

# NEED ANALYSIS OF ENGLISH TEACHING MATERIALS FOR ELECTRICAL ENGINEERING

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## Abstract

*This study investigates how podcast assignments affect the speaking skills of students in the TBI program at Institut Agama Islam Negeri (IAIN) Pontianak. Focusing on the importance of language proficiency, especially in English, the research addresses the challenges of developing effective speaking in today's interconnected world. The TBI program aims to equip students with essential English language skills using innovative teaching methods, including podcast assignments. The literature review highlights the significance of speaking skills, particularly for English learners, and emphasizes podcasts as valuable tools for language instruction. Using a qualitative case study design, the study assesses podcast content, language proficiency, delivery, clarity, and creativity among third-semester TBI students. Results show most students have a basic proficiency level, with areas for improvement. The discussion connects these findings with recent research, emphasizing podcasts' dynamic role in language development. In conclusion, the study emphasizes the diverse impact of podcast integration, offering insights for educators and institutions to enhance language learning initiatives. The positive outcomes and areas for improvement guide future interventions, showcasing podcasts' potential in improving students' speaking skills and overall language learning.*

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## INTRODUCTION

The design of an English course is one of the important things in teaching English. a teacher must be able to understand the condition of students, this is very important because it is useful as information about special needs in learning English such as skills, competencies, and knowledge that must be achieved by students. Teaching that is tailored to the needs of students will affect the ability of students according to the interests of the majors. The term "needs" here means that there are a number of problems that must be analyzed

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so that an appropriate solution is made to solve the problem. These problems can be seen from various things such as difficulties that must be resolved in facing challenges and making decisions that are the specific objectives of student learning.

A needs analysis is carried out to establish "what" and "how" courses and is the first stage in the development of ESP courses, followed by curriculum design, material selection, methodology, assessment, and evaluation (Paltriade, 2013: 326). In other words, analysis of student needs is something that must be considered in deciding the material that will be given to students and also efforts to identify students' needs in learning. Learning according to students' needs will further add insight into learning English according to their majors. and will develop and help when students apply for jobs both locally and internationally. However, before analyzing student needs, a teacher is obliged to be able to understand the specific objectives of students. English for students aims to enable them to communicate in English. By being able to communicate in English, students are expected to have competitiveness in their work environment. If students have this goal, then a teacher must provide or facilitate by providing English language material related to all activities in each study program. Therefore, to meet students' professional needs and educational requirements set by the institution, students will need English for certain purposes.

The English language used in vocational schools is called English for Specific Purposes (ESP). Before delivering learning material to students, a teacher must understand the purpose of ESP. This is because ESP has different learning materials than students in public high schools who use English in general. (esp) or English for specific purposes is the specific English language learning of each study program at Vocational School with this ESP very helpful for learning according to students' needs. Teaching English for special purposes means learning English which provides high-quality material for students so that they can communicate according to their fields. Basturkmen (2010) states ESP is a course that deals with narrower English topics that students need to learn. Therefore, a teacher must be able to understand and analyze what learning is like for students according to their needs, In other words, ESP focuses on the needs of students in learning English to be able to communicate in the work environment. both local and international. Also, a teacher must be able to identify students' knowledge in English so that the teacher can find shortcomings of students and hopefully he can find solutions that must be solved. How and what to do in implementing an ESP program for vocational schools in Indonesia, the needs of students learning English as well as views or expectations that exist in each student so that students

understand what they need in learning English. In other words, to support this, there must be educational institutions that prioritize the needs of students to prepare people who have competence in each field. Or apply English teaching using ESP (English for Specific Purposes). Education system to improve education that adjusts courses in vocational schools.

The Government of Indonesia issues policies in the world of education as regulated in Law no. 20 (2003) this policy states that one of the goals of education is to create a generation that has the skills to prepare graduates who are professional and able to compete. Some vocational high schools facilitate students who wish to attend a number of courses needed to meet the future expectations of students who will face global competition. In vocational high schools, students are educated to be ready to enter the workforce. Where this will relate to or impact when students have graduated or completed school. In this case, to help students become professional resources, ESP is a very important role in learning by providing communication skills that students can use effectively in accordance with the target situation. Murray and Christison (2011) define, vocational programs involve teaching the skills needed for a particular job.

The Electrical Engineering Class is one of the study programs in one of the vocational schools in Majalengka. Students are required to be able to understand how to become an electrician, service technician, electric mechanical production operator, technician in fire alarms and hydrants. of course, the use of English in this department is very often found in English vocabulary. where there is a lot of English vocabulary in the field of electrical engineering using ESP will greatly assist students in achieving English mastery correctly and easily. and this will be very helpful if you already know the world of work in general. Based on a preliminary study a problem found in English textbooks used by students a which the content is same, such as narrative text, memos in making memos, signs, daily activities, schedules, food and beverages. In addition, the syllabus used by English teachers does not suit students' learning needs. Therefore, the practical way by English teachers in the teaching and learning process is not according to the needs of vocational school students. This statement is reinforced by the experience of researchers as pre-service teachers in one of the vocational schools in Majalengka from February to March.

Based on the explanation above, the researchers are interested in analyzing the teaching of English material based on the needs of students majoring in Electrical Engineering. Furthermore, the results of this study can

be used as suggestions for vocational schools to design English for Special Purpose materials based on the needs of students in vocational schools.

## LITERATURE REVIEW

### Need Analysis

The basic course starts with the needs of the students. Understood, learned in preparing students to use English in an academic, professional or workplace environment (Basturkmen, 2010). A needs analysis is carried out to determine the "what" and "how" of a course, and is the first stage in developing an ESP course, followed by curriculum design, material selection, methodology, assessment, and evaluation (Paltridge, 2013: 326). Al- Thiyabi (2014) and Yundayani, Emzir, & Rafli (2017) infer that the need thinks that the analysis needed is an important step in designing an ESP program. This is the first step to providing an appropriate program. when we know what the results are like, it will be an important basis for the future, such as how to design a syllabus, how to manage implementation, and evaluate the results of the ESP program. Based on the explanation above it can be concluded that all matters relating to learning English must be based on an analysis of student needs is one of the basic assumptions of curriculum development. Information about students is the basis of learner analysis. Therefore, it can be concluded that this is used by a teacher in making syllabi and methodology so that it is more in line with the characteristics and students' needs.

Richard (as cited in Puspitasari, 2013: 23) states the procedure used to gather information on the needs of learners is known as needs analysis. Meanwhile, according to Nunan (as cited in Sukarni, 2016: 13) needs analysis is the process of gathering information concerning learners' needs. Before carrying out the analysis, the difference between target needs and learning needs must be first identified. Furthermore, Hutchinson and Waters (as cited in Nuryanto, 2018: 27) classify the needs into target needs (what learners need to be able to communicate in the target situation) and learning needs (what learners need to learn). Related to needs analysis, Graves (2000) supports Dudley-Evans and St. John (2007): the importance of ESP, the role of practitioners in needs analysis, and how to implement it. Objective information is information that does not pay attention to students' attitudes and views or is also called factual information for example regarding age, nationality, everyday language etc. Meanwhile, subjective information reflects students' priorities and perceptions. This includes information about students' needs in learning, why students want to learn English and assignments in class, as well as activities that students like. what students need in learning English in their class. students must know that learning in accordance with their majors or implementing the ESP program will have an impact on mastering the material according to their majors.

In other words, subjective information describes the priorities and perceptions of students about what must be taught and how it should be taught. a teacher must also observe students how to learn according to their needs. in that way the teacher will understand how students will begin to be interested in learning English according to their needs and especially in teaching English. The target situation has several elements in gathering data. This statement is supported by Hutchinson et al (1987: 55) target needs is a general term, which in practice has a number of important differences. It would be more useful to look at the target situation in terms of needs, shortcomings and desires.

### *Necessities*

Necessities is the types of needs determined by the demands of the target situation; that is, what students must know in order to function effectively in the target situation. From this reason the teacher needs to do an analysis to find out about the student or the target situation. Whether the material distributed is appropriate or not appropriate to make students aware of their subjects. For example, for electrical technicians to understand the important vocabulary section in English this department makes students better understand their majors and benefit in the field.

### *Lack*

Lack of Researchers need to know what students already know, teachers must understand what is needed by students and also understand what students lack by analysing problems before the teacher will learn more about what stages a teacher will give to his students so researchers can decide which needs which students don't have. One needs a target situation might be to read the text in a certain subject area. From this statement, the researcher knows that the teacher must know about student deficiencies, the means of lack here is the problem of students in their majors and problems that are difficult for students to understand in class. By knowing the needs and characteristics of students in advance, the teacher will know several approaches and techniques that will be applied to students to make students understand their material and resolve their shortcomings beforehand.

### *Wants*

Analysis of the needs of the target situation is basically a matter of asking questions about the target situation and attitudes towards situations from various participants in the learning process. A teacher must ask students about student situations about the app's expectations of a learning system that is appropriate to the need to achievement targets, therefore it is sometimes

called subjective. In fact, these desires are real, and can conflict with needs as perceived by the employer.

### **English for Specific Purposes (ESP)**

ESP deals with preparing the learners to be able to use English in academic, professional or workplace setting. Basturkmen (2010) stated ESP is a course which concerns narrower range of topics of English that the students' needs to learn. Byram, Michael and Hu (2013:223) mention that English for Specific Purposes refers to the teaching and learning of English for work or study-related purposes. It can be that ESP is a learning with new discipline within applied linguistic that offers a new learner centered approach to English language teaching whose methodology is based on the specific needs of the learner. In other words, ESP is a method of teaching and learning English for specialized subject matter with some specific vocational and educational purposes in mind. In ESP syllabus, the teaching content is suitable to the special language concerning to the specialized aims that are required of the learners.

As Bracaj (2014) explained that students learn English for a specific purpose, represented by studying subject matter to gain and develop appropriate knowledge and skill through English. The learners should to perform a task in English than the learners should have interest in the study. In other word the learners will be easy to apply they knowledge in their work place. Beshaj (2015) added the necessity of ESP method related to international exchanges and interactions that the recent condition needs to have people know not just general English but to have extensive English. Day and Krzanowski (2011) state English for specific purposes (ESP) refers to the teaching and learning of English as a secondary domain and it is always a professional purpose- asset of skill that learners currently need in their work or will need in their professional careers. Based on explanation above it can be seen that the ESP is about the learners need, and language used in real life connected by every aspect of ESP teaching. English for Specific Purposes (ESP) is defined as a language course or program in which the objectives and content are specific needs for particular group or students and has specific major so english for the vocational students must be different with senior high school. And be more specific for learning English.

### **Theoretical Framework**

Efforts to identify students' needs in learning English are the objectives of needs analysis. Each student has a different major according to their choice, this affects the learning of the English that they will learn to achieve their goals. One of vocational school in Majalengka providing five different study

programs, they are, Computer Network, Engineering, Automotive, Software Engineering, and Textile Chemistry. In the teaching and learning process the students' used similar text book materials with senior high school, its means they learn English for generally. This study aims to analyze the needs of students in the Electrical Engineering class in learning English. This study utilizes descriptive analysis by using collecting data interview.

## **METHODS**

This research was conducted at one of vocational school in Majalengka. The subject of this research involves an English teacher and ten grade students of Electrical Engineering study program. The reason of researcher chose the school because based on the preliminary study the researchers found some problem that the English text book materials used by students has similarities with English text books used by senior high school students', the syllabus used by the English teacher not appropriate with students learning needs. Therefore, the practical ways by English teacher in teaching and learning process not appropriate with students' needs. This statement strengthened by the experience of researcher as pre service teacher at one of vocational school in Majalengka on February until March. In addition, the syllabus used by the English teacher not appropriate with students learning purposes. The subject of this research is the tenth-grade students of Electrical Engineering study program at one of vocational school in Majalengka. The researcher collected the data by observing English teaching and learning process through interview to students and English teacher.

## **RESULTS AND DISCUSSION**

The need analysis conducted to evaluate the English teaching materials for electrical engineering revealed several key insights that are pivotal for enhancing language instruction in this specialized field. The survey responses from both students and faculty emphasized a notable gap between the existing materials and the specific linguistic demands of electrical engineering. One significant finding was the identification of technical vocabulary as a major area of concern, with participants expressing the need for instructional materials that incorporate a comprehensive range of electrical engineering terminology. This highlights the importance of developing content that not only covers general language skills but also integrates domain-specific lexicon to bridge the language gap between classroom learning and practical application in the field. Moreover, the results underscored the necessity for a more practical and industry-oriented approach in English teaching materials. Participants emphasized the value of real-world scenarios, case studies, and communication exercises that mirror the professional challenges encountered

in electrical engineering. This aligns with the broader trend in education towards experiential and contextually relevant learning experiences. Consequently, the development of materials that simulate authentic workplace communication and technical documentation can significantly enhance students' language proficiency while preparing them for the specific language requirements of their future careers. Additionally, the analysis revealed varying levels of proficiency among students, indicating a need for materials that cater to a diverse range of language learners. Tailoring content to accommodate both foundational and advanced language skills ensures that all students, regardless of their starting point, can benefit from the instructional materials. This recognition of diversity in language proficiency levels also suggests the potential value of implementing adaptive learning strategies within the materials, allowing for personalized learning experiences that address individual needs and accelerate language acquisition.

In conclusion, the results of the need analysis highlight the imperative to revitalize English teaching materials for electrical engineering by integrating technical vocabulary, embracing practical scenarios, and catering to diverse proficiency levels. The development and implementation of such materials not only address the identified gaps but also pave the way for a more effective and relevant language education that aligns with the evolving demands of the electrical engineering profession. There are some relevant researches that to this research. They are explained as follows: First: "Needs Analysis of Electrical Engineering Students, Graduates, and Companies: A Step toward Employability" *Abbas Ali Rezaee*<sup>2</sup> *Samira Kazempourian*<sup>3</sup>. This study intended to investigate the English language needs of Electrical Engineering (EE) students and graduates from their own perspectives, along with the English language Expectations of Electrical companies from the employers' point of view. Second: "An Analysis of English for Specific Purpose Syllabus At Electrical Engineering Department Of Padang Technology Institute (Descriptive study at the first year Electrical Engineering Department of ITP West Sumatera in 2014/2015) By: Yulia Nofriani\*) Syayid Sandi Sukandi, S.S, M.A\*\*) Melvina, M.Ed. In this research, the researcher analyzes the suitability of the English syllabus with the needs of students based on theory Dudley Evan and St Jo. There are nine indicators in making good syllabus material: The implementation, the assessment, the needs, the teacher or lecturer's role, the focus, the experience, the material, the group or learners and the type. Third: "Needs Analysis of English for Technicians: A Case Study" by San, and Choo 2015. This research reveals the needs and skills of technicians in English communication in their work environment. This research was conducted on technicians who produce microchips and electronic components. The purpose of this study is to design a ESP course for

technicians, get feedback from other technicians. In addition, this research reveals that the four national skills are often used, especially speaking and listening so that technicians assume that the English they use is less effective in communicating with other technicians. This research helped researchers in developing English courses for special purposes (ESP). Fourth: "Need Analysis on English Teaching Materials For Ict Students" Sri Diana Polytechnic Negeri ATI Makassar, Indonesia and Musdalifah Mansur Universitas Negeri Makassar, Indonesia. The result of this research revealed that students of Information, Communication and Technology (ICT) mostly needed two skills in learning English. First, speaking skill that is to communicate in English and to present their final project exam. Second, writing skill is used to do their assignment and final report in English. Language element which is the most important and needed by the students is vocabulary, then followed by grammar.

## CONCLUSION

In conclusion, the need analysis of English teaching materials for electrical engineering underscores the critical importance of aligning language instruction with the specific requirements and technical nuances of the field. This study has shed light on the unique linguistic demands faced by students in the electrical engineering domain, emphasizing the necessity for tailored educational materials that integrate technical vocabulary, industry-specific communication skills, and real-world scenarios. As technology continues to advance, effective English language proficiency becomes increasingly vital for professionals in electrical engineering. Thus, the findings of this need analysis not only contribute to enhancing language education in this specialized context but also pave the way for the development of targeted and impactful instructional materials that empower students to excel in both language skills and technical expertise within the field of electrical engineering.

## REFERENCES

- Al- Thiyabi, ( 2014 ). *Need Analysis for EFL listening Skills at the EII*
- Basturkmen, H. (2010). *Developing Course in English for Specific Purposes*. NewYork: Palgrave Macmillan.
- Benavent, G. T.,& Sánchez-Reyes, S. (2015).Target situation as a key element for ESP (Law Enforcement) syllabus design. *Procedia - Social and Behavioral Sciences*, 173, 143 – 148. DOI: 10.1016/j.sbspro.2015.02.044
- Creswell, Jhon W.(2009).*Reseach Design Qualitative, Quantitative, and Mixed Method Approaches*. California: Sage Publications, Inc
- Depdiknas. (2003). Undang-Undang RI No. 20. Sistem Pendidikan Nasional.

- Dudley-Evans, T. & St. John, M. (1998). *Developments in English for specific purposes*. Cambridge: Cambridge University Press.
- Hutchinson, Tom and Alan Waters. (2010). *English for Specific Purposes: A Learning- Centered Approach*. New York: Cambridge University Press.
- Moslemi
- Liu, J.Y., Chang, Y.J., Yang, F.Y., and Sun Y.C. (2011). Is what I need what I want? Recopceptualizing college students' need in English course for general and specific/academic purposes. *Journal of English for Academic Purposes*. Vol. 10, 271-280.
- Mahripah, Siti. dkk. (2016). Analisis Persepsi Mahasiswa dalam Mengembangkan English for Specific Purposes (ESP) *Learning Materials (Materi Ajar Pengajaran Bahasa Inggris untuk Tujuan Khusus) [Proposal Penelitian Pengembangan]*.
- Moleong, L. 2007. *Metode penelitian Kualitatif*. T Remaja Rosda Karya. Bandung.
- Murray, D. E., & Christison, M. A. (2011). *What English language teachers need to know*. New York. Routledge.
- Nuryanto. (2018). Peningkatan Mutu Madrasah Ibtidaiyah: *School-Based Management dan Kompetensi Guru Madrasah*. *Jurnal Elementary*. Vol 4 , 21-32.
- Otilia, S. M. (2015). *Needs analysis in English for specific purposes*. *Annals of the Constantin Brâncuși University of Târgu Jiu, Economy Series*, 1 (II).
- Paltridge & Starfield (2013). *The Handbook of English for Specific Purpose*. United Kingdom: John Willey and Sons, Inc.
- Puspitasari, Indah. (2013). *English For Computer Science: Sebuah Analisis Kebutuhan Bahasa Inggris pada Mahasiswa Teknik Informatika*. *Jurnal Pro Bisnis*. 6 (1), 21-37.
- Rita Karmila Sari 1 , Adhityo Kuncoro 2 & Fajar Erlangga 3 ( 2019 ). *NEED ANALYSIS OF ENGLISH FOR SPECIFIC PURPOSES (ESP) TO INFORMATIC STUDENTS*.
- Sukarni, Sri. (2016). Analisis Kebutuhan Bahasa Inggris Mahasiswa Universitas Nusa Tenggara Barat. *Jurnal Media Bina Ilmiah*. 10 (1), 12- 16. *Sciences*, 173, 143 – 148. DOI: 10.1016/j.sbspro.2015.02.044
- Yundayani, A., Emzir, & Rafli, Z. (2017). *Need analysis: The writing skill instructional material context for academic purposes*. *English Review: Journal of English Education*, 6(1), 59-70. DOI: 10.25134/erjee.v6i1.771.