, Shapes and properties of materials, Structure, and composition of objects, Functions, and abilities, Actions in sequence, and job search skills.

From the material obtained from the results survey and the highest requirement is job material search skills, namely material that discuss the inner stages of looking for work, including: Analyzing Job Vacancies Advertisement (analyzing job advertisements), Writing a letter of application (writing a cover letter) and Job Interview Preparation (preparation for a job interview) in language English.

The second level requirement is Function and ability material. This material discusses how to describe the functions of tools or instruments commonly used in civil engineering, such as Hammers, files, spades, hacksaws, and instruments commonly used in laboratories or workshops, such as CBR machines, cutting machines, and so on, by using passive forms in sentences that are made.

The third level of language needs is Identifying materials and containers and the Structure and composition of objects. These two materials have the same percentage of needs. The material discussed on the topic of Identifying materials and containers is how to describe materials and various forms of containers that are commonly found in the field of civil engineering. Meanwhile, the material on the Structure and composition of objects discusses how to describe the structure and composition of buildings, usually using sentence forms with active verbs.

The fourth rank of language needs is Safety rules, Safety equipment, and Shapes and properties of

materials. On the topic of Safety rules and Safety equipment, it is discussed how to get to know the tools and rules used for safety in the field or at work. On the topic of Shapes and properties of materials, it is discussed how to describe the forms and properties of building materials used in buildings, highways, and bridges.

In this case, the language skills are English that graduates from the highest Civil Engineering department need to be mastered: skills in reading work instructions and work drawings/schedules. The second skill is Skills in understanding presentations and Skills in oral communication. It is crucial. It is needed because graduates who have held senior supervisor or project manager positions/positions must be able to make presentations in English due to projects in their companies working with IDB or project funders from foreign countries.

The following skills needed in the third rank are reading cost estimates, reading the text of work contracts, and understanding work instructions orally. Furthermore, the skills required at rank 4 (four) are Skills in making cost estimates in English. Skills in making cost estimates in English so far have not been given because this course has only been acquired by the Department of Civil Engineering students, even though English courses are in semesters two and three.

As for the skills to write work instructions and the skills to make drawings/work schedules are ranked fifth. These skills are not drawing but making terms used in working drawings in English while making work instructions, in this case, instructions on products made by the construction company. The skill with the lowest demand is writing memos in English. The following is a tabulation of skills required by graduates.

From the ranking of the needs, the four language skills that graduates prioritize are: speaking, listening, reading, and the last is writing.

It follows the purpose of giving English courses at the Semarang State Polytechnic Department of Civil Engineering, namely so that students get the provision of communication skills in English so they can compete and compete with graduates from other tertiary institutions or Polytechnics and are ready to go to International Polytechnics.

4 CONCLUSIONS

From the results of the exposure previously described, it can be concluded that, nowadays, ESP is significant in the world of specific learning at the lecture level. One of them is addressed to the Department of Engineering. ESP has a kind of

approach needed in development to prepare students for abilities that will be needed in the world of work later. For example, in the field of reading, where students must understand English texts or readings that are appropriate to their field, then in the field of speaking and listening, where students must be able to speak in public in English according to their field, so, they understand what is being said. They are instructed in an English procedural text.

In addition, the material for learning English should be adapted to the demands of the industrial world. Examples of the material urgently needed by the industrial world terms in engineering English learning, Occupational Health and Safety (K3), and object descriptions. These three materials are needed by the industrial world today, which the authors will develop from existing materials.

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