



## การสำรวจแนวทางการสอนและความท้าทายในการออกเสียง: กรณีศึกษาเรื่องการรับรู้ และเสียงพยัญชนะที่เป็นปัญหาของนักศึกษาสาขาภาษาอังกฤษเพื่อการสื่อสาร

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### บทคัดย่อ

การออกเสียงภาษาอังกฤษที่มีประสิทธิภาพได้รับการนำเสนอในฐานะที่เป็นปัจจัยสำคัญของการสื่อสาร และเป็นความท้าทายของผู้เรียนภาษาอังกฤษในฐานะเป็นภาษาต่างประเทศ การศึกษานี้มุ่งสำรวจแนวทางการสอนในวิชาสัทศาสตร์ และตรวจสอบเสียงพยัญชนะที่เป็นปัญหาของนักศึกษาชั้นปีที่1 วิชาเอกภาษาอังกฤษเพื่อการสื่อสารในมหาวิทยาลัยเทคโนโลยีในประเทศไทย เครื่องมือวิจัยคือแบบสอบถามและการทดสอบการออกเสียง ผลการวิจัยสรุปว่าการอ่านสัญลักษณ์สัทศาสตร์ และการถอดเสียงช่วยให้การออกเสียงถูกต้องและเพิ่มความมั่นใจให้นักศึกษา เสียงพยัญชนะที่เป็นปัญหาคือ /θ/ และ /z/ ผลการศึกษานี้สามารถนำไปใช้ในแนวทางการสอนเพื่อออกแบบและกำหนดงานเพื่อฝึกอบรมการออกเสียง การศึกษานี้มีข้อจำกัดบางประการ ได้แก่ จำนวนนักศึกษาที่เข้าร่วมการศึกษาน้อย และการเน้นทดสอบการออกเสียงพยัญชนะ ดังนั้นการวิจัยในอนาคตควรรวมถึงจำนวนนักศึกษาที่มากขึ้นและพิจารณาการทดสอบการออกเสียงระดับคำและประโยค

**คำสำคัญ:** การออกเสียง สัทศาสตร์



## Exploring Instructional Approaches and Pronunciation Challenges: A Study of English for Communication Students' Perception and Problematic Consonant Sounds

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### Abstract

Effective English pronunciation has been presented as a key factor for successful communication and it is a challenge of English as a foreign language learners. This study aimed to explore the instructional approaches in a phonetics course and investigate the problematic consonant sounds faced by the first-year students majoring in English for Communication at a university of Technology in a Thai university. Research instruments are survey questionnaires and pronunciation tests. The findings conclude that reading phonetic symbols and transcriptions aids correct pronunciation and increase students' confidence. The problematic consonant sounds are /θ/ and /z/. The implication of this study can be applied into pedagogical approaches to design and assign instructional resources for enhancing pronunciation training. This study has certain limitations of the small number of participants and the focus on consonant sounds in the pronunciation test. Therefore, future research should include a larger number of participants and consider pronunciation testing of word stress and sentence stress.

**Keywords:** Pronunciation, Phonetics



## 1. Introduction

English in the future is a world language which continues to be compulsory for progress, serving as the primary gateway to information and communication, supported by many countries that reinforce its status as a global language [1]. English speaking is a productive skill which emphasizes the pronunciation as an element for successful communication [2-4]. Despite English's significance, mastering in English language pronunciation remains. Ruengwatthakee and Barndt [5] claimed that there is a requirement for English language teachers to conduct research in pronunciation to support students in developing proficient oral communication skills.

Rajamangala University of Technology Isan presented in Amatariyakul and Amatariyakul [6] that it has been a hub for lifelong learning. Through a process of developing students to reach the international standards, training students' pronunciation competency for the country's competitiveness is necessary. Pronunciation emerges in every English class because it directly affects clarity, accuracy, and comprehension for communicative competence [7]. Therefore, the pronunciation teaching can help the students focus on both accuracy and fluency and improve self-confidence in speaking for long-term progress [8].

Sahatsathatsana [9] conducted the study with the English for Communication (EC) students at Rajamangala University of Technology (RMUT), Kalasin and found that the first-year students graduated from high school or vocational college with little experience in practicing English pronunciation. As a result, their ineffectiveness in English pronunciation may influence incomprehensibility in communication [10]. According to Taladngoen and Palawatwichai [11], the students under the Bachelor of Arts program at RMUT are required to take a phonetics course comprises English speech sound production, organs of articulation, the sound systems, syllable structures, and suprasegmental phonemes (stress and intonation).

In addition, being one of stakeholders in the course, the students' voice should be pronounced to represent their perception towards pronunciation practices and feedback on learning outcomes. Therefore, this research is designed to find out an evidence regarding the aspects of the first-year EC students in the phonetics class and examine their problematic consonants to enhance the effectiveness of the course, deliver graduates skillful in pronunciation for international professional standards, and to fulfill the mission of university in fostering academic research.

## 2. Literature review

### 2.1 Pronunciation Challenges

The difficulties of students in pronunciation related to language interference, the limited exposure to authentic English language input and the absence of certain sounds in the first and the second languages. In an area of language interference, Brown [12] presented that learners from diverse linguistic backgrounds encounter difficulties in reproducing English sounds and make pronunciation errors when transferring L1 to L2. Khamkhien [13] stated that the English exposure of Thai learners is limited since it is a foreign language and the students' opportunities to expose real English pronunciation seem to be insufficient. According to Machacova [14] and Kitikanan [15], learners assimilate English sounds to the sound closest in their first language due to their language experience. For example, Thai learners cannot distinguish between spoken



and written forms in English so their mispronunciation can lead to misunderstandings or communication breakdowns in conversation [16-17]. Plailek and Abigail [18] also revealed that the factors of pronunciation problems are the students' basic knowledge, the frequency of pronunciation, and the instruction of teachers. To overcome these, exposure to examples of accurate pronunciation is recommended [19].

Pronunciation practices require both accuracy and fluency and they should be fit with the students' ages and experiences. Besides the teaching sources, the authentic materials from songs; websites; TV and radio programmes; students' self-recordings; and resources outside the classroom have been explored [20]. Pronunciation trainings in Thailand were piloted with different approaches. Lamarca et al. [21], showed an explicit instruction with Presentation-Practice-Production. Sriha [22] used movies and had the students imitate the final sounds. The study conducted by Cedar and Ternjai [23] trained Thai EFL teachers' pronunciation through social media. Tiewcharoenkij et al. [24] presented a phonetic transcription writing for developing the students in pronouncing the /r/ sound. Although various methodologies have been explored pronunciation training, the present study evaluate the instructional methods for phonetics education which can meet the needs of EC students and provide the skills necessary for accurate pronunciation.

## 2.2 English Phonetics

Phonetics is the foundation of English pronunciation. According to Brown [25], a phonetic ability is a coding which some individuals who have better listening skill can categorize the sounds more accurately, and imitate the sounds more effectively. In an EFL context which pronunciation skills receive less attention [26], International Phonetic Alphabet (IPA) is a tool to provide a standard system of symbols to represent the description and features of phonetic transcriptions and phonological characteristics. The studies of Kotcharat and Limsiriruengrai [27] revealed that the students can improve pronunciation through phonetics because they understand the correct principles. Mompean and Gonzalez [28], showed the students find phonetic symbols helpful for awareness-raising and autonomous learning. In addition, Nguyen et al. [29] appealed that the tertiary students need to do more self-practice on pronunciation to broaden their knowledge from exercises and class activities. Therefore, the idea of investigation pronunciation through phonetic symbols is to help students distinguish how each consonant sounds are pronounced and represent their problems in pronunciation.

## 2.3 Problematic consonant sounds

According to Roach [30], consonant sounds are articulated with airflow barriers into voiced sounds with vocal cord vibrations, while voiceless sounds are produced without vibration. The important features of English consonants are categorized into two aspects of places and manners of articulation. Places are bilabial, labiodental, dental, alveolar, palato- alveolar, palatal, velar, and glottal. Manners of articulation are plosive, fricative, affricate, nasal, lateral and approximant. Voicing, places, and manners of articulation are basic content in the phonetics course to systematically present language learners a framework for sound analyzing and describing and to help the students understand how speech sounds are produced [31].



While it is necessary to prioritize English pronunciation training, it is also worth exploring an ability of students' consonant pronunciation. The findings showed English pronunciation of Thai students, particularly with challenging consonants that are not presented in Thai, such as /v/, /θ/, /ð/, /z/, /ʃ/, /ʒ/, /g/, /r/, /tʃ/, /dʒ/, and /ʌ [32-33]. Tanthanis [34] and Chakma [35] highlighted difficulties of problematic initial sounds include /θ/, /ð/, /v/, /r/, /z/, /ʃ/, /ʒ/, and /tʃ/, while problematic final sounds include /ʒ/, /dʒ/, /ʃ/, /θ/, /ð/, /z/, /tʃ/, /g/, and /ʌ. The absence of final consonant clusters in Thai leads to substitutions with similar Thai sounds. Supanamoke [36] explained that Thai phonology such as the unaspirated /p/, /b/, /t/, /d/, and /k/ sounds, contrasts with English, which can have both aspirated and unaspirated sounds. These challenges emphasize the needs for teaching English pronunciation.

## 2.4 Related research

In RMUT context, Jantharavroj [10] used diagrams showing places and manners of articulation and indicated students pronouncing certain English consonant sounds such as fricatives, affricates, stops, lateral and approximant due to the absence in the Thai phonological system and students' lack of knowledge in pronunciation rules. The study recommended focusing on introducing consonants at the beginner level and practicing articulation at higher levels, teachers' role modelling of accurate pronunciation, and students' engagement in out-of-class activities to enhance their pronunciation skills.

Wongsuriya [38] proposed a mobile application in which students used Google Translate application to listen to and imitate the word pronunciation. The findings showed that the application can help language learners have more learning experiences and situate learning without an effect from cultural and mother tongue. The students showed positive reactions because of the convenient application and their motivation. Therefore, they can practice pronouncing the difficult vocabularies and sentence with more confident.

In the same year, Taladngoan and Palawatwichai [11] research presented learners' perspective on the Phonetics and Phonology course and found some particularly challenging topics which were a general phonetic transcription, articulatory phonetics, and a syllable structure. The easier topics mentioned were an introduction and definition to English phonetics and phonology, intonation patterns, and word and sentence stress. This study confirmed that the better pronunciation can develop the higher self-confident because they can collaborate and support each other.

Recently, Dandee and Pornwiryakit [39] highlighted students' awareness of the importance of pronunciation and their commitment to practicing it. Students planned out-of-class practice with TV shows, radio programs, songs, movies, YouTube, and applications. They also formed practice groups to check each other's accuracy and sought teachers' feedback to increase confidence and speaking opportunities. This study emphasized real-world practice and using phonetic transcriptions for better pronunciation accuracy.

The previous studies presented RMUT context which different effective strategies include structured classroom activities, collaborative efforts in out-of-class activities, the use of technology, and real-world application were applied to improve pronunciation. This study aims to emphasize the importance of instructional approaches in teaching pronunciation and address students' pronunciation challenges by:



1) exploring first-year EC students' perceptions of pronunciation practice methods in an English phonetics course, and 2) identifying problematic consonant sounds in English pronunciation.

### 3. Research methodology

#### 3.1 Participants

The 113 participants show the largest proportion of females at 72.57% (n=82), males represent 24.78% (n=28), and 2.65% (n=3) identify as non-binary. Most students (84.07%, n=95) have a high school education, 15.93% (n=18) from a vocational education. For class preferences, 56.64% (n=64) prefer onsite classes, 26.55% (n=30) prefer hybrid classes, and 16.81% (n=19) prefer online classes. Their learning tools include mobile phones (31.86%, n=36), tablets (22.12%, n=25), Personal Computers (11.50%, n=13), textbooks (17.70%, n=20), and combinations of multiple tools (16.81%, n=19).

#### 3.2 Research instruments

The online questionnaire was distributed to survey students' perceptions. The questionnaire presented two main parts of 1) information of the students and 2) students' experiences with English pronunciation practices, assessment of learning outcomes, and the difficulty levels of six units in the course, with the questionnaire's validity evaluated by three phonetics course experts (IOC value of 0.66).

For investigating problematic consonant sounds, two pronunciation tests with 22 words for initial consonants and 21 words for final consonants were used. The differences in word counts were due to certain phonetic symbols appearing only in initial or final positions. The words were selected from a phonetics coursebook, and an IOC ensured test alignment with learning objectives. A result from pilot study with 10 first-year EC students improved the tests' validity and reliability.

#### 3.3 Data Collection and Analysis

Data was collected from students after the course completion, using quantitative techniques. Responses from the questionnaire were compiled, double-checked for accuracy and completeness, and coded for categorization and analysis. Descriptive analysis involved calculating frequencies, percentages, and averages for each question. Average scores were interpreted to explore students' perceptions of pronunciation practice methods both in-class and out-class study, learning outcome achievements, and challenging lessons. For the pronunciation tests data, analysis proceeded through three steps of listening to students pronouncing and recording the scores; calculating scores; and interpreting the scores adapted from Sahatsathatsana [9] to identify problematic consonant sounds for first-year EC students.

### 4. Results

#### 4.1 Results for research question 1

The participants of the survey are 113 first year EC students studying English phonetics course at RMUTI. For table 1-3, the mean value for 4 scales of responses can be interpreted as: 1 means strongly disagree with the statement; 2 means disagree with the statement; 3 means agree with the statement; 4 means strongly agree with the statement

**Table 1:** Perception towards Classroom Practice Methods

Pronunciation Practice Methods	Strongly disagree 1	Disagree 2	Agree 3	Strongly agree 4	S.D.
7. Playing games about pronunciation	0.88	6.19	51.33	41.60	25.19
2. Practicing with online dictionary websites	0	10.62	47.79	41.59	23.28
9. Practicing reading phonetic symbols and transcription	0	8.85	50.44	40.71	24.36
5. Reading in front of a teacher	2.65	7.08	50.44	39.83	23.72
8. Practicing writing phonetic symbols and transcription	0.88	15.04	46.90	37.18	20.89
3. Practicing by imitating	0	7.96	55.75	36.29	25.74
10. Doing online exercises (etc. Google, MSteam)	1.77	12.39	50.44	35.40	22.02
1. Practicing with videos or movies	1.77	9.73	57.52	30.98	24.94
4. Reading in front of the class	10.62	20.35	42.48	26.55	13.37
6. Practicing with a flashcard	6.19	20.35	48.67	24.79	17.66

**Table 2 :** Perception towards Self Practice Methods

Pronunciation Practice Methods	Strongly disagree 1	Disagree 2	Agree 3	Strongly agree 4	S.D.
3. Practicing with videos or movies	0.88	9.73	44.25	<b>45.14</b>	23.02
5. Playing games about phonetics	3.54	13.27	40.71	<b>42.48</b>	19.58
7. Practicing with friends	2.65	13.27	43.36	<b>40.72</b>	20.17
4. Practicing with dictionary websites	3.54	8.85	51.33	<b>36.28</b>	22.67
2. Practice by imitating	0.88	9.73	56.64	32.75	25.00
9. Using language learning apps offering pronunciation exercises	2.65	14.16	51.33	31.86	21.27
6. Practicing with phonetic symbols and transcription	1.77	18.58	55.75	23.90	22.57
8. Working on specific problem sounds	1.77	18.58	55.75	23.90	22.57
10. Recording myself speaking and comparing it to native speaker recordings.	7.96	22.12	46.02	23.90	15.72
1. Making a video	8.85	27.43	54.87	8.85	21.75

In English phonetics classrooms, students strongly agreed that practicing with online dictionary websites, playing pronunciation games, reading phonetic symbols and transcriptions, and reading in front of a teacher are effective for improving pronunciation. However, they did not find activities like reading aloud and using flashcards as helpful. For self-practice, students preferred watching English movies with subtitles and repeating dialogues, exploring online tutorials, playing phonetics games, and practicing with friends. They found making videos, working on specific problem sounds, recording themselves and comparing their speech to native speakers' recordings less effective.

**Table 3:** Achievements in a Phonetics Course

I can	Strongly disagree 1	Disagree 2	Agree 3	Strongly agree 4	S.D.
4. I can pronounce the words according to phonetics transcriptions	1.77	16.81	59.29	22.13	24.43
5. I can use contraction, reduction, connect speech, stress and intonation for communication	0.00	18.58	61.95	19.47	26.22
7. I can apply phonetics to communicate with English speakers both nationally and internationally.	1.77	19.47	59.29	19.47	24.34
6. I can apply phonetics to communicate in academic and professional work.	1.77	26.55	57.52	14.16	23.92
1. I can define phonetic terms, the organs and principles of English pronunciation	2.65	23.89	61.95	11.51	26.13
2. I can compare sounds to distinguish different phonemes in English	0.88	22.12	66.37	10.63	28.91
3. I can analyze an English text into accurate phonetic transcription.	1.77	27.43	61.95	8.85	26.91

The data on course learning outcomes reveals student perceptions of phonetics proficiency. For instance, more than half of students agreed that they can pronounce the words according to the phonetic transcriptions, presented confidence in using contraction, reduction, connect speech, stress and intonation, and applying phonetics to communicate with English speakers both nationally and internationally. Conversely, few students agreed that they can define phonetic terms, the organs and principles of pronunciation, compare sounds to distinguish different phonemes in English, and analyze an English text into accurate phonetic transcription.

**Table 4:** Difficult Lessons in a Phonetics Course

For table 4, the mean value for 4 scales of responses can be interpreted as: 1 means the lesson is very easy; 2 means the lesson is easy; 3 means the lesson is difficult; 4 means the lesson is very difficult.

Units of content	Very easy 1	Easy 2	Difficult 3	Very Difficult 4	S.D.
2. Articulatory Phonetics	3.54	17.70	60.18	18.58	24.44
6. Sentence stress and Intonation	2.65	21.24	53.10	23.01	20.87
3. syllables and word stress	2.65	25.66	49.56	22.13	19.24
4. Contraction and reduction	3.54	24.78	52.21	19.47	20.26
5. Connected speech	3.54	33.63	42.48	20.35	16.95
1. Introduction to Phonetics	6.19	23.89	53.98	15.94	20.63

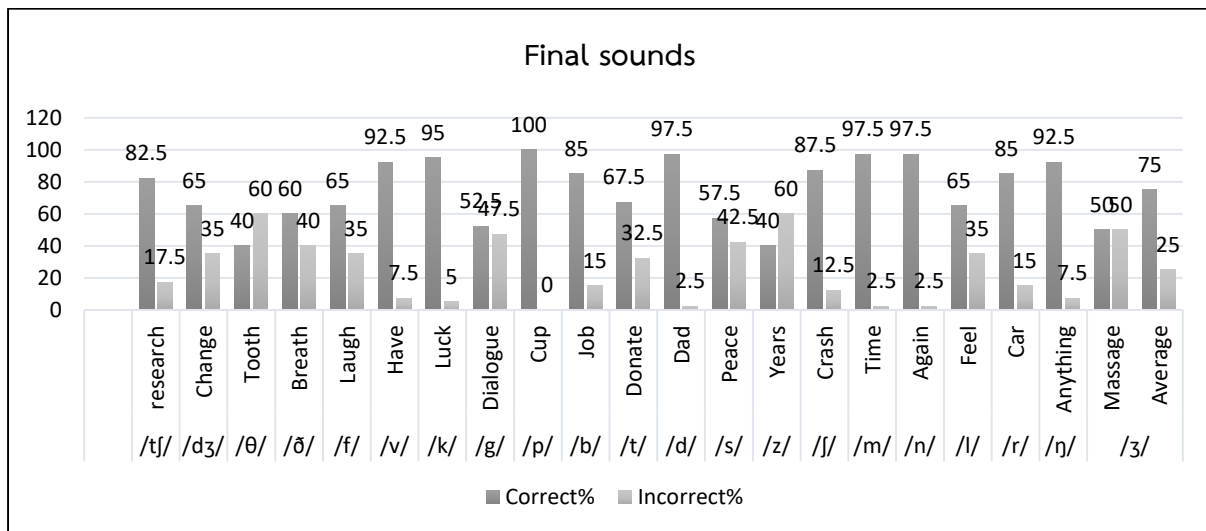
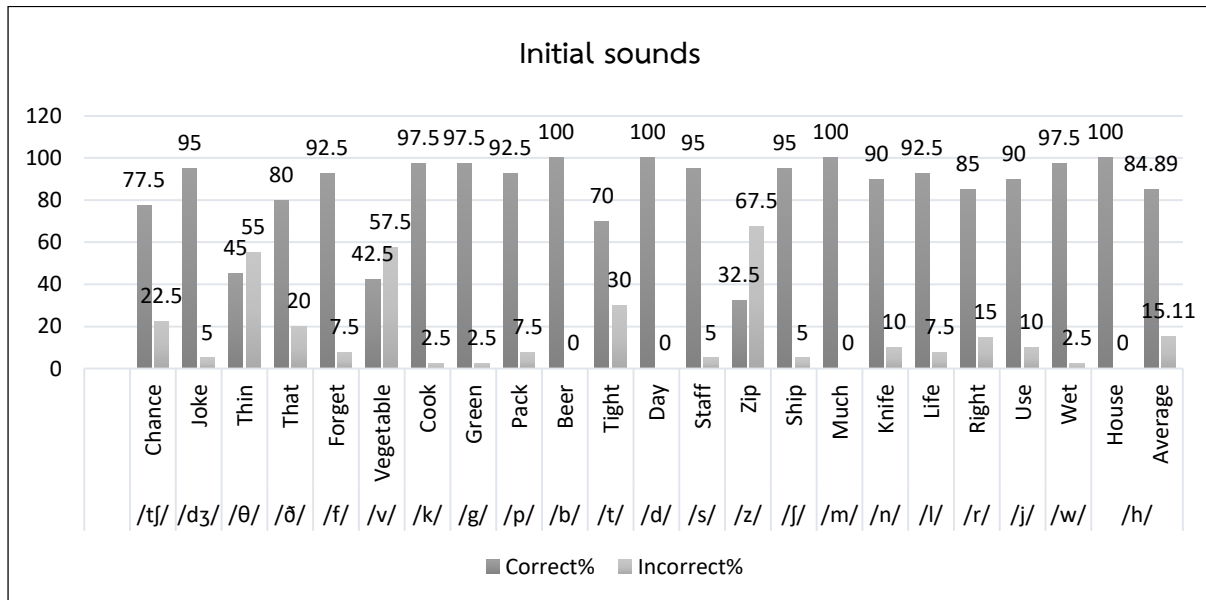
The data showed difficulty levels of six units, ranging from "Very easy" to "Very difficult." "Introduction to Phonetics" is considered the least challenging, with 30.08% of the students finding it easy and very easy. However, all units are regarded challenging, with most students rating them as difficult or very difficult, notably unit 2, "Articulatory Phonetics," which 78.76 % found it difficult and very difficult.



#### 4.2 Results for research question 2

To interpret the scores, the percentage of incorrect pronunciation can identify problematic consonant sounds as: 90-100% indicates a very serious problem; 80-89% indicates a serious problem; 70-79% indicates a moderate problem; 60-69% indicates a small problem; below 60% indicates a very small problem

**Table 6:** Problematic English consonant sounds



The findings revealed that students demonstrate proficiency in pronouncing initial consonants such as /b/, /d/, /m/, /h/ and a final sound of /p/ without difficulty. The mispronunciation percentages below 60% for 17 sounds of /tʃ/, /dʒ/, /θ/, /ð/, /f/, /v/, /k/, /g/, /t/, /s/, /ʃ/, /n/, /l/, /r/, /j/, /w/, /ŋ/, /ʒ/ indicating a very small problem. However, the top mispronounced initial consonants are /z/ as (67.50%) categorized as a very small problems. Regarding final consonants, students pronounce /p/ sound effortlessly, with 20 final consonant sounds showing mispronunciation percentages below 60%, indicating a very small problem.



However, the two mispronounced final consonants, /θ/ and /z/, have a percentage of 60.00%, classified as a small problems.

## 5. Conclusion and Discussion

The current study, similar to previous research by Mompeán et al., [28], highlights the effectiveness of using diverse methodologies and resources to enhance pronunciation skills. Additionally, it found that reading phonetic symbols and transcriptions aids correct pronunciation. Students preferred self-practice activities such as using videos or movies and practicing with friends, aligning with Kotcharat and Limsiriruengrai [27] and Nguyen et al. [29], who emphasized self-directed learning and engagement in activities beyond the classroom.

The study also identified students' confidence and challenges in phonetics. While students faced with defining phonetic terms and understanding pronunciation principles, they were confident in using phonetic transcriptions and communicating in English. These findings align with Taladngoen and Palawatwichai [11], who linked better pronunciation to higher self-confidence and identified articulatory phonetics as challenging. Unlike Lamarca et al. [21], who promoted explicit instructional methods, the current study suggests that traditional classroom activities like reading aloud and using flashcards are not perceived as effective.

To identify difficult English consonants, researchers used pronunciation tests and found problematic initial and final consonant sounds such as /θ/ and /z/ due to language interference. The results are consistent with findings by Sahatsathatsana [9] Jantharaviroj [10], and Plailek [18], which cited basic knowledge, teacher instruction, and practice frequency as key factors in pronunciation problems.

Regarding learning outcomes, students felt more confident in practical tasks such as using contractions, reductions, connected speech, stress, and intonation for communication. However, fewer students felt confident in analytical tasks like transcribing English texts into accurate phonetic transcription or applying phonetic knowledge in academic and professional contexts. Even though this study provides some insights into instructional approaches in a phonetics course and investigates problematic consonant sounds among students, it has certain limitations. The small number of participants and the focus on consonant sounds in the pronunciation test restrict the generalizability of the results to other population. Future research should include a larger number of participants across different settings to achieve more reliable results. Additionally, variables such as testing for word stress for phonetic symbol pronunciation and the pronunciation of initial, medial, and final sounds should be considered.

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