EXPLORING PRONUNCIATION CHALLENGES ENCOUNTERED BY FIRST-YEAR NON-ENGLISH MAJORED STUDENTS

Dr. Bui Thi Kim Phuong, Nguyen Thuy Linh, Nguyen Diem Quynh, Hoang Thu Thao
Hanoi University of Science and Technology
Corresponding Author: phuong.buithikim@hust.edu.vn

Abstract

Pronunciation is a vital component of English language acquisition, significantly influencing students' engagement in effective communication during. This study aims to explore the pronunciation challenges encountered by first-year students who are not majoring in English in a university located in Hanoi. It identifies prevalent errors and explores the underlying factors contributing to these difficulties, including limited exposure to English, negative transfer from Vietnamese phonetics, and inadequate instructional methods. Utilizing a quantitative research methodology, the results indicate that students face significant difficulties with consonant pronunciation, word and sentence stress, as well as intonation adjustment. The findings highlight the importance of tailored pronunciation training in the curriculum and advocate for the adoption of effective teaching strategies, including phonetic transcription and minimal pair drills. By addressing these challenges, educators can enhance students' communicative competence and confidence in English language learning, paving the way for improved English language teaching practices.

Keywords: English pronunciation, non-English majored students, pronunciation errors, pronunciation training, language teaching and learning.

Khám phá những khó khăn về phát âm của sinh viên năm nhất không chuyên ngôn ngữ Anh

TS. Bùi Thị Kim Phượng, Nguyễn Thùy Linh, Nguyễn Diễm Quỳnh, Hoàng Thu Thảo
Đại học Bách khoa Hà Nội
Tác giả liên hệ: phuong.buithikim@hust.edu.vn

Tóm tắt

Phát âm đóng vai trò quan trọng trong việc học tiếng Anh, vì nó ảnh hưởng trực tiếp đến khả năng giao tiếp hiệu quả và được hiểu trong các tình huống giao tiếp thực tế. Nghiên cứu này được thực hiện nhằm tìm hiểu những thử thách về phát âm mà sinh viên năm nhất không chuyên Anh tại một trường đại học ở Hà Nội gặp phải. Nghiên cứu xác định những lỗi phổ biến và khám phá những yếu tố tiềm ẩn gây ra khó khăn này, bao gồm những hạn chế trong tiếp xúc với tiếng Anh, khác biệt trong hệ thống ngữ âm tiếng Việt và các phương pháp giảng dạy chưa tối ưu. Thông qua phương pháp nghiên cứu định lượng, kết quả cho thấy sinh viên gặp khó khăn đáng kể trong việc phát âm phụ âm, nhấn trọng âm từ và câu, cũng như điều chỉnh ngữ điệu. Những phát hiện này nhấn mạnh tầm quan trọng của việc đào tạo phát âm phù hợp vào chương trình giảng dạy, đồng thời, đề xuất các chiến lược giảng dạy hiệu quả hơn, bao gồm sử dụng phiên âm và bài luyện tập cặp tối thiểu. Bằng cách giải quyết những thách thức này, giáo viên có thể nâng cao năng lực giao tiếp và sự tự tin của sinh viên trong việc học tiếng Anh, mở đường cho việc cải thiện các phương pháp giảng dạy tiếng Anh.

Từ khóa: Phát âm tiếng Anh, sinh viên không chuyên Anh, lỗi phát âm, đào tạo phát âm, giảng dạy và học ngôn ngữ.

1. Introduction

Pronunciation is an important aspect of English proficiency, directly impacting both communication effectiveness and listening comprehension [1]. Clear and accurate pronunciation enables speakers convey the intended message and allows listeners to easily understand speech. However, for English as a Foreign Language (EFL) learners, pronunciation remains one of the most difficult components for English as a Foreign Language (EFL) learners due to differences in language, teaching methods, and learner attitudes [2]. The majority of non-English major students, particularly science and technology students, receive minimal pronunciation practice because course syllabi would prefer to focus on grammar and vocabulary rather than speaking skills [2]. This imbalance can lead to persistent persistent pronunciation errors that hinder effective communication in both academic and professional contexts..

Vietnamese learners of English encounter specific pronunciation challenges due to the differences between the English and Vietnamese phonetic systems. A significant difficulty arises with consonant sounds such as /θ/ and /ð/, which do not exist in Vietnamese [3]. Consequently, students often substitute these sounds with /t/ or /d/, leading to errors that can disrupt comprehension. Additionally, final consonants, particularly plosives /p/, /t/, and /k/, are frequently omitted or altered, as Vietnamese syllable structure tends to favor open syllables [3]. Furthermore, the distinction in vowel length, which is crucial in English, tend to be overlooked by Vietnamese learners, causing confusion between minimal pairs such as "ship" and "sheep" [3]. This kind of pronunciation error can cause misunderstandings and discourage learners from communicating orally.

Another important issue among ESL learners is the impact of intonation characteristics in the native language. Vietnamese is a tonal language with a relatively even rhythm, as opposed to the English-stressed rhythm [4]. The contrast typically results in misplaced stress and unnatural intonation patterns when speaking English. Misplaced stress can alter word and sentence meaning, which leads to less effective communication [4]. Moreover, less exposure to native speech in English also adds to these problems since students may largely rely on written English without sufficient practice in speaking and listening [2].

Although pronunciation is very important in communication, it is often overlooked in formal language education, with the emphasis laid more on grammar and vocabulary [2]. The majority of EFL courses, especially those for non-English majors, put priority on reading and writing skills and leave pronunciation as a secondary matter. As a result, students may excel in vocabulary and grammar but struggle with oral communication. Given the growing importance of English in globalized economies, especially in science and technology, it is imperative that students receive improved pronunciation instruction to improve their employability and open up opportunities for international collaboration.

While previous studies have investigated pronunciation challenges in EFL learners, relatively few studies have focused on non-English majors at a university of science and technology in Hanoi. These students have unique learning needs and exposure to English since they utilize English primarily for academic and technical communication and not so much for everyday communication. By addressing these issues, this study aims to contribute to the improvement of English language teaching so that students can develop stronger communication skills that will be beneficial in both academics and the work environment.

2. Content

2.1. Literature Review

2.1.1. Pronunciation Issues in Non-Major Students

Pronunciation mastery remains one of the significant challenges for EFL learners, particularly non-major English learners. Common pronunciation issues are due to their failure to pronounce specific sounds correctly, give correct stress patterns, and use proper intonation. Vietnamese learners of English frequently experience challenges with consonant clusters, the pronunciation of final consonants, and suprasegmental features [5,3]. A notable problem is the incorrect pronunciation of fricatives and affricates, such as /ð/, /θ/, /ʒ/, /v/, and /z/ [15]. Additionally, word-final consonants like /s/ and /z/ are often left out because of the phonological differences between Vietnamese and English [6].

Another common challenge for Vietnamese learners is distinguishing vowel length. Many the English diphthongs and triphthongs are not present in Vietnamese, which makes it hard to differentiate between a short and long vowel, such as /i:/ and /ɪ/ and /u:/ and /ʊ/ [7]. In addition, incorrect pronunciation of English diphthongs and triphthongs leads to decreased intelligibility [8]. Research from EFL contexts in Indonesia and Singapore indicates similar obstacles, including issues with consonant substitution and vowel articulation [9].

The consequences of pronunciation issues extend beyond the intelligibility level, influencing listening comprehension and communicative competence generally [4]. Mispronunciation leads to misinterpretation and loss of confidence in English speaking [10]. Consequently, the majority of non-major students avoid oral communication, which consequently limits their exposure and opportunity for growth [11]. This lack of exposure is a factor in a cycle where students receive little practice, which will result in long-term pronunciation errors inhibiting fluency and language learning overall.

Another prevalent phenomenon problem that may be observed is misplacement of stress in English words with more than one syllable. Vietnamese is a tonal language, and native language prosodic characteristics are carried over to English, which puts unnatural stress [4]. It impacts their communicative intelligibility and level of proficiency in speaking English. Moreover, weak forms and connected speech are not adequately practiced, making their spoken English sound rigid and unnatural [4,12].

2.1.2. Causes of Pronunciation Problems

Pronunciation problems among English as a Foreign Language (EFL) learners often stem from multiple interrelated causes. One major factor is the influence of learners' native language, which may lead to difficulties in articulating specific phonemes, especially when those sounds do not exist in the mother tongue [7,8]. Another critical cause involves inadequate exposure to authentic English environments. Limited access to native speakers and real-world language contexts hampers learners' ability to internalize accurate pronunciation models [9]. In addition, socio-cultural factors, such as motivation and beliefs about English, can determine the degree of investment learners make in improving pronunciation. When learners doubt their capacity to achieve native-like accents or fail to see the relevance of clear speech, they may lack the commitment necessary for regular practice [10]. Furthermore, instructional strategies and teacher perceptions play a vital role in shaping learners' pronunciation outcomes. In some contexts, instructors may prioritize grammar and vocabulary over phonetics, leading to insufficient practice and feedback on pronunciation [11]. The perceived importance of sounding native-like can also be problematic, as it places undue pressure on learners who may feel judged for retaining elements of their native accent [12]. Collectively, these causes highlight the complex interplay of linguistic, psychological, and pedagogical factors that contribute to persistent

pronunciation difficulties. By recognizing and addressing these diverse factors, language educators and policymakers can devise more targeted and inclusive strategies that foster better pronunciation skills and overall communicative competence.

2.1.3. Techniques for Solving Pronunciation Issues

To assist in solving pronunciation issues, a multifaceted strategy must be employed. From studies, inclusion of pronunciation teaching within other language competencies is more effective than its separate teaching [13]. Authentic practice listening through exposure to native and proficient non-native speakers using multimedia can heighten the sensitivity of students to pronunciation [4].

Pronunciation can be greatly enhanced by focusing on a particular set of contrasting sounds. One useful method for enhancing pronunciation is minimal pair training, which teaches students to differentiate between words with similar phonetic features, such as /v/ and /f/ [14]. Vietnamese students, who often find it difficult to differentiate between voiced and voiceless consonants, will particularly benefit from this approach [8]. Additionally, phonological awareness training works well; exercises that focus on stress patterns and syllable segmentation can help students become more rhythmic and intonative [4].

The use of technology is increasingly favored as a means of enhancing pronunciation. Applications powered by AI, such as ELSA Speak, offer real-time feedback, enabling learners to engage in independent practice and pronunciation development [15]. Just as automatic speech recognition technology identifies errors and provides targeted corrections, learning efficiency and accuracy are significantly improved [16]. Furthermore, incorporating pronunciation software into classroom instruction promotes a more interactive and engaging learning experience by allowing students to practise and self-correct in a safe environment [4].

Teachers play a critical role in helping students improve their pronunciation. To improve pronunciation instruction, EFL training programs should provide instructors with a solid understanding of phonetics and phonology [11]. Role-playing, tongue twisters, and shadowing exercises are all effective and enjoyable methods for improving pronunciation [4]. Furthermore, providing students with timely and encouraging corrective feedback has been shown to significantly improve their pronunciation skills [17]. A communicative pronunciation practice can be especially useful. Practice English in real-world contexts, such as debates, presentations, and group discussions, allows students to learn pronunciation in a meaningful and authentic way [4]. Furthermore, creating a learner-centered environment in which mistakes are viewed as opportunities to learn can reduce anxiety and boost learners' confidence when practicing pronunciation [10].

In short, pronunciation challenges can be tackled effectively by the combination of specialized pronunciation training, technology, and well-prepared instructors that have the ability to offer systematic and engaging practice. With all of these established, Vietnamese EFL learners can enhance their pronunciation as well as develop their English communication.

2.2. Research methodology

This study used a quantitative research design to examine pronunciation difficulties among first-year engineering students learning English as a foreign language. 309 students at CEFR A1–A2 levels from a university in Hanoi were selected via convenience sampling.

Data were collected through a Google Forms questionnaire over two weeks, covering three sections: 1) Pronunciation Problems, adapted from Shak et al. [18]; 2) Factor Analysis, with multiple-choice questions adjusted from Lovenia & Jufrizal [19] to identify key articulation issues; and 3) Strategy Identification, based on Dwi & Ningrum [20], assessing the frequency and effectiveness of pronunciation learning techniques.

The instrument's reliability was confirmed by a Cronbach's alpha exceeding 0.7 [21], validating its effectiveness in measuring pronunciation issues and learning strategies. Descriptive statistical methods such as frequency analysis, mean comparisons, and standard deviations were applied using SPSS [22] to identify pronunciation error patterns. Ethical guidelines were strictly followed—students were informed of the study's purpose, assured of confidentiality, and participated voluntarily with the option to withdraw at any time. Informed consent was obtained to ensure transparency and respect for participants' rights.

2.3. Findings and Discussion

2.3.1. Pronunciation problems encountered by the students

As seen from Table 1, linking sound (P10) is considered the most difficult component, with a mean score of 3.70 and a standard deviation of 1.142. This suggests that learners have significant difficulty connecting sounds in speech, which may affect their fluency and overall intelligibility. The high mean scores for sentence stress (P8) and word stress (P7), at 3.62 and 3.61, respectively, with standard deviations of 1.199 and 1.221, confirm the issues with suprasegmental features. Within the segmental features, Consonant cluster pronunciation (P2) with a mean of 3.40 and a standard deviation of 1.236, and Consonant pronunciation (P1), has a mean score of 3.33, with a standard deviation of 1.292, are both major obstacles to learners. These segmental issues are in line with Al-khresheh (2024) and Glasdam et al. (2017) [8,9], who discuss how L1 interference makes it difficult to produce fricative and plosive sounds. As also mentioned by Begum & Hoque (2016) [7], diphthong vowel pronunciation (P4), with a mean score of 3.32 and a standard deviation of 1.222, and monophthong vowel pronunciation (P3), with a mean score of 3.18 and a standard deviation of 1.312, both indicate difficulties with vowel sounds. The final sound with the -ed ending pronunciation (P5) has the lowest mean score of all of them, with a mean score of 3.08 and a standard deviation of 1.250. However, it still shows a significant challenge. These persistent problems with final sounds attest to the complex pronunciation problems identified by Wang et al. (2024) [17].

Table 1. Problems in English pronunciation

Items		Mean	Std. Deviation
P1	Consonant pronunciation (e.g., p, t, k, b...).	3.33	1.292
P2	Consonant cluster pronunciation (e.g., pl, st, tr...).	3,40	1,236
P3	Monophthong vowel pronunciation (e.g., i, e, u...)	3,18	1,312
P4	Diphthong vowel pronunciation (e.g., ai, oi, au...).	3,32	1,222
P5	Final sound with -ed ending pronunciation (e.g., walked, played...).	3,19	1,232
P6	Final sound with -s ending pronunciation (e.g., cats, dogs...)	3,08	1,250
P7	Word stress	3,61	1,221
P8	Sentence stress	3,62	1,199
P9	Intonation	3,69	1,165
P10	Linking sound	3,70	1,142

2.3.2. External and internal factors causing pronunciation problems

Table 2 presents external factors influencing pronunciation. Limited exposure to English and insufficient listening and speaking practice (E2) had the highest mean score (3.57, SD = 1.142), reinforcing studies that emphasize exposure as essential for pronunciation development [23,16]. Difficulty applying acquired knowledge to real-life situations (E3) followed closely (3.43, SD = 1.11) [8].

Exposure to inaccurate English usage (E4) scored 3.33 (SD = 1.105), highlighting the negative impact of incorrect models [7,23]. Limited access to pronunciation materials (E6) had a mean of 3.3 (SD = 1.191), underscoring the need for quality resources. Lack of spoken English exposure (E1) and insufficient pronunciation instruction (E5) both scored 3.18, suggesting that instructional quality and regular speaking opportunities are key [11,13].

Errors in pronunciation resources (E7) had the lowest score (3.03, SD = 1.183), emphasizing the importance of reliable materials [10,23]. The standard deviations (1.1–1.191) indicate moderate variation, reflecting individual differences in how learners experience these factors.

With regard to internal factors affecting pronunciation shown in Table 3, lack of a clear learning goal (I3) ranked highest (3.55, SD = 1.138), supporting research on the role of motivation and goal setting [17,25]. Limited awareness of pronunciation proficiency (I1) followed (3.52, SD = 1.13), highlighting the importance of self-awareness and metacognitive skills [7,26]. Perceived lack of innate ability (I2) had the lowest score (3.51, SD = 1.127), but remained high, aligning with Glasdam et al. (2017), who found that aptitude is not the most decisive factor in pronunciation mastery [9].

Table 2. Causes related to external factors

	Items	Mean	Std. Deviation
E1	Lack of exposure to spoken English (having no chances to talk with native English speakers, having no habits of speaking English)	3,18	1,127
E2	Limited exposure to English and insufficient opportunities for listening and speaking practice	3,57	1,142
E3	Difficulties in applying learned knowledge to real-life situations	3,43	1,11
E4	Influence of an environment with inaccurate English usage	3,33	1,105
E5	Unclear or insufficient pronunciation lessons and instructions	3,18	1,1
E6	Limited opportunities to engage with English pronunciation materials	3,3	1,191
E7	Errors in students' learning resources and pronunciation materials	3,03	1,183

Table 3. Causes related to internal factors

	Items	Mean	Std. Deviation
I1	Insufficient awareness of pronunciation proficiency	3,52	1,13
I2	Lack of innate ability to master English pronunciation	3,51	1,127
I3	Absence of a clear target in learning pronunciation	3,55	1,138

2.3.3. Strategies used by the students to improve their pronunciation
Strategy 1: Learning about Sounds

Predicting pronunciation based on spelling (LS3) had the highest mean score (3.15, SD = 1.108), highlighting learners' reliance on the spelling-sound relationship [4,8]. In contrast, analyzing word formation and practicing sounds (LS5) had the lowest score (2.84, SD = 1.145), suggesting a lack of emphasis on morphological analysis, possibly due to insufficient knowledge or training [6,17].

Strategy 2: Practicing Sounds

Both connecting and shortening sounds (PS1) and using mirrors or video for observation and adjustment (PS3) had the highest mean scores (3.06), indicating frequent use. PS1 underscores the importance of suprasegmental features in speech flow [13,15], while PS3 highlights the role of technology in pronunciation learning [11,26]. Conversely, repeating sounds, words, and sentences (PS4) had a lower score (2.73), implying that rote repetition is less favored, despite its historical importance in language learning.

Strategy 3: Listening and Imitation

Paying attention to key sounds and intonation (LI3) had the highest score (3.15, SD = 1.108), aligning with research that emphasizes the role of suprasegmental features in communication skills [13,15]. Differentiating sounds in listening passages (LI2) had the lowest score (3.01, SD = 1.125), suggesting significant challenges due to the complexities of phonological awareness [4,8].

Strategy 4: Communicating and Responding

Automatically correcting pronunciation errors while speaking (CR1) had a moderate mean score (2.89, SD = 1.113), indicating an attempt at self-correction but with possible difficulties [13,11]. Chatting with native speakers and requesting feedback (CR2) had the lowest score (2.56, SD = 1.230), reflecting low engagement, likely due to confidence issues or limited access to native speakers [15]. This contrasts with research emphasizing communicative practice as essential for pronunciation improvement [1,4].

Strategy 5: Using support tools to practice speaking English

The pronunciation aids are categorized into textbooks, internet resources, and software (ST1); mirrors, pens, and sticks (ST2); and dictionaries (ST3). Dictionaries (ST3) were used most frequently (3.15), indicating strong reliance on lexical support [17]. Conversely, physical tools (ST2) had the lowest score (2.83), suggesting a preference for digital alternatives or a lack of awareness of their effectiveness.

Among all the strategies, Pronunciation prediction based on spelling (LS3) in Table 4 and Attention to important sounds, and intonation while listening (LI3) in Table 6 both had the highest mean score of 3.15 and a standard deviation of 1.108. The high score for LS3 implies that students utilize spelling as a guide for pronunciation, showcasing a robust comprehension of the relationship between spelling and phonology [4,8]. Given the inconsistent phoneme-grapheme correspondences in

English, research highlighting the importance of spelling patterns in pronunciation learning reinforces this dependence [15]. Similarly, the high score of LI3 highlights the importance learners place on suprasegmental elements such as intonation and stress further evidence for the argument that prosodic awareness is key to effective communication [13]. Conversely, the lowest-ranked strategy was chatting with native speakers and receiving feedback (CR2) of Table 7 with a mean of 2.56 and a standard deviation of 1.230. This suggests that learners are less likely to engage in interactive pronunciation practice, possibly due to confidence issues, lack of access to native speakers, or a preference for self-study tools [1,4]. The higher standard deviation indicates significant individual differences, with some learners actively seeking feedback while others avoid it. Since communicative pronunciation practice is central to both fluency and intelligibility [15], this is an area of pronunciation learning that can be addressed with guided interactive learning opportunities.

Table 4. Students' strategies for pronunciation improvement

	Items	Mean	Std. Deviation
Strategy 1: Learning about sounds			
LS1	Dictionary lookup for pronunciation and stress	3,05	1,096
LS2	Dictionary lookup using notation version and important sounds	3,01	1,125
LS3	Pronunciation prediction based on spelling	3,15	1,108
LS4	Application of pronunciation rules	2,90	1,133
LS5	Analysis of word formation and sound practice	2,84	1,145
Strategy 2: Practicing sounds			
PS1	Practice of connecting and shortening sounds	3,06	1,078
PS2	Reading of words, sentences, and paragraphs	2,80	1,181
PS3	Use of tempered glass or video for observation and adjustment	3,06	1,082
PS4	Repetition of sounds, words, and sentences	2,73	1,157
Strategy 3: Listening and imitating			
LI1	Listening to online documents, recordings, lectures.	3,05	1,096
LI2	Distinguishing sounds in listening passages.	3,01	1,125
LI3	Attention to important sounds, intonation while listening.	3,15	1,108
LI4	Imitation of native speakers and repetition of phrases	3,09	1,132

Strategy 4: Communicating and responding			
CR1	Automatic correction of pronunciation errors while speaking	2,89	1,113
CR2	Chatting with native speakers and requesting feedback	2,56	1,230
Strategy 5: Using support tools to practice speaking English			
ST1	Use of textbooks, online documents, and software	3,13	1,064
ST2	Use of mirrors, pens, and sticks to support practice	2,83	1,177
ST3	Dictionary lookup and use of electronic dictionaries	3,15	1,072

3. Conclusion

This study sheds light on the pronunciation issues encountered by non-English major students at a science and technology university in Hanoi. The data demonstrate that final sounds, particularly those ending in "-s" and "-ed," are among the most difficult features for learners, while areas such as linking, intonation, and sentence stress show relatively better performance. The significant variation in students' abilities highlights the need for a more tailored approach to pronunciation instruction.

Both internal and external factors were found to contribute to pronunciation learning outcomes. External difficulties primarily stem from inadequate exposure to spoken English, a shortage of practice opportunities, and the influence of incorrect pronunciation models. Internally, students' lack of clear pronunciation goals, limited awareness of their pronunciation weaknesses, and the misconception that pronunciation is an inherent talent rather than an acquirable skill create additional obstacles. These findings illustrate the complexity of pronunciation acquisition and stress the importance of comprehensive instructional support within learning environments.

The study explores pronunciation learning strategies and reveals that students prefer self-directed approaches. Conventional methods like word formation analysis and repetitive drills are preferred over methods like using audio resources and consulting dictionaries for pronunciation verification. This pattern suggests a discernible move toward experiential and interactive learning, which suits each student's unique study preferences.

Although the study has made significant contributions, it is important to recognize its limitations. Relying exclusively on quantitative data limits the depth of understanding regarding students' learning experiences. Hence, qualitative research may offer a more thorough examination of this matter. Additionally, the small sample size limits the generalizability of the findings, and the absence of specialized phonetic analysis software compromises the accuracy of pronunciation assessments. Having discussed these flaws, it is suggested to utilize cutting-edge phonetic analysis technologies and mixed method approaches to gain a deeper understanding of pronunciation issues and effective teaching strategies.

In conclusion, this study expands the existing body of research on pronunciation difficulties among non-English major students and serves as a valuable reference for future investigations. By identifying key problem areas and influential factors, the findings offer useful insights for educators aiming to refine pronunciation instruction and enhance students' overall English communication skills.

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