



## THE IMPORTANCE OF ENGLISH FOR SPECIFIC PURPOSES BASED ON THE ENGINEERING STUDENTS' PERCEPTIONS

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### Abstract

English for Specific Purposes (ESP) is garnering significant attention and anticipation for its contribution to the teaching and learning process at the Polytechnic of Road Transportation Safety in Indonesia. Consequently, this study offers valuable insights into the perceptions of cadets at a vocational college regarding the significance of the ESP course within the transportation engineering program. Specifically, this paper aims to explore the cadets' perspective on the role of ESP in their future careers. By conducting a qualitative descriptive study, four types of questionnaires were administered to a total of ninety second-year cadets who are pursuing a major in transport engineering. The findings reveal that the cadets/students recognize the importance of ESP as a crucial subject that supports their future employment prospects. Moreover, they acknowledge the appropriate allocation of time to ESP within their curriculum, recognizing its necessity for their academic success and eventual career advancement. Understanding the importance of ESP is crucial for cadets aspiring to work in the industry. Cadets must have a strong motivation to learn and familiarize themselves with core engineering concepts in order to establish themselves as competitive engineers on a global scale.

**Keywords:** English for Specific Purposes; English for Engineering; English Curriculum

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### INTRODUCTION

Proficiency in the English language holds immense significance for students pursuing Engineering and other professional courses due to its role as the medium of instruction in higher academic settings and its widespread use as a means of communication in offices across the country. Additionally, English serves as the dominant language for international commerce, trade, diplomacy, tourism, scientific research, and education. Consequently, Engineering students must possess a comprehensive command of English to effectively engage with the numerous lectures delivered in English, comprehend the countless sentences and paragraphs presented in English within engineering textbooks, reference materials, tutorials, and project and dissertation papers, (Celce-Murcia, 2001) . The attainment of academic success, therefore, heavily relies on the students' proficiency in the English language. Moreover, in today's interconnected world, job opportunities are no longer restricted solely to Indonesia, even for individuals who have completed their education here. Many other countries employ Indonesian workers even it is not in the significant numbers.

Hence, it becomes imperative for Engineering students in Indonesia to master communicative competence in English, not only to excel in their academic careers but also to thrive in their future professional lives. Given this context, it becomes essential to examine the current status of English language proficiency levels and communication skills among engineers graduating from engineering colleges, (Patra & Mohanty, 2016). In this research paper, we aim to find out the significance of ESP for Engineering cadets and identify the cadets' perspective toward ESP course. By doing so, we hope to gain insights that will enable us to make informed and strategic decisions in this regard.

The teaching and learning of the English language in Indonesia at present is characterized not just by a wide range of educational institutions but also unsuitable linguistic environments. Throughout the process of language instruction and acquisition, prevalent classroom procedures are adhered to. The rise of English for Specific Purposes (ESP) has necessitated a critical evaluation by educators of the fundamental underpinnings of their courses, (Basturkmen, 2006). ESP represents a crucial branch within the broader field of English as a Foreign or Second Language (EFL/ESL) instruction, serving as the mainstay of English language teaching (ELT). Therefore, ESP should not be viewed as a distinct type of language or methodology, but rather as an approach to language acquisition that is shaped by the individual needs of learners, (Hutchinson & Waters, 1987). Similarly, (Dudley-Evans & St-John, 1988) conceptualize ESP as an approach rather than a finished product, resulting from the dissemination of scientific and technological knowledge as well as internal and international communication.

While it is of utmost importance for lecturers to take into account the discourses surrounding ESP, the significant disparity in English language proficiency among students/cadets across various provinces in Indonesia, including those at colleges and universities, poses a major challenge for ESP instructors, particularly when teaching specialized subjects like transportation engineering within the realm of science. In addition to the diversity in English language proficiency, lecturer also face the obstacles of large class sizes, the presence of underqualified educators lacking specialized knowledge, and students' inclination towards passive learning and reliance on teacher-generated materials, (Diana, 2023).

Given the complexity of these challenges, it is incumbent upon lecturer to assume responsibility for transforming their roles and implementing instructional modifications that cater to the specific learning needs of their students/cadets. Furthermore, once cadets begin to comprehend their own roles within the realm of ESP learning, they can evolve into autonomous learners who actively engage in the process of acquiring knowledge in specific disciplines, facilitated by their leturers' effective instructional approaches and the utilization of needs analysis or assessment techniques. According to statistical data, Indonesia is ranked relatively low among countries where English is spoken. As stated in the EF English Proficiency Index (EPI) 2023 report, Indonesia holds the 79th position out of 113 countries in terms of English speaking ability, highlighting the dire state of English proficiency in the country, (First, 2023). In conclusion, the concept of English for Specific Purposes (ESP) entails the teaching of the English language based on the specific interests and needs of the learner, which necessitates a foundational understanding of general English.

Since its inception in the 1960s, the field of English for Specific Purposes (ESP) has undergone progressive development, predominantly catalyzed by the adoption of a "contextualized notion of language" (Brinton & Master, 1997). The field has experienced a surge in growth since English has become the preeminent language for international

communication, and linguistic studies have shifted towards examining social contexts to facilitate language as a means of communication. Early research on specialized languages was primarily founded upon the concept of 'register', which was expounded upon in the environment and was instrumental in recognizing specific functional varieties based on lexical aspects, thereby distinguishing them from everyday language. However, recent studies have demonstrated that this approach is insufficient, since distinctions between specialized languages are not only confined to the lexical level, but also encompass morphosyntactic and organizational patterns at the textual and pragmatic levels.

The various subcategories of English for Specific Purposes (ESP), such as English for Academic Purposes, General English for Specific Purposes, English for Business and Economics, English for Science and Technology, English for Legal Purposes, and others, have been subject to examination within their respective social contexts, as well as based on the linguistic choices made to fulfill specific situational and functional requirements. These choices encompass a range of features, including but not limited to lexical density, clause structure complexity and length, degree of formality, and information management, (Brinton & Master, 1997).

In general, there are various approaches to course design based on the kind of course, the target situation, the target population, and the aim of the course. Another definition of ESP, it is explained as a language teaching approach that bases all decisions regarding content and methodology on why the learner is learning (Hutchinson & Waters, 1987). Furthermore, (Evans & John, 1988) explains that ESP does not exclusively focus on the language for a specific discipline or profession, like English for Law or English for Engineering. Teaching university students about the common aspects of academic discourse in the sciences or humanities, commonly referred to as English for Academic Purposes (EAP), also falls under the umbrella of ESP. The term ESP assumes the existence of a set of vocabulary items, grammatical forms, and functions that are typical in the study of science and technology. However, secretaries have different language requirements compared to scientists, technologists, physicians, nurses, mechanics, lawyers, etc.

Students pursuing Engineering in ESP courses are typically categorized based on a variety of factors, including their anticipated level of language ability and expected language learning aptitude, which theoretically should lead to homogeneity in groups. Additionally, an objective factor, namely the field of engineering in which the student is enrolled, is also taken into consideration. However, this combination of criteria may not necessarily aid educators in predicting the future performance of these students. Emphasized the importance of educators taking a step back to consider the purpose of assessments, (Brown & G, 1994). Motivation, creation of learning activities, feedback to students to identify strengths and weaknesses, feedback to staff on how effectively the message is being conveyed, and performance evaluation (grading/degree classification) are among the most commonly cited reasons for utilizing assessment. Recently, quality assurance, both internally and externally to the institution has also been added to this list of reasons.

One crucial aspect to consider is the level of confidence that students have in their teacher. It is imperative that the teacher establishes a conducive environment that promotes positive feelings in the classroom. This approach helps to alleviate any discomfort that learners may experience because optimal learning transpires when students are at ease. Moreover, active engagement of students in teaching and learning activities is a fundamental element in achieving success in language acquisition.

In addition, it is important to take into account the language background variable. This factor should be examined not only to determine the degree to which student groups differ from one another, but also to filter the motivation variable. It is possible that the decision to take voluntary English courses may be linked to an individual's level of motivation.

The presence of motivation can greatly increase the likelihood of achieving success in language learning, as noted by (Ellis, 1986). (Gardner, 1985) further explains that motivation consists of various components, including effort and setting, desire to achieve goals, and attitudes. Effort, being the initial factor, can be influenced by various factors such as social pressure and the need for achievement. Setting and desire to achieve goals serve as means to direct and focus the effort. Lastly, attitudes towards language learning can greatly affect motivation. Therefore, this study should take into account both attitude and motivation, as they are pivotal factors in second language acquisition (Brilianti, Fahmadi, & Rokhim, 2024).

To conclude, the concept of ESP entails the teaching of English based on the specific interests and needs of the learner, which requires some prior knowledge of general English. That is why it is necessary to find out these research questions: 1) What is the significance of ESP in relation for transport engineering students? 2) What is the cadets 'perspective toward ESP course?

## **METHOD**

The research methodology employed in this scholarly investigation is the utilization of a case study, which aims to provide an extensive examination of a particular case, (Jonshon & Christensen, 2017) . In a broader context, a case study entails a meticulous analysis of a specific subject matter, be it an individual, a group, a place, an event, an organization, or even a phenomenon, (Alkhalidi, Ozdemir, & Alhasan, 2022) . The primary objective behind conducting a case study is to acquire a profound understanding and comprehensive insights into the intricacies and nuances surrounding the individual, group, or situation under scrutiny, (González, Pilgrim, & Viquez, 2020). Thus, the utilization of this research method allows for an in-depth exploration and examination of the chosen case, enabling the researcher to delve into the various dimensions and complexities associated with it. This research can be defined as the study of natural phenomena and answers the questions of its reason. This study comprised a total of ninety sophomore cadets specializing in road safety transportation engineering. These cadets constituted the entire cohort enrolled in the second year of the road safety transportation engineering program. They were pursuing a course titled "English for Engineering" offered at the Polytechnic of Road Transport Safety.

The descriptive statistics pertaining to the perspective of the study participants with regards to the educational and professional development course known as ESP, including an analysis of the perceived importance of ESP, as well as the level of satisfaction among cadets, were further examined by converting the raw numerical data into percentages (Machmud, 2018). This transformation was undertaken in order to facilitate a more visually accessible representation of the data, allowing for a clearer and more comprehensive understanding of the patterns and trends observed within the study population.

The participants included both male and female cadets. 100% of the participants fell within the age range of 19 to 21 years. In terms of their prior experience with learning English, all participants had only studied English as a mandatory subject in their educational curriculum, with none of them having had the opportunity to reside in an English-speaking nation.

In order to accomplish the objectives of this research endeavor, an initial needs analysis questionnaire was administered. Comprised of four distinct sections, the questionnaire first sought to gather demographic information about the participants, (Pazoki & Alemi, 2019). The questionnaire only limited to three kinds of questions, it asked about the cadets' perspective of the usefulness of ESP, secondly, it asked about the cadets' perspective of how important ESP supports their career, and lastly, it was limited to assess the cadets' satisfaction of the time allocation in implemented ESP. Subsequently, the second section aimed to collect data pertaining to the participants' evaluation of the English courses they had undertaken within the second year of study. Then, the last section addressed the English learning requirements of the respondents and finally the last question assessed the necessity of ESP. The questionnaire included a combination of open-ended inquiries and multiple-choice items that necessitated respondents to indicate their preferences by checking the appropriate boxes. Utilizing the results of this needs analysis questionnaire, an action plan was developed and implemented. This plan entailed the design of an English for Specific Purposes (ESP) course that targeted the communicative and professional needs of the participants.

Upon the conclusion of the study, an ESP course evaluation questionnaire was administered to assess the outcomes of the action plan. Consisting of three open-ended questions, this questionnaire was specifically devised to measure the effectiveness of the ESP course and the extent to which it met the participants' needs.

## RESULTS AND DISCUSSIONS

The majority of respondents provided positive feedback regarding whether the previous English courses were beneficial for their future job requirements. This is evident from the results presented in table 1 below:

Table 1 The Result of Cadets' Perspective of The Usefulness of English Subject toward Engineering Students

No	Category	Number of Cadets	Percentage
1	Very Useful	68 Cadets	75.56 %
2	Useful	15 Cadets	16.67 %
3	Some Useful	5 Cadets	5.56 %
4	Little Useful	2 Cadets	2.22 %
5	Useless	0 Cadets	0 %
	TOTAL	90 Cadets	100 %

The data in table 1 indicates that the English language courses provided to engineering students do not align with their language needs. In other words, a significant proportion of respondents expressed favorable opinions regarding the usefulness of these courses. Specifically, 75.56% considered them to be highly useful, while 16.67% found them to be useful to some extent. Only 5.56% believed the courses to be of limited use, and 2.22% deemed them to be of little use. Those who felt that the courses were not helpful mentioned that the content was too general and not directly related to their field of study. Additionally, some participants noted that the courses primarily focused on general reading comprehension and essay writing, which were not relevant to their career needs.

In the second inquiry, the respondents were obliged to select either general English (GE) or English for Specific Purposes (ESP) as the fundamental component of the English course

they deem most appropriate to enroll in. The outcomes are visually depicted in table 2, as stated below:

Table 2 The Result of Cadets' Perspective of The Important of ESP

Item of Question	Options	Number of Cadets	Percentage
What type of English language course is important for developing your skills?	General English	17 Cadets	18.89 %
	English for Specific Purposes (ESP)	73 Cadets	81.11 %
	TOTAL	90 Cadets	100 %

As indicated in the aforementioned table, a significant portion (81.11%) of the respondents expressed a preference for enrolling in a course specifically tailored to their English language needs, commonly referred to as English for Specific Purposes (ESP).

Based on the findings, it can be inferred that "theories of adult learning have suggested that adults exhibit improved learning outcomes when the content of the program aligns with their immediate interests and concerns, with language instruction generally focusing on the end result: the actual language that learners are required to employ" (Dahbi, 2017) . This may explain why some respondents expressed a higher level of motivation towards studying ESP, as they believe it facilitates the acquisition of the necessary technical language input and communicative skills essential for their prospective careers.

Table 3 The Result of Cadets' Satisfaction of the Time Allocation of ESP

Item of Question	Yes		No	
	Number of Cadets	Percentages	Number of Cadets	Percentages
Is the duration of the English for Specific Purposes course satisfactory in your perspective?	57	63.33%	33	36.67%

The deduction from the aforementioned findings is undeniably evident, whereby a significant majority of the participants (63.33%) were of the belief that the duration assigned to the English language curriculum was inadequate. They expressed their difficulty in comprehensively grasping all the facets of transportation terminology due to the inclusion of a mere two credit hours in their Diploma IV studies. Additionally, a substantial portion of the speaking exercises involved role-playing, a category of tasks that typically necessitate a considerable amount of time.

Based on the aforementioned viewpoints, it can be contended that ESP pertains to the instruction of the English language in alignment with the individual learner's distinct interests and requirements. This would entail a certain level of prior familiarity with general English on the part of the learner, although recently courses have been tailored to accommodate beginners as well (Veronica & Amalia, 2014).

Table 4 The Result of Cadets' ESP Course Perception and Cadets' English Proficiency

No.	Item of Questions	Percentages
1	Necessity of ESP toward cadets' success at their collage	89%
2	Necessity of ESP toward cadets' success in facing their future job	75%
3	The connection between content of ESP and cadets'	88%

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	curriculum	
4	The connection between module of ESP and cadets' curriculum	85%
5	Significancy of the English level of cadets for their future success	77%

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On the last presented in the subsequent section depicts the perspectives of aspiring cadets regarding the English for Specific Purposes (ESP) course, as well as the English proficiency of students. Upon careful examination of the data, it became evident that a vast majority of cadets expressed strong agreement with the items outlined in the survey, with an astounding 89% of participants falling into this category. It is worth noting that the survey employed a five-point response scale, ranging from 1 (indicating strong disagreement) to 5 (indicating strong agreement), with 3 representing uncertainty. Consequently, it can be inferred that cadets firmly believe that the inclusion of the ESP course within the program is crucial in ensuring their academic triumph during their time in college. Moreover, cadets also recognized that their motivation for learning ESP stems from its potential implications for their future careers, as evidenced by a noteworthy 75% of respondents acknowledging this factor.

However, an analysis of the cadets' responses reveals that there exists a strong correlation between the content of the ESP course and the delivery of their subject-specific courses, as indicated by an overwhelming 88% agreement among participants. This finding implies that the content covered in the ESP course is closely intertwined with the material covered in their other courses, thereby underscoring its relevance and applicability in their academic journey. Additionally, it is important to highlight that a considerable proportion of cadets, amounting to 85% of respondents, expressed agreement with the notion that a connection exists between the ESP coursebook and their content courses. This suggests that the materials and resources utilized in the ESP course align harmoniously with the content taught in their other academic pursuits.

Moreover, it is noteworthy to mention that a notable number of cadets, whose exact figure remains unspecified, reached a consensus on the fact that English proficiency contributes significantly, accounting for approximately 77%, to enhancing their future professional success. This finding underscores the importance of English language skills in the cadets' pursuit of their desired career paths. By attaining a high level of English proficiency, these aspiring professionals are equipping themselves with a valuable tool that will undoubtedly propel them towards achieving their career aspirations.

The purpose of conducting the current study was to explore and examine the manner in which cadets perceive the significance and value of English for Specific Purposes (ESP) in the context of transportation engineering cadets at PKTJ, a vocational college located in Tegal, Indonesia. The results obtained from the study indicate that the participating cadets possess favourable attitudes and perceptions towards the necessity of an ESP course tailored for transportation engineering cadets in a vocational college. Furthermore, it is crucial that the ESP course adequately reflects both the content courses and language skills that cater to the current and future academic and occupational requirements of the cadets.

Hence, ESP course designers must carefully consider how to effectively integrate and address the learning needs of the cadets within specific contexts, with a particular focus on preparing them for high-quality work in their future careers. Although an analysis of the cadets'

perceptions of their formal English language proficiency revealed that they were not proficient or even had no prior experience in utilizing any of the four English language skills, it was observed that there is a pressing need to incorporate language skills within the ESP course.

## CONCLUSION

The purpose of this article is to demonstrate the English for Specific Purposes (ESP) requirements of undergraduate cadets of engineering sciences and to determine if the current ESP courses align with their needs. The present investigation yields a comprehensive comprehension of the significance of taking into consideration the perceptions of cadets in the design of the English for Specific Purposes (ESP) course. Additionally, it provides a platform for cadets to express their thoughts and opinions regarding their proficiency in the English language and the requirements of the course.

This study sheds new insights on the understanding of cadets' perceptions within the field of transportation engineering in a vocational college. Firstly, it highlights the awareness of the importance of the ESP course specifically tailored for transport engineering cadets in this institution. Secondly, by doing so, this revamped ESP course has the potential to empower cadets as learners, nurturing their skills for their future careers from a learner-centered approach. Furthermore, the study addresses the cadets' satisfaction with the duration of the ESP course and their belief that ESP is more crucial than general English in enhancing their knowledge and skills for their future job prospects. Lastly, the curriculum is seen as successfully meeting the cadets' needs in terms of enhancing their communication skills for their future occupations. The findings demonstrated that the delivery of these English courses proved to be highly effective for the cadets, particularly when the duration of the curriculum was extended. Consequently, there is a pressing need for additional ESP courses to equip them with the necessary English communication skills required in their future workplaces. Furthermore, the cadets acknowledged that the ESP course held greater significance in supporting their careers as transport engineers compared to a more general English course. The outcomes of the ESP course evaluation questionnaire, which was administered after this research, suggest that the majority of respondents held a positive perception of the ESP course, primarily due to its alignment with their specific needs in supporting their job and interests.

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