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ФИЛОЛОГИЯ

songs, watching movies, or listening to speeches by celebrities. It is important to pay attention to the pronunciation of native speakers and strive for natural, emotive speech rather than mechanical repetition. Some students speak English rapidly to demonstrate fluency in their speaking skills. However, speaking too quickly without accurate pronunciation, stress, intonation, etc., may hinder comprehension by listeners. Therefore, it is essential to prioritize accurate pronunciation initially, and once achieved, adjusting speaking speed will become easier and more fluid. Controlling volume and incorporating intonation, particularly emphasizing stress in sentences or keywords, is crucial. Moreover, infusing emotions into speech to convey feelings to listeners, reflected through volume and speech rate, facilitates accurate message delivery.

5. Conclusion

Pronunciation holds significant importance for non-English major students at technical universities due to its pivotal role in effective communication, professional development, and academic success. Despite focusing primarily on technical subjects, students at technical universities are increasingly required to possess competent English language skills for various purposes, including presenting research findings, collaborating with international colleagues, and pursuing opportunities in multinational corporations. Pronunciation accuracy enhances clarity and comprehension during oral presentations, ensuring that technical concepts and ideas are effectively conveyed to diverse audiences. Moreover, clear pronunciation fosters confidence and credibility, essential attributes for successful communication in academic and professional settings. Additionally, precise pronunciation facilitates effective collaboration and teamwork, enabling non-English major students to engage in interdisciplinary projects and leverage diverse perspectives to solve complex problems. Overall, proficiency in pronunciation equips non-English major students at technical universities with essential communication skills essential for their academic and professional endeavours.

References

1. Cook V (1996). *Second language learning and language teaching*. London: Arnold.
2. Dalton, C. (1994). *Pronunciation*. OUP
3. Dictionary.cambridge.org
4. Kenworthy, J. (1987). *Teaching English Pronunciation*. Longman.
5. Ur, Penny. (1996). *A Course in Language Teaching: Practice and Theory*. Cambridge. London.
6. Nguyen Thanh Tam, *Tầm quan trọng của phát âm tiếng Anh*, ĐH Văn Hoá, Hà Nội.
7. Lynda Yates (2002). *Fact sheet- What is pronunciation?* Adult Migrant English Program Research Centre, La Trobe University.

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READING SKILLS IN ESP FOR TECHNICAL STUDENTS: CHALLENGES AND SOLUTIONS

1. Introduction

English for Specific Purposes (ESP) has attracted attention from universities due to the demands of globalization and the practical significance of ESP for students' future careers after graduation. For

engineering universities today, among the four basic English skills (listening, speaking, reading, writing) reading skills are currently considered crucial and receive the most investment in ESP courses compared to other skills. One of the reasons is the requirement to read English technical documents in research and job processing. However, the reading skills of most non-English major engineering students have not met the course requirements, thus resulting in various obstacles for students in comprehending ESP materials. Several factors and determinants impact students' ESP reading comprehension abilities, including curriculum design, instructional materials, pedagogical approaches, learning strategies, students' learning awareness, learning environment, etc. Due to limitations in time and scope of research, this paper primarily outlines significant challenges in ESP reading comprehension from the learner's perspective, referencing the opinions of certain ESP instructors. Based on the findings, the paper then provides suggestions to enhance students' effectiveness in ESP reading comprehension skills.

2. An overview of reading comprehension and esp

2.1. Reading Comprehension

According to King (2008), reading is the cognitive process of understanding texts. Effective readers have an awareness of when they need to read and what to read. They can monitor their understanding while reading. When readers miss information or do not understand what they are reading, they often naturally choose and use reading strategies (such as rereading or asking questions) to help them understand the meaning of the text better. Reading skills and strategies can be carefully taught when learners study specialized subjects through reading authentic texts and documents. Those who have good reading skills often know how to use strategies to understand issues before, during, and after reading.

Effective strategies adopted before reading:

- Use prior knowledge to think about the topic you are about to read.
- Make predictions about the main content of the text.
- Preview the text by skimming and scanning to understand the overall meaning.

Effective strategies adopted While reading:

- Check understanding by asking questions, thinking, and verifying the main idea and information in the text.

Effective strategies adopted After reading:

- Verify the main idea and information in the text.
- Relate what you have just read to your own experiences and knowledge.
- Clarify your understanding of the text.
- Expand your understanding critically and creatively.

Brown (2001) points out that reading comprehension is about developing strategies to understand fully and appropriately, and he suggests the following 10 reading comprehension strategies:

1. Identify the purpose of reading.
2. Use rules and graph models to support "bottom-up" reading.
3. Use various silent reading techniques to increase reading speed.
4. Skim to get the main idea.
5. Scan to get specific information.
6. Use semantic maps or semantic clusters.
7. Guess when uncertain.
8. Analyze vocabulary.
9. Differentiate between literal and figurative meanings.
10. Use discourse cues to analyze relationships.

Karlin (1987) classifies reading skills into five groups as follows:

1. Word recognition skills: including using context, sound analysis, structure analysis, and dictionary use.

2. Word meaning skills: including using context, structure analysis, recognizing polysemous and quantifying words.

3. Comprehensive skills: created by recognizing literal meanings of words, inferred meanings (figurative), evaluation, and document confirmation.

4. Study skills: identifying information, selecting information, using graphic support, predictive ability, and flexible implementation.

5. Appreciation skills: recognizing language and literary forms.

Mumby (1978) provides some effective reading skills as follows:

1. Guess the meaning of unknown phrases.

2. Identify directions in the reading.

3. Summarize the main idea.

4. Use basic reference skills.

5. Skim to get the main information.

6. Scan to identify information.

In most cases, researchers provide different reading strategies/skills to achieve the most effective reading comprehension. However, different reading strategies also depend on various purposes and different types of readers. Therefore, readers need to know how to choose the most effective strategies for their reading purposes.

2.2. English for Specific Purposes

The term ESP, derived from English, means English for Specific Purposes. Hutchinson & Waters (1987) argue that ESP is an approach rather than a product, and it is an approach to language teaching in which all decisions regarding content or methodology are based on the reasons why learners want to learn. According to Robinson (1991), ESP emerged and has continued to develop to meet the needs of language learners who want to use that language for a clearly defined practical purpose. As purposes change, ESP must also change. Swales (1992) defines ESP as "*...the area of research and practice in the design of language teaching programs for those who need a language to meet predetermined communication needs.*" Meanwhile, Smoak (2003) states that ESP is the teaching of English based on learners' immediate and practical needs to help them succeed in their real-life jobs, not just to pass tests. ESP teaching must be needs-based and task-oriented.

2. Challenges facing students when reading esp materials

2.1. Challenges in terminologies

It can be argued that technical/ specialized terminologies pose the greatest obstacle for students when reading ESP materials. Despite having studied some specialized subjects in their first language before taking ESP courses, students may still lack a clear understanding of the subject matter. Consequently, many terms in ESP may be unfamiliar to students, compounded by their lack of proficiency in using reading comprehension skills to infer word meanings from context or deduce the meanings of passages. This results in students spending significant time on reading activities without much effectiveness. Continuously encountering new words within the same reading materials can lead to loss of motivation, decreased interest, and a lack of comprehension, thereby discouraging further reading. If reading assignments and activities persistently follow this pattern, students' classroom hours devoted to ESP will be inefficient, resulting in a waste of both instructors' and learners' time.

2.2. Challenges in English grammar

Apart from struggling with vocabulary, students also face significant challenges when dealing with sentence structures, verb tenses, forms, phrases, and similar aspects while reading ESP materials.

Theoretically, students' English proficiency should be at an intermediate level (Level 3) before studying ESP. This means that students have grasped most basic structures, some complex structures, various forms of words, phrases, etc., and have a certain vocabulary repertoire sufficient to avoid difficulties when studying ESP. However, in reality, most students in technical universities only achieve elementary proficiency levels (A1, A2). Therefore, complex and unfamiliar grammatical structures create major barriers for students to comprehend the author's intentions and the content of the reading text.

2.3. Challenges in the Subject knowledge

Typically, students engaged in ESP studies have previously completed specialized courses relevant to the subject matter of ESP. However, in practice, these specialized courses tend to focus extensively on particular domains, whereas ESP often encompasses broader, more generalized content. Therefore, when reading articles with unfamiliar topics, students may lack knowledge of the subject, have limited vocabulary, and encounter many new and unfamiliar grammatical structures compared to their language proficiency level. This leads to a lack of understanding of the content of the reading material, resulting in ineffective reading activities. Furthermore, the outcomes of ESP courses are often not standardized, which poses challenges for both teachers and students in teaching and learning ESP.

2.4. Challenges in reading comprehension skills

One of the reasons students face difficulties in reading comprehension skills is their relatively modest English proficiency. Furthermore, during basic English education, students are not adequately trained in reading skills, leading to a lack of familiarity with various reading techniques when transitioning to ESP materials. Consequently, when reading ESP texts, students often struggle to apply different reading strategies effectively. They tend to read through the texts from beginning to end, consuming a significant amount of time without understanding the content, and lacking strategies for processing information or making inferences while reading. Even the constant need to look up new words and repeatedly consult dictionaries without retention impedes students' reading process, resulting in both time inefficiency and ineffectiveness in their reading activities.

3. Rationale for challenges in reading esp materials

There exist various factors influencing the difficulties encountered by technical students in understanding specialized English texts, encompassing subjective as well as objective aspects. Some of these reasons are closely linked to the circumstances and contexts of individual universities. The following factors may lead to the inefficiency of students' comprehension of ESP materials.

3.1. Learning methods

Students generally tend to overlook useful learning methods that serve different subjects and their learning objectives. When it comes to subjects requiring extensive reading such as ESP or other specialized disciplines, students lack the habit of exploring reference materials for pre-reading or post-lecture in-depth understanding. Particularly in ESP, reading becomes more demanding as it involves English language texts. Most students fail to apply English text comprehension skills to ESP documents, such as scanning, skimming, inference, and prediction, leading to ineffective reading.

3.2. Students' awareness and attitude

Despite the majority of students being aware of the importance of basic English and ESP for their future careers, bridging the gap between awareness and action remains a considerable challenge that not everyone can overcome. While being aware of this, the learning attitude of most students is not proactive and they are not engaged in self-improvement beyond classroom hours with teachers. Additionally, the limited class time allocated for the subject results in teachers primarily focusing on practising sample exercises and guiding students to practice outside the class. However, the control over students' self-study outside the class by teachers is still limited, leading to students' laziness and a lack of motivation.

3.3. Course Materials

Course materials are pivotal factors related to content, curriculum, teaching methods, and contribute to the effectiveness and success of the course. If the course materials align with the course objectives and are tailored to meet the needs and abilities of students, the effectiveness of the course will be greatly improved. A textbook with appealing content and form, clear illustrations aiding in a better understanding of the issues discussed in the reading, and a diverse range of exercises integrated with the content, structure, grammar, and lesson objectives will motivate students to engage in studying and conducting independent research before or after class.

However, ESP course materials for the technical domain have not received significant interest. Some textbooks were written over a decade ago, containing lengthy readings, numerous technical terms, which are difficult to comprehend, and either lacking or providing very few accompanying exercises or explanations. Some textbooks, revised by the departments, still heavily focus on narrow, specialized branches, with lengthy readings, numerous new terms, and complex grammatical structures, as they are excerpts from English-written specialized textbooks by foreign authors. The quantity of accompanying exercises and supplementary activities aimed at aiding students' understanding of the discussed issues is either minimal or absent. The textbooks predominantly consist of comprehension readings, most of which hardly provide accompanying skills to complement reading proficiency. In some courses, official textbooks are unavailable; instead, instructors prepare lectures for each class session and distribute materials to students every session. Consequently, students do not grasp the entire course content framework, nor are they able to preview or prepare for the class in advance. (Huong D.T., 2019).

3.4. Teaching methods

The debate over whether ESP courses should be taught by language teachers or subject-matter ones remains controversial among many tertiary institutions in Vietnam. The ESP teachers under study are from major faculties of a technical university, not the language teachers. Therefore, their expertise in the field is undisputed, as evidenced by certifications, degrees, and practical teaching experience in specialized subjects. Regarding language proficiency, some instructors hold PhD from English-speaking countries, some have language certifications as required by the Ministry of Education and Training, and yet some instructors teaching ESP do not meet language proficiency standards. The issue here lies in the ESP teachers' perspectives on the concepts of ESP, leading to the adoption of various teaching methods for this course. ESP is a language course which equips students with knowledge and skills in using English in their future profession. The subject outcomes include reading comprehension, translating ESP documents, exchanging ideas, discussing with partners, and conducting transactions with partners in English for professional purposes. However, due to the limited course duration and misunderstanding between ESP and EMI (English as a medium of instruction) teaching methods employed by the ESP instructors seem to be unsuitable for a language course. Instructors predominantly use traditional methods focusing on reading and translating materials, often citing readings from English-language textbooks in the field, which puts pressure on students and reduces their motivation to learn due to the abundance of new and complex vocabulary in the readings. Furthermore, applying methods used for specialized subject instruction to ESP courses makes class sessions less dynamic and less engaging for students. Additionally, students are not provided with opportunities to practice diverse reading comprehension skills for various purposes, leading to students' inability to apply the knowledge and skills acquired to understand and read ESP documents to enhance their English proficiency, serve scientific research, participate in conferences, or contribute to their future careers.

4. Suggested solutions to fight off the challenges

From identifying the difficulties students face in comprehending ESP materials to understanding the

underlying causes of these challenges, this paper offers suggestions to help both instructors and students enhance the effectiveness of ESP document comprehension in the specific context of the institution.

4.1. For ESP teachers

ESP teachers, who are from major faculties, should participate in training courses on English teaching methods or ESP to understand how to deliver a language course.. Instructors can explore additional methods suitable for ESP courses to increase student engagement; utilize information technology applications such as audio, visuals, and video clips; assign group tasks, group presentations, and encourage students to seek supplementary materials based on the instructor's guidance.

In case the allotted time for the course is limited and cannot be changed, there should be a detailed curriculum that aligns with the needs and capabilities of the students, and appropriate learning outcomes should be clearly determined given the time constraints. Thus, instructors can then select teaching methods that are suitable for the curriculum and learning objectives, ensuring the course is effective. When the time allocated for the course is limited, instructors should equip students with basic reading comprehension skills so that they can gradually develop them during the learning process and apply them flexibly to various types of texts in their field of specialization.

4.2. For students

Students play the most crucial and decisive role in their own learning process. Therefore, students need to recognize the significance of ESP for their future careers and devise study plans as well as actively engage in learning this subject.

Students should cultivate effective reading habits. During the reading process, students can jot down difficult technical terms, unfamiliar grammatical structures in a notebook, and later review or memorize them when necessary. Note-taking should be systematic: terms and phrases should be organized by field of study and speciality, further subdivided into different categories within each field. This approach will enable students to compile an extremely useful handbook for studying and future research. If necessary, students can initially read specialized books in Vietnamese. Once they have grasped the basic knowledge and vocabulary of the field, students can gradually begin to read ESP materials, gradually increasing in length and difficulty.

By dedicating some time to reading practice, including general English and ESP specifically, students can find many supportive tools through websites dedicated to developing reading skills. Some notable websites include:

+ Discover Magazine <https://discovermagazine.com/>: This website provides the latest news in natural sciences. Readers do not need to be proficient in scientific terminology to understand the content because the website transforms academic research articles into easily understandable news pieces, making reading enjoyable.

+ C.E.P www.cep.com.vn: This website guides how to read bilingual English-Vietnamese articles across various fields of specialization. Readers can enter keywords related to their desired field of study and select their proficiency level.

+ English Online <http://www.english-online.at/>: The articles on this website are carefully selected and rewritten more understandably to help learners practice reading at an appropriate level. Each article includes a list of new vocabulary at the end. Currently, there are hundreds of topics and special news articles covering various fields.

+ Many Things <http://www.manythings.org/voa/stories/>: A website featuring American stories specifically for English learners. These short stories, lasting about 10 minutes each, provide readers with

relaxation time while absorbing the American tone/melody. Reading these stories helps improve skim-reading skills and information-seeking abilities naturally, allowing readers to learn implicit structures or nuances in American English usage.

+ Reading Rockets <http://reading.ecb.org/student/index.html>: This website can help readers practice reading skills through various methods. The website guides readers and provides specific learning strategies, such as visualizing, summarizing, inferring, making connections, synthesizing, drawing on prior knowledge, and evaluating.

+ English Club <http://www.englishclub.com/reading/index.htm>: English Club is a forum for sharing valuable English learning experiences and resources. The website is divided into various sections such as recommended reading, short stories, and everyday idioms to help readers improve their reading skills and share experiences with other readers.

+ ESL Bits <http://esl-bits.net/main2.htm>: This website offers various sets of exercises in different formats to assess reading comprehension levels and help readers prepare for upcoming exams.

5. CONCLUSION

For non-specialized students, especially those in technical fields, reading English is already challenging, and reading ESP materials presents an even greater challenge. However, if students recognize the significance of ESP for their studies, research, and future careers, they can overcome these difficulties and effectively improve their learning and reading skills in ESP. The difficulties, as mentioned above, may be subjective or objective. To ensure that students can apply their ESP knowledge and reading skills effectively in their future work and ongoing studies after graduation, there needs to be a change and support from both the universities and the instructors. Consequently, ESP classes will become more engaging, attract students and motivate them to achieve the learning outcomes of the ESP course. This will help students comprehend ESP materials more effectively, serving their specialization projects, thesis papers, and future careers.

References

1. Brown, H. D. (2001). *Teaching by principles: An interactive approach to language pedagogy*. Englewood Cliffs, New Jersey: Prentice Hall Regents.
2. Huong D.T. (2019). *Research on the state of teaching and learning ESP at HUMG and proposed solutions*. Institutional Project, code: T18-38.
3. Hutchinson, T., and Waters, A. (1987). *English for specific purposes: A learning-centered approach*. Cambridge: Cambridge University Press.
4. Karlin, R & Karlin, A. R. (1987). *Teaching Elementary Reading: Principle and strategies (4th Ed.)*. Harcourt Brace Jovanovich Publishers.
5. King, K. (2008). *Reading Strategies*. Freely available at: <http://www.isu.edu/~kingkath/readstrt.html>.
6. Mumby, J. (1978). *Communicative syllabus design*. Cambridge: Cambridge University Press.
7. Robinson, P. (1991). *ESP today: A practitioner's guide*. Prentice Hall. UK: Prentice Hall International (UK) Ltd.
8. Smoak, R (2003). *What is English for specific purposes?* English Teaching Forum, 22 – 27, 2003.
9. Swales, J. (1992). *Language for specific purposes*. In W. Bright (Ed.), *International encyclopedia of linguistics (Vol. 2, p. 300)*. New York, Oxford: Oxford University Press.
10. Trần Quốc Thảo, Dương Mỹ Thảo (2018). *The difficulties in ESP reading comprehension encountered by English-Majored students*. VNU Journal of Foreign Studies. Vol 34 No.2.

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