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THE MISMATCH BETWEEN ESP INSTRUCTION AND WORKPLACE REQUIREMENTS AT A VIETNAMESE TECHNICAL UNIVERSITY

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Abstract: In the context of global economic integration, English for Specific Purposes (ESP) is essential for engineering graduates; however, a significant gap remains between academic training and professional requirements. This study explores the misalignment between institutional ESP instruction and workplace linguistic demands at a technical university in Vietnam. Using an explanatory sequential mixed-methods design, the research carried out a survey of 209 engineering students, a systematic analysis of university documents, and semi-structured interviews with ESP lecturers and alumni. The results reveal a clear mismatch between the curriculum's theoretical focus and the industry's practical needs. While document analysis and stakeholder feedback highlight an emphasis on technical reading and translation, the professional environment requires proficiency in oral communication and task-based language use. Key pedagogical and institutional barriers identified include disproportionately low credit allocations, a lack of standardised materials, and the absence of language pedagogy training for content-specialist instructors. The study concludes that bridging this gap requires a demand-driven realignment, recommending curriculum standardization based on workplace task analysis, along with professional development for non-language specialists to ensure academic standards meet global engineering expectations.

Keywords: curriculum reform, curriculum-workplace misalignment, ESP instruction, engineering education

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BẤT CẬP GIỮA ĐÀO TẠO TIẾNG ANH CHUYÊN NGÀNH TẠI MỘT TRƯỜNG ĐẠI HỌC KỸ THUẬT Ở VIỆT NAM VÀ YÊU CẦU CÔNG VIỆC THỰC TẾ

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Tóm tắt: Trong bối cảnh hội nhập kinh tế toàn cầu, tiếng Anh chuyên ngành (TACN) đã trở thành công cụ thiết yếu đối với sinh viên tốt nghiệp khối ngành kỹ thuật; tuy nhiên, vẫn tồn tại sự bất cập giữa việc đào tạo TACN và nhu cầu sử dụng ngôn ngữ này tại nơi làm việc. Nghiên cứu này phân tích sự bất cập giữa giảng dạy TACN và nhu cầu tại nơi làm việc tại một trường đại học kỹ thuật ở Việt Nam. Bài báo sử dụng phương pháp nghiên cứu hỗn hợp, bao gồm: khảo sát 209 sinh viên kỹ thuật, phân tích tài liệu liên quan và phỏng vấn sâu các giảng viên giảng dạy TACN cùng cựu sinh viên hiện đang đảm nhiệm vai trò quản lý trong các lĩnh vực khác nhau. Kết quả nghiên cứu chỉ ra sự thiếu đồng bộ giữa chương trình đào tạo và nhu cầu thực tế tại nơi làm việc. Trong khi việc giảng dạy tại trường chủ yếu tập trung vào kỹ năng đọc hiểu và dịch thuật kỹ thuật, môi trường chuyên nghiệp lại đòi hỏi sự thành thạo trong giao tiếp nói và các tác vụ ngôn ngữ liên quan đến công việc. Nghiên cứu cũng xác định các rào cản chính như: thời lượng môn học hạn chế, sự phụ thuộc vào học liệu tự biên soạn và thiếu hụt kỹ năng sư phạm ngôn ngữ của giảng viên chuyên ngành. Trên cơ sở đó, nghiên cứu đề xuất cải tiến chương trình đào tạo theo định hướng nhu cầu, bao gồm: chuẩn hóa học liệu dựa trên phân tích nhiệm vụ thực tế và bồi dưỡng nghiệp vụ sư phạm cho giảng viên nhằm thu hẹp khoảng cách giữa kết quả đào tạo và kỳ vọng của thị trường lao động.

Từ khoá: phát triển chương trình đào tạo, sự bất cập giữa giảng dạy và thực tế, giảng dạy TACN, đào tạo kỹ thuật

1. Introduction

The integration of English for Specific Purposes (ESP) in engineering programmes at Vietnamese universities directly addresses the needs of the modern technical workforce. At the institution where this study was conducted, ESP is not centralised in a foreign language department; instead, it is overseen and taught by lecturers within each technical faculty. This approach aims to ensure that the language instruction is closely aligned with the specific technical knowledge of fields such as mining, geology, or mechanical engineering.

However, this decentralized approach presents certain practical challenges in daily instruction. Because the courses are delivered by subject-matter experts rather than language specialists, the lessons and the types of materials used can vary significantly across departments. This situation raises questions about how these classroom practices relate to the language skills engineers need upon entering the workplace. It is often observed that, while students spend several semesters on ESP, their ability to use English in professional tasks, such as technical reporting or communicating with international partners, remains a concern for both the university and potential employers.

Rather than examining this issue from a broad, national perspective, this study concentrates on the specific instructional environment at a single technical university. The aim is to understand the factors that influence how ESP is delivered and identify gaps between classroom learning and job requirements. By engaging directly with those involved, including the students, lecturers, and graduates now working in industry, the research seeks to provide a clear depiction of the current state of ESP and pinpoint areas that need practical adjustment. Consequently, this study is guided by the following two research questions.

1. What practical factors and teaching constraints influence the delivery of ESP within technical faculties?

2. How do the specific skills taught in these ESP courses align with the language tasks that graduates encounter in their professional roles?

The findings of this study will provide an empirical basis for re-evaluating the institution's current ESP framework. By identifying the specific gaps between academic output and industry expectations, the research offers practical insights for curriculum designers and faculty administrators. Ultimately, these results aim to support the development of a more integrated instructional model that better prepares engineering students for the communicative challenges of their future careers.

2. Literature Review

2.1. Theoretical Framework of English for Specific Purposes

ESP has developed into a significant field within English as a Foreign Language (EFL) instruction since the 1960s. Its emergence was driven by a practical need for learners to use English for specific academic or professional purposes (Hutchinson & Waters, 1987). This evolution was accelerated by global economic growth and the development of a "new world" requiring specialized language skills. Key scholars have defined ESP in various ways. Hutchinson and Waters (1987) emphasised that ESP was not a unique methodology or language type, but rather a learner-centred approach. In this view, all decisions about content, methods, and materials must be based on a thorough needs analysis of the learners, aiming to equip them with the specific skills and knowledge required to perform their tasks. The authors argued that ESP was not merely about teaching specialized vocabulary, but about teaching language that was focused on the learner and informed by collaboration with subject-matter experts to create authentic and relevant materials. In the context of this study, needs analysis was operationalized as the systematic process of identifying the gap between the students' current proficiency and the target linguistic requirements of the engineering workplace. Furthermore, alignment refers to the degree of consistency between the curriculum's intended learning outcomes, the instructional materials used by specialized faculties, and the actual professional tasks graduates encounter. While some scholars categorize Content-Based Instruction (CBI) as a broader curricular framework that emphasizes the acquisition of subject matter, ESP remains distinct in its primary focus on developing specific communicative competence. This is achieved through a deliberate collaboration between language practitioners and subject-matter experts to ensure that language instruction serves the functional needs of the profession. This distinction is crucial for analyzing the decentralized model at the institution under study, where the boundary between teaching technical content and teaching professional language often overlaps.

Building on this foundation, Munby (1978) and Robinson (1991) further developed the concept of ESP, emphasizing that needs analysis must precisely define how learners use the language in real-world contexts. Dudley-Evans and St John (1998) later systematized ESP into

Absolute Characteristics (meeting specific learner needs and using the discipline's underlying methodology) and Variable Characteristics (flexibility in audience level and teaching methodologies compared to General English). In the context of this study, these characteristics provide a framework to evaluate whether the current decentralized model, managed by technical faculties, truly meets the discipline-specific requirements of ESP.

The evolution of ESP has mirrored shifts in language learning theories. While early stages (1960s-1970s) focused on isolated vocabulary and grammar, the rise of learner-centred instruction in the late 1970s established needs analysis as the cornerstone of curriculum design (Munby, 1978). Subsequent developments moved toward understanding the cognitive processes of language use, emphasizing comprehension skills and learner reflection. Today, ESP adopts a holistic approach that considers the entire learning environment, from student potential to the future professional discourse. This research utilizes this holistic view to examine how the instructional practices at the university align with the multifaceted demands of the engineering workplace.

2.2. Previous studies on ESP

In the context of globalization, the teaching and learning of ESP in Vietnamese universities has become an urgent issue, attracting considerable research attention. Existing studies, both domestic and international, highlight numerous challenges and shortcomings in ESP training.

Domestic research has highlighted several "paradoxes" and limitations. Tran (2011) noted that, despite efforts by both teachers and students, learners' English proficiency often failed to improve or even declines. He attributed this mainly to an assessment system overly focused on reading comprehension and grammar, which neglected other vital skills for comprehensive language competence. This finding was supported by a Ministry of Education and Training (MOET) report cited by Nguyen and Pham (2016), revealing that only about 49.3% of graduates met employers' English-language requirements. Other studies by Lam (2011, 2014) and Duong (2018) identified widespread confusion between teaching ESP and teaching a subject in English. These studies concluded that a thorough analysis of learner needs and workplace requirements has been largely absent from the curriculum design process.

International research echoes these concerns, emphasizing the need to align ESP programs with labour market demands. Bouzidi (2009) emphasized the importance of collecting data from stakeholders, such as employers and students, to design relevant ESP programs that accurately reflect language use in the workplace. Similarly, Aliakbari (2014) found that while Iranian architecture students had a high demand for all four language skills, their teachers focused only on reading comprehension, resulting in a skills gap upon graduation. Fălăuș (2017) also affirmed that ESP faced greater challenges than General English and required teachers with deep disciplinary experience to conduct a proper needs analysis.

While these studies highlight general difficulties in ESP training, a significant gap remains. Most research is general in nature and lacks in-depth analysis of the specific governance models within Vietnamese technical universities, where ESP instruction is decentralized and managed by specialized engineering faculties. Specifically, there remains a deficit in empirical evidence regarding how the lack of formal pedagogical qualifications among content-specialist instructors and the reliance on fragmented, self-compiled materials affect the alignment with real workplace discourse. This study aims to fill that gap by providing a more detailed investigation into these institutional constraints at one such institution, thereby identifying the specific factors that lead to the mismatch between academic training and professional communicative requirements.

3. Methodology

This study employed an explanatory sequential mixed-methods research design to provide a comprehensive and objective overview of ESP at the technical university. As Creswell and Creswell (2018) argued, this design enabled the combination of quantitative and qualitative techniques to develop a deeper understanding of the research problem than either approach could achieve on its own. In this study, quantitative data were initially collected through surveys to identify general trends and patterns. Subsequently, qualitative data were gathered via semi-structured interviews to further explain and contextualize the quantitative findings. These two data sets were then integrated during the discussion phase for triangulation and validation, ensuring a robust analysis of pedagogical constraints and skill misalignments.

3.1. Context and Participants

The study was conducted at a public technical university with a nearly 60-year history. The university specializes in Earth Sciences and other engineering fields. The student body, largely from rural areas, typically has low English proficiency upon entry. The university's graduation standard requires students to achieve a B1 level (in the Vietnamese six-level framework).

The ESP curriculum at the university is managed and taught by nine out of eleven specialized faculties, comprising a total of 29 different ESP courses. Significantly, only a few faculties make ESP a compulsory course, while most consider it an optional one. The teaching staff consists of 60 lecturers, all of whom are from the specialized faculties. While more than one-third of these lecturers hold master's or doctoral degrees from abroad, 100% lack formal training in foreign-language pedagogy. This presents a significant challenge, as language-teaching methods differ significantly from those used in technical subjects.

The participants selected for this study represent three key stakeholder groups to provide a comprehensive view of the ESP reality. First, 209 students who were either currently enrolled in or had completed an ESP course participated in the quantitative survey. Second, five ESP lecturers from five distinct specialized faculties were chosen for semi-structured interviews. These five instructors were selected as representative cases from the faculties with the largest student cohorts, ensuring that the findings reflect the primary instructional practices across the university’s diverse engineering disciplines. Notably, all selected lecturers possessed more than 5 years of experience in teaching ESP, and among them, three held PhDs from abroad and two from Vietnam, providing a deep and balanced perspective on both international standards and long-term local institutional constraints. Third, the interview included five alumni who currently held technical and management positions at companies that require English proficiency. These alumni served as workplace practitioners and proxies for the "employer" voice, offering critical insights into the actual language tasks required in the engineering industry rather than merely reflecting on their past studies. Finally, the research included an analysis of relevant university documents, such as course outlines, syllabi, and teaching materials, to triangulate the data collected from the participants.

3.2. Data Collection Procedures

This study employed an explanatory sequential design to ensure data triangulation and validity. First, a quantitative survey (13 items, 5-point Likert scale) was administered to students (n = 209) to identify perceptions of the importance of ESP and its instructional reality. Subsequently, document analysis was conducted, involving a systematic content review of course syllabi, credit allocations, and self-compiled materials to establish an objective

framework for evaluation. Finally, semi-structured interviews were held with five lecturers and five alumni. These were strategically conducted after the preliminary phases to allow for more specific, context-based inquiry into the identified pedagogical and institutional barriers. Each interview lasted approximately 30 to 45 minutes and was conducted in Vietnamese, audio-recorded, and transcribed verbatim for thematic coding. This triangulated approach, integrating quantitative trends, objective document reviews, and deep qualitative insights, provides a robust account of the ESP mismatch at the institution.

3.3. Data Analysis

The data analysis process followed a systematic triangulation protocol to ensure the validity and depth of the findings. Quantitative data from the student surveys were first analyzed using descriptive statistics, such as frequencies and percentages, to identify general trends in perceptions and expectations.

Subsequently, content analysis was applied to the collected documents (syllabi, credit allocations, and materials) to establish an objective baseline for the instructional framework. These findings were then integrated with the thematic analysis of the interview data. The interview analysis involved transcribing recordings, generating initial codes, and grouping them into broader themes to explain the specific pedagogical barriers and professional requirements.

Finally, a cross-data comparison was conducted to synthesize all three sources. Instructional challenges reported by lecturers were contrasted with the constraints identified in the syllabi, while the professional tasks described by alumni were compared against the content of self-compiled materials. This integrative approach enabled the researcher to identify specific misalignments between stakeholder perceptions, institutional documentation, and labour market demands, ensuring that the study's conclusions are grounded in a comprehensive empirical evidence base.

4. Findings

The data from the student survey, lecturer interviews, and alumni interviews, integrated with a systematic review of institutional documents, revealed a clear picture of the state of ESP teaching and learning at the technical university.

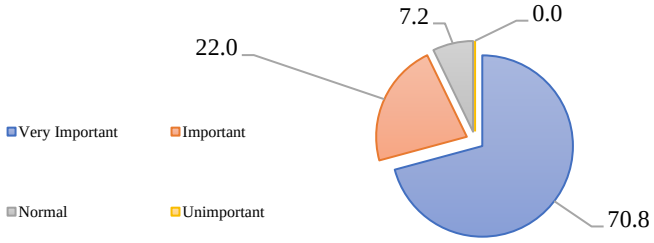
4.1. Survey Findings

4.1.1. Student Perception of ESP Importance

The survey results indicate a high level of student awareness of the importance of ESP for their future careers. As shown in Figure 1, 92.8% of the students considered the subject to be either very important (70.8%) or important (22%). No students considered it unimportant.

Figure 1

The Importance of English for Specific Purposes



Furthermore, students identified specific benefits of ESP. The survey data in Table 1 shows that a majority of students believed ESP was a useful tool for their future careers. 81.3% agreed that ESP would provide them with strong English skills for professional use, especially in foreign companies. Additionally, over 65% of students saw the subject as a way to reinforce their specialized knowledge, and nearly 60% felt it deepened their understanding of their major. This recognition of ESP's value, however, is not fully reflected in the university's credit allocations, which show that ESP courses only occupy a small fraction of the total engineering curriculum. These results indicate that ESP is seen as a direct contributor to their career preparation.

Table 1

Survey Results on the Benefits of the ESP Course

No.	Benefits of the ESP Course	Percentage %
1	Deeper understanding of specialized knowledge	59,8
2	Reinforce professional and technical skills	65,5
3	Easier to find a job after graduation	57,4
4	Helps students learn foreign training programs more effectively	39,7
5	Helps students write scientific reports for domestic and international journals	46,4
6	Participate in seminars and discussions related to their major	58,6
7	Gives students strong English skills for job applications, work, and professional communication, especially at foreign or joint-venture companies	81,3

4.1.2. Discrepancies in ESP Teaching and Learning

Despite their high regard for ESP, students expressed significant dissatisfaction with the current program. Only 7.7% of students were "very satisfied" with the course (Figure 2). A major issue identified was the course duration, with 76.1% of students feeling it was insufficient (see Figure 3). This student perception is consistent with the university's credit allocation records, which show that ESP is limited to 2-3 credits, a timeframe that document analysis suggests is inadequate to cover both technical vocabulary and communicative skills. (Figure 3).

Figure 2

Satisfaction with ESP Course

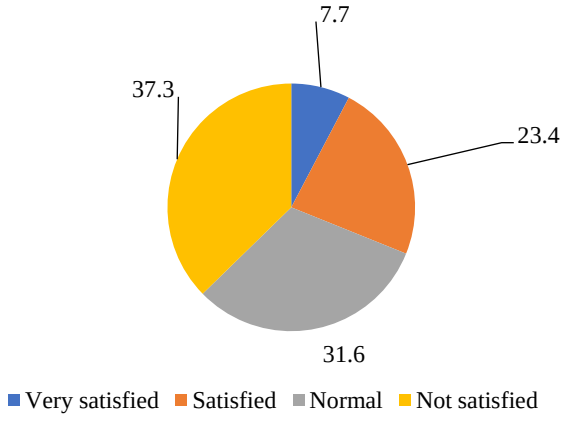
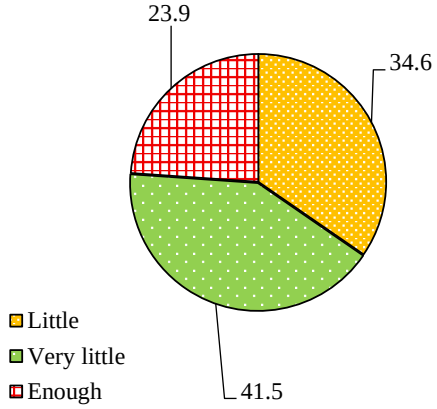


Figure 3

Time for ESP Course



The survey also highlighted a gap between the skills students learned and those they felt

they needed. As indicated in Table 2, while the most improved skills were specialized vocabulary (56.4%) and translation (48.3%), students identified communication and speaking as the most important areas for their future jobs. This mismatch is supported by an examination of the assessment rubrics in the course syllabi, which focus predominantly on reading comprehension and translation tasks, leaving little room for communicative proficiency.

Table 2

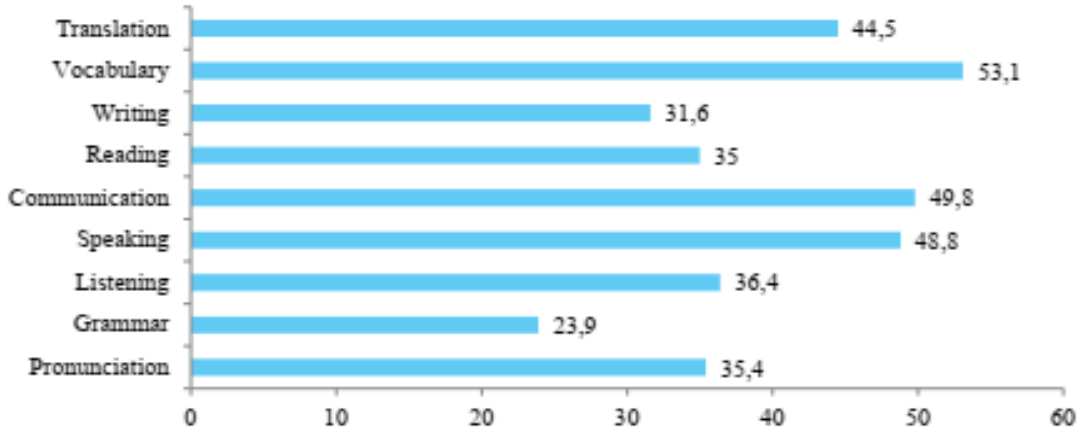
Skills Acquired by Students from the ESP Course

No.	Skills Acquired by Students from the ESP Course	Percentage %
1	Have sufficient professional and technical competence for future work	38,8
2	Fully equipped with soft skills like presentation and teamwork	29,2
3	Proficiently use language skills for communication and negotiation	25,8
4	Oriented on the practical application of their major	31,1
5	Firmly grasp the specific characteristics of their major	35,9
6	Regularly updated on new trends and developments in their field	32,1
7	Easily communicate with foreign partners in English on major-related topics	26,3
8	Adapt to working in an international environment	22,5
9	Provided with information on job opportunities and study materials related to their major	31,1
10	Enhance their CVs with specialized skills	28,7

Furthermore, Figure 4 illustrates the specific skills students wish to improve, with a strong emphasis on speaking (48.8%) and communication (49.8%). However, a review of the self-compiled teaching materials reveals a lack of structured activities designed to foster these productive skills, with a focus instead on passive, text-based exercises.

Figure 4

Skills which Students wish to improve in ESP Course



4.1.3. Learning Methods and Challenges

The survey explored students' learning methods and the challenges they faced. As shown in Table 3, 78.5% of students relied only on the university's ESP course, while others used English centres (14.4%) or self-study (7.1%). This high reliance on the institutional program underscores the critical role of the university's syllabi and materials in shaping students' competence.

Table 3

Student ESP Learning Methods

No.	Student ESP Learning Methods	Percentage %
1	Through the ESP course at the university	78,5
2	Through ESP courses at language centers	13,4
3	Private tutoring	8,1
4	Reading additional foreign materials and textbooks	27,8
5	Self-study online via specialized websites	24,9
6	Watching documentaries or news on CNN, BBC, etc	27,8
7	Attending student science conferences organized by the university	17,7
8	Participating in English clubs organized by specialized faculties	14,8

However, many students encountered significant difficulties. Table 4 indicates that 57.4% of students felt the lecturers' teaching methods were ineffective, and 40.7% felt the lessons were overly focused on limited skills such as reading and translation. A systematic review of the self-compiled teaching materials used in these classes supports these student concerns, as they consist primarily of static texts and vocabulary lists with very few interactive tasks. Additionally, students struggled with textbook lessons (35.8%). These challenges were further intensified by the fragmented nature of the ESP curriculum, which, according to document analysis, lacked a unified pedagogical framework to support students with varying levels of proficiency.

Table 4

Student-Identified Difficulties in ESP Learning

No.		Strongly Disagree (%)	Disagree (%)	No Opinion (%)	Agree (%)	Strongly Agree (%)
1	Student's initial foreign language proficiency is insufficient.	10	17,2	22	47,4	3,4
2	Students are not adequately informed about the course's objectives and importance	9	9	24,9	52,2	4,9
3	Lecturer's teaching methods are ineffective	1	9,5	32,1	53,1	4,3
4	Lecturers do not provide or introduce enough necessary materials	17,7	34,4	35,9	10,5	1,5
5	Lessons focus only on a few skills like reading and translation	12,9	15,3	31,1	35,9	4,8
6	Some textbook lessons are too difficult for students' level	12	25,4	26,8	31,1	4,7
7	The course duration (2-3 credits) is insufficient	2	8,1	40,1	25,8	24
8	The university does not organize enough seminars or conferences on ESP for students	14,8	19,1	16,3	28,2	21,6

4.2. Interview Findings

4.2.1. Lecturer Interviews

The five interviewed lecturers, all with PhDs and over five years of experience teaching ESP, provided key insights. They acknowledged that the ESP program has a practical purpose in helping students access technical documents and terminology. However, they universally agreed that the current curriculum is overly general and insufficiently tied to the specific demands of each technical field. As one lecturer noted, "The current curriculum only provides basic vocabulary and structures, but doesn't delve into real-world professional situations for the industry" (Lecturer 2 = L2). All lecturers agreed that the 2-3-credit duration was too short to equip students with the necessary skills. L5 stated: "With two credits, we can only focus on vocabulary and reading comprehension, as that's all students can absorb in such a short time. There's no time to teach listening or speaking".

The lecturers identified the wide disparity in students' initial English proficiency as their biggest challenge, making it difficult to balance specialized content with language ability. The lack of standardized materials was also a significant issue. A lecturer remarked, "Most of our textbooks are self-compiled by lecturers, lacking consistency and up-to-date content" (L4). All lecturers, despite their high academic qualifications, admitted they lacked formal training in foreign language pedagogy. They knew what to teach (the technical content) but not how to teach it effectively. L3 shared: "We are trained to teach our major, not to teach a language. So, our teaching method is very traditional: we lecture on theory and ask students to translate documents. Interactive activities, pronunciation, or communication are infrequent".

4.2.2. Alumni Interviews

The five interviewed alumni, who now hold management positions, confirmed the disconnect between the ESP curriculum and the demands of the workplace. They appreciated the program's basic foundation, but felt it "lacked depth". An alumnus commented: "When we started working, we realized the ESP content from university wasn't enough to meet job requirements, especially for writing professional emails and handling technical documents" (Alumni 2 =A2). They unanimously agreed that the university's program did not meet real-world needs. One shared: "New graduates can translate documents well, but when they need to present a problem in English or negotiate with a partner, they are hesitant and lack confidence. The university course gave us basic vocabulary, but it didn't help us use English as a real work tool".

All alumni stressed that the course duration was "too short" for the profession's needs. They felt the program was too theoretical, while the workplace requires a flexible application of English. Many employees, they noted, have to enroll in additional, company-sponsored English courses to fill the skills gap. The alumni confirmed that English was not just a soft skill but a "mandatory requirement" for engineers. They highlighted the frequent need to read technical documents, write professional emails, communicate with international partners, and even operate machinery using English instructions. An alumnus who is a technical director stated: "In our industry, communication with partners, operating machinery, or writing technical reports is all done in English. If an engineer lacks communication skills, they will face many difficulties".

5. Discussion

The mixed-methods data from 209 students, 5 lecturers, and 5 alumni provide a comprehensive, multifaceted perspective on the state of ESP instruction at the surveyed

technical university. The findings reveal a significant systemic imbalance. While the need and awareness of ESP's importance are high among all stakeholders, the program's design, materials, and implementation are constrained by limited credit hours, inconsistent entry-level proficiency, a fragmented curriculum, and a lack of language pedagogy training for content specialist instructors.

5.1. The Contradiction of Perception and Reality

A central finding of this study is the clear contrast between the high perceived value of ESP and the low satisfaction with its outcomes. Students, lecturers, and employers all recognize that ESP is a crucial bridge between technical knowledge and global professional competence. However, this shared understanding does not translate into effective learning outcomes. The data show that the curriculum's broad goals, such as enabling students to perform professional tasks in English, are not aligned with the actual results, which are primarily limited to reading comprehension and vocabulary.

This paradox results from a failure to transform program objectives into corresponding teaching and assessment activities. Lecturers admitted that the curriculum provided broad objectives but lacked specific guidance on task competence. As a result, students may acquire technical terminology but remain unable to apply it effectively in authentic professional contexts. This highlights the need to re-conceptualize ESP not just as a language-teaching process but as a professional-competence-building process, requiring a task-based "learning by doing" approach. Such a conceptual shift necessitates a strategic realignment of both instructional frameworks and assessment methods, which will be further addressed in the recommendations section.

5.2. Curriculum and Materials: The Theory-Practice Gap

Document analysis reveals a fragmented curriculum with 29 different ESP courses across various faculties, taught with an equally diverse set of materials. These materials exist in three forms: (i) standardized foreign textbooks that are too extensive for the limited course duration, (ii) adapted textbooks, and (iii) self-compiled materials that are most prevalent. This fragmentation leads to a lack of standardization and quality control. The self-compiled materials often focus on long reading passages and comprehension checks, neglecting the diverse skills required in the workplace, such as writing reports, emails, and presentations, as well as engaging in negotiation.

This issue is compounded by the "washback effect", where assessment methods dictate what is taught and learned. Since the final exams often focus on reading and translation, both teaching and learning activities are geared towards these skills, at the expense of practical, communicative competence. Furthermore, the lack of standardized pedagogical features in self-compiled materials, such as pre-, while-, and post-reading activities, functional vocabulary exercises, and simulated communication tasks, hinders effective learning. This highlights a fundamental flaw at the level of the curriculum and materials that must be addressed to improve outcomes. The persistence of this gap emphasizes the urgency of establishing a more integrated management model to standardize and modernize instructional resources across the university's technical disciplines.

5.3. The Dual Challenge: Learner and Instructor Limitations

The research points to a two-fold constraint. On the one hand, students' heterogeneous and often insufficient general English proficiency requires instructors to allocate valuable class

time to general language development, reducing opportunities to develop specific professional skills. On the other hand, the instructors themselves, though subject-matter experts, lack formal training in language pedagogy. They admitted that their teaching methods were traditional and information-heavy, focusing on "reading a text, explaining the words, and translating" (L3), with few interactive activities.

This dual limitation creates a vicious cycle. When students lack a strong language foundation, and instructors lack the pedagogical skills to scaffold and facilitate communication, the gap with professional requirements becomes difficult to bridge. The result is that students can understand a concept but are unable to perform a professional task with it, directly impacting their employability. Breaking this cycle requires a multi-dimensional intervention that addresses both the standardization of entry-level proficiency and the professionalization of ESP instructional methodologies.

5.4. The Mismatch with Labor Market Demands

The interviews with alumni provided a clear picture of the skills gap. They stressed that the modern engineer must be able to perform specific tasks in English, including reading and processing technical documents, writing and responding to professional emails, presenting technical information, and engaging in direct communication with international partners. They consistently stated that most graduates require additional training from the company to meet these demands. The core issue is not a lack of specialized vocabulary, but a lack of ability to apply language to professional tasks.

The alumni's feedback suggests that the current channel for industry consultation is not formalized into a curriculum development and review cycle. This disconnect is a primary reason for the mismatch between graduate skills and employer expectations. The fragmented curriculum, limited course duration, inadequate materials, and a lack of pedagogical training all contribute to a system that fails to ensure the "interconnectivity" of program goals, teaching activities, and assessment in line with professional standards. Ultimately, this misalignment highlights the critical need for a more dynamic and integrated approach that bridges the gap between institutional ESP training and the functional linguistic demands of the engineering workplace.

5.5. Pedagogical Implications and Recommendations

Based on the systemic misalignments identified in this study, several pedagogical and institutional reforms are necessary. First, to address the fragmentation of the 29 independent ESP courses and the inconsistency of self-compiled materials, the university should establish a Centralized ESP Committee. This body would play a crucial role in standardizing the curriculum and ensuring that learning outcomes shift from generic linguistic knowledge toward functional professional tasks, such as technical reporting and email correspondence. By unifying instructional resources, the institution can mitigate the theory-practice gap and provide a more cohesive learning experience across different engineering faculties.

Furthermore, the mutual relationship between student proficiency and instructor methodology creates a significant barrier to effective ESP delivery. Since most instructors are subject-matter experts rather than language specialists, there is an urgent need for targeted professional development that extends beyond basic workshops. The focus should be on practical skills, such as communicative facilitation and task design, which are vital for helping lecturers transition from their traditional role as "information providers" to "language facilitators". Given the limited contact hours and diverse student levels, incorporating small workplace tasks into existing lessons offers a more practical approach than a complete

curriculum redesign. By practising simple, authentic activities, such as drafting short technical emails or explaining a basic diagram in English, students can gradually build professional confidence without requiring major changes to the university's credit system.

Finally, to bridge the gap between academic training and workplace requirements, the university must reform its assessment methods and industry engagement. Moving beyond traditional grammar-translation tests towards performance-based assessments, such as simulated presentations or technical problem-solving scenarios, will create a positive washback effect, motivating students to develop practical communicative skills. This should be supported by a formal feedback loop with industry, including regular consultation with alumni and employers, to ensure the ESP curriculum remains adaptable and accurately reflects the changing linguistic needs of the global engineering sector.

6. Conclusion

This study has investigated the misalignment between institutional ESP training and the practical linguistic requirements of the engineering profession. By employing a mixed-methods approach, the research identified significant gaps caused by systemic flaws, namely insufficient credit hours, fragmented materials, and a lack of pedagogical training for content-specialist lecturers. These factors have resulted in a curriculum that prioritizes theoretical vocabulary over the functional communicative skills demanded by the modern workplace. While the research provides a foundation for institutional reform, its scope is limited by a single-site design and a relatively small qualitative sample. Furthermore, the reliance on self-reported data without direct classroom observations means the findings primarily reflect stakeholder perceptions rather than observed classroom interactions.

Despite these limitations, the study offers critical insights into the need to realign academic instruction with professional discourse. Future research should expand to multiple institutional contexts and incorporate longitudinal observation to further validate these findings. By addressing the identified gaps through standardized management and task-oriented instruction, universities can better equip engineering graduates for the professional demands of the global labor market.

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