

Phonological Dilemmas Thai Students Face in Arabic Pronunciation

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Abstract

This study assesses the phonological difficulties Thai students face when pronouncing Arabic consonant sounds by comparing and contrasting Arabic and Thai consonant sounds, and by testing students' pronunciation issues of Arabic sounds through error analysis (e.g., Corder, 1981; Ellis, 2008). Using a basic random selection method, thirty native Thai-speaking students (18 females, 12 males) took a pronunciation test, giving a demographic introduction in Arabic and then speaking about freedom of expression. Contrastive analysis identified twenty-three Arabic consonant sounds that are absent from Thai, and eleven consonant sounds that are synonymous between Arabic and Thai. To identify mispronounced consonant sounds, an analysis was conducted on the students' voice recordings. Mispronunciations of some Arabic sounds were common and involved addition, omission, and transformation. The study contributes to the creation of Arabic phonetics curricula in Thai-Arabic language educational institutions.

Keywords: Arabic pronunciation, phonological dilemmas, contrastive approach, error analysis, Thai students

1. Introduction

For Muslims, the Arabic language is crucial. Because it is widely spoken around the world, particularly in western nations, where the number of students learning Arabic is rising quickly, Arabic is seen as a global language. To researchers, bilingual education can develop open expressive and cognitive capacities using bilingual reading materials, conversational written work from students following various rules, and oral code exchange between teachers and students in the classroom (Khattab, 2015; Perveen & Dahir, 2019).

Each language has its unique sound system, with the exception that many sounds in each language are comparable with other languages. This is the similar case with Arabic and Thai because many Arabic sounds are similar to Thai sounds. This makes it possible for Thai learners to pronounce these sounds without much trouble while imprinting in memory how simple it is to comprehend and remember Arabic vocabulary. However, there are sounds in Arabic whose pronunciation is different from that of Thai sounds. The difference between some of these sounds and others varies greatly, with some differences being much wider than others. These variations provide a variety of problems and challenges when teaching Arabic to Thai students.

According to Grabe (2002), students struggle to speak Arabic because they are shy and afraid that other students would make fun of them if they pronounce a word wrong. As a result, they tend to be quiet both inside and outside of the classroom. Scholars have underscored the importance of providing students with support and encouragement during their challenges and endeavors when interacting with Arabic (Haron et al., 2016). Pronunciation of the Arabic script differs greatly from that of Thai and English.

This study is significant because it offers solutions to the problems that Thai students encounter when learning Arabic. It will also benefit

teachers who can use it as a medium of Arabic language instruction to Thai students.

1.2 Literature review

Mastering the sound system is crucial for learning a foreign language, as the sense and understanding of a word rely on its pronunciation, even if mentally uttered (Handschin, 1923). This suggests that learners of a foreign language are hugely impacted by their own mother tongue, environment and culture.

Most studies on the variables affecting the issue of Arabic language competency come to similar observations. Lack of practice, a limited vocabulary, a bad learning environment, a lack of communication partners, a weak command of Arabic grammar, shyness, and feeling frightened are just a few of these (Nafi, 1995).

In Islam, God chose the Arabic language over other Semitic languages, making it the best and most eloquent one. Since the advent of Islam, Arabic has also been the language of Muslims. About this the Most High said in the Holy Qur'an, "Surely We have made it an Arabic Quran that you may understand." (Quran, 43: 3). He also stated "The Trustworthy Spirit has brought it down upon your heart, that you may be among the warners in a clear Arabic tongue" (Quran, 42: 193-195). And "An Arabic Quran, without any crookedness (therein) in order that they may avoid all evil which Allah has ordered them to avoid, fear Him and keep their duty to Him" (Quran, 39: 28). These Quranic verses underscore the unequivocal importance of learning Arabic, for its religious significance and primary source of Islamic tenets. Arabic is the primary language of Islam, second only to Christianity, and is the primary language for Muslims to read and study the Quran.

Arabic is a significant Islamic instructional material in Thai educational institutions, promoting the study of Islam and foreign languages, fostering collaboration among educators and individuals in both Islamic and

contemporary cultures. Thai society requires Arabic cultural education for economic and political fields. As relations between Thailand and the Arab world strengthen, Arabic teaching is expanding to include Thais, affecting over eleven universities, schools, and books, raising concerns about its educational institutions.

Teaching Arabic in Thailand presents additional challenges for teachers and students compared to non-native speakers. This study compares and contrasts Arabic to the Thai sound system, highlighting the difficulties Thai students face in pronunciation and providing recommendations for treatment and diagnosis.

2. Objectives of the study

The objectives of this study were to:

1. discern via a contrastive analysis the Arabic consonant sounds that do not exist in Thai consonant sounds.
2. assess the phonological difficulties Thai students have in pronouncing Arabic consonant sounds.
3. determine the appropriate solutions for teaching Arabic sounds to Thai students.

2.1 Significance of the study

The study is significant for students and teachers in adopting Arabic Language as a medium of instruction as it suggests strategies to address the difficulties faced by students.

3. Contrastive theory in language study

Some scholars highlight the importance of learner errors in language acquisition as inevitable and inherent in the process of building a new language system (Corder, 1981; Ellis, 2008).

Language researchers and instructors have long been fascinated by errors, which were once seen as a problem to be solved. They now view

errors as a tool for students to learn (Corder, 1967), demonstrate proficiency (Gass & Selinker, 1983), provide insights into learning strategies (Richards & Sampson, 1974; Taylor, 1975), and help teachers evaluate instruction (Richards & Sampson, 1974). Error analysis can identify the source of the errors as well as their causes, aiding in determining remedies and guiding the emphasis and sequencing of future instruction (Sompong, 2014).

Error analysis is helpful in examining linguistic errors, common error patterns, and surrounding circumstances, which is important for advancing knowledge for second language acquisition theory and improving language learning processes. These are some of the reasons why it is imperative to investigate the features of linguistic errors, the pattern of common errors, and the causes and effects.

Error analysis (EA) emerged in the 1960s as a counter approach to contrastive analysis, highlighting the nuanced relationship between native language and second language acquisition, influenced by target language, communicative strategies, and instruction quality (Hashim, 1999, pp. 59-76).

Krashen's monitor model (1977) suggests that native language influence on second language acquisition is not always negative. Language transfer research now focuses on positive transfer, examining the support of one's original tongue and parallels between languages (Dulay et al., 1982).

When Lado (1957, p. 1) discussed how to compare two phonetic systems, he said:

The evidence at hand indicates that when we learn a foreign language, we tend to transfer our entire language system to the foreign language, transferring to it the phonemes of our language and their phonetic substitutes, and transferring stress, rhythm patterns, pausing, and intonation patterns, and its interaction with other phonemes

The linguist (Lado, 1957) contuses that “We can now see more clearly the need to compare native and foreign phonological systems as a means of predicting and describing pronunciation problems in the performance of speakers of one language when they are studying another language” (p. 1), after highlighting this crucial point. He explicated that transfer often happens in a single direction, that is, from the native language to the target language. He opined that thinking about English as a foreign language differs from thinking about it as a native language in terms of processing. Lado backed that up by arguing that the key to learning a foreign language lies in comparing the mother tongue to the target language, and contrastive analysis is a crucial strategy for overcoming challenges.

For political, economic, and religious reasons, Thai people have required Arabic language knowledge since ancient times. As a result, Arabic language instruction is provided in a large number of educational facilities and classrooms. Nonetheless, there are issues that must be examined and resolved, the most significant of which is the challenge of pronouncing Arabic sounds correctly. The goal of this research is to determine whether students have trouble pronouncing Arabic sounds by comparing Arabic and Thai sounds and by recording students’ errors to identify the causes of their mispronunciations.

3.1 Comparison between Arabic and Thai sound systems

3.1.1 Arabic sound system

There are two primary categories of Arabic sounds: consonants and vowels. Furthermore, classical Arabic has three short vowels: the “fatha” **الفتحة**, “kasra” **الكسرة**, and “damma” **الضمة**, added to three long vowels, known as “mad” **المد**. They are: “alif” **الالف**, “waw” **الواو** and “ya.” **الياء**

Table 1
Arabic and Thai vowels

Arabic vowels	Thai vowels	Phonetic Symbols
أ	อะ	/a/
إ	ອີ	/i/
ئ	ອຸ	/u/
ا	ອາ	/a:/
ى	ອີ	/i:/
ئ	ອູ	/u:/

As shown in Table 1, all the sounds associated with Arabic vowels may also be found in Thai, so this eliminates any pronunciation issues for Thai students. Therefore, there is no need to carry out additional research on this topic. The difficulties Thai students encounter concern the Arabic consonant sounds, some of which are listed in Table 2.

Table 2
Arabic consonants

Number	Arabic consonants	Phonetic symbols	Arabic words	Phonetic transcription
1	أ	/ʔ/	أَدَمْ	/ʔa:dama/
2	ب	/b/	بَطْلَ	/batˤala/
3	ت	/t/	تَابَ	/taba/
4	ث	/θ/	ثَوَاب	/θawa:b/
5	ج	/dʒ/	جَعْلَ	/dʒa:lal/
6	ح	/ħ/	حَكَمَ	/ħakama/

Table 2
 Arabic consonants (cont.)

Number	Arabic consonants	Phonetic symbols	Arabic words	Phonetic transcription
7	خ	/χ/	خائف	/χa:ʔifun/
8	د	/d/	دعى	/daʕa:/
9	ذ	/ð/	ذبح	/ðabaha/
10	ر	/r/	رکع	/rakaʕa/
11	ز	/z/	زاد	/za:da/
12	س	/s/	سلام	/sala:mun/
13	ش	/ʃ/	شرب	/ʃariba/
14	ص	/sˤ/	صبر	/sˤabara/
15	ض	/dˤ/	ضرب	/dˤraba/
16	ط	/tˤ/	طعن	/tˤaʕana/
17	ظ	/ðˤ/	ظلم	/ðˤalama/
18	ع	/ʕ/	علم	/ʕalila/
19	غ	/ɣ/	غفر	/ɣafara/
20	ف	/f/	فطن	/fatˤana/
21	ق	/q/	قتل	/qatala/
22	ك	/k/	كتب	/kataba/
23	ل	/l/	لعب	/laʕiba/
24	م	/m/	ملك	/malaka/
25	ن	/n/	نقل	/naqala/

Table 2
Arabic consonants (cont.)

Number	Arabic consonants	Phonetic symbols	Arabic words	Phonetic transcription
26	و	/w/	وَجَدَ	/wadʒada/
27	ه	/h/	هَجَمَ	/hadʒma/
28	ي	/j/	يَبِسَ	/jabisa/

Table 2 above displays 28 Arabic consonants and some of them are difficult for Thai students to pronounce accurately (e.g., /h/, /sˤ/, /tˤ/).

The Thai alphabet system has a total of 44 letters, with 21 initial consonant sounds appearing at the beginning of the syllable (see Table 3).

Table 3
Thai initial consonants

Number	Thai consonants	Phonetic symbols	Thai words
1.	ป	/p/	ปลา
2.	พ, ຝ, ຝ	/pʰ/	ພັບ
3.	ບ	/b/	ບກ
4.	ຕ, ຕີ	/t/	ຕກ
5.	ທ, ທີ, ດີ, ດີ, ທ	/tʰ/	ທ່າ
6.	ດ, ດີ	/d/	ດຳ
7.	ກ	/k/	ກຳ
8.	ຄ, ຂ, ຂີ, ຂີ, ຕ	/kʰ/	ຄນ
9.	ອ	/ʔ/	ໂອ່ງ
10.	ນ	/m/	ນາ
11.	ນ, ນີ	/n/	ນໍາ
12.	ງ	/ŋ/	ງງ
13.	ຝ, ຝ	/f/	ຝ້າ

Table 3

Thai initial consonants (cont.)

Number	Thai consonants	Phonetic symbols	Thai words
14.	ສ, ທ, ຕ, ພ	/s/	ສົ່ງ
15.	ທ, ດ	/h/	ທິວ
16.	ຈ	/tɕ/	ຈົນ
17.	ໜ, ດັບ	/tɕʰ/	ໜັນ
18.	ຮ	/r/	ຮັບ
19.	ຢ, ໝູ	/j/	ຢາວ
20.	ວ	/w/	ວ່າງ
21.	ລ, ພິ	/l/	ລິ້ງ

Table 3 depicts the 21 sounds that appear in nine sounds only if they are final consonants as displayed in Table 4.

Table 4

Thai final consonants

Number	Phonetic symbols	Thai words	Phonetic transcription	
1.	/k/	It stands for the sound: /k/ and /kʰ/.	ບກ	bok
2.	/t/	It replaces the sound: /tɕ/, /d/, /t/, /tʰ/, /tɕʰ/, and /s/.	ກດ	kot
3.	/p/	It substitutes for the sound: /b/, /p/, /pʰ/, and /f/.	ກບ	kop
4.	/ŋ/	It stands for the sound: /ŋ/.	ຮັງ	tʰoŋ
5.	/m/	It stands for the sound: /m/.	ລົມ	lom
6.	/n/	It stands for the sound: /n/ and /l/.	ບນ	bon
7.	/j/	It stands for the sound: /j/.	ກາຍ	ka:j
8.	/w/	It is about the sound: /w/.	ເລວ	le:w

Table 4 details the nine final consonants sounds in Thai and their phonetic symbols.

Table 5
Similarity between Arabic and Thai consonants

Number	Place of articulation	Arabic consonants	Thai consonants	Phonetic symbols	Manner of articulation
1	Bilabial	ب (1)	ປ	/b/	Plosive
2	Bilabial	م	ມ	/m/	Nasal
3	Labio-dental	ف (2)	ພ, ພ	/f/	Fricative
4	Bilabial	و	ວ	/w/	Approximant
5	Alveolar	ج (3)	ຈ, ຈ	/v/	Lateral
6	Alveolar	ر (4)	ຮ	/r/	Trill
7	Alveolar	ن	ນ	/n/	Nasal
8	Velar	ك	ກ	/k/	Plosive
9	Glottal	ء (5)	ອ	/ʔ/	Plosive
10	Glottal	ه	ອ, ອ	/h/	Fricative
11	Palatal	ڦ (6)	ຢ, ຢ	/j/ /y/	Approximant

Table 5 displays 11 Thai sounds that are similar to Arabic sounds due to their shared place and manner of articulation. The table compares the similarities between Thai and Arabic sounds, with details provided below:

1. The case of (ب) ba: If it is an initial consonant of the syllable, it is one of the synonymous sounds in Thai, and it corresponds to the sound /b/ “ປ”. For example, the word “ອປາ” /ʔaba:/-. If it is a final consonant, this sound is not found in the Thai sound system. In addition, if the “ba” is a final consonant in Arabic, the audible release (Qalqalah) increases, but this audible release does not exist in the Thai sound system.

2. The case of (ຝ) fa: if it is an initial consonant of the syllable, it is synonymous with the Thai sound /f/ “ຝ, ຝ”. For example, the word “ຝືນ” /fan/. If it is a final consonant, this sound is not found in the Thai sound system, but its sound turns into a unvoiced unaspirated bilabial stop /p/. In Thai, for example, in the word: Thai “ອລືຟ” it is written /alif/ but is pronounced with /?alip/, and the word “ເອກອົຟ” is pronounced with /?awq?ɔ:p/.

3. The issue of the (ດ) lam: if it is an initial consonant, it is synonymous with the sound of ດ and ພ /l/ in Thai; for example, the word “ລຳ” is pronounced /lam/, but if it is a final consonant, there is no such sound in the Thai sound system. Rather, it is changed to the voiced alveolar nasal /n/, such as in the word: “ເທສບາດ” /tʰe:t sa ba:l/, but it is pronounced /tʰe:t sa ba:n/, and just as lam if it is accentuated, it is not found in the Thai language as well.

4. The case of (ຈ) ra: if it is an initial consonant of the syllable, then it is synonymous with the Thai consonant sound “ຮ” /r/; for example, the word ກາຮືມ /ka:ri:m/, but if it is final consonant, this sound does not exist in the Thai language. However, the sound of “ຮ” is transformed /r/ with the voiced alveolar nasal /n/ when it appears at the end of the syllable; for example, the word “ຈາຈັກ” /tɕa ra: tɕɔ:n/ and the word “ຈາຕົກ” /kha:t ta kɔ:n/. In addition, if it is ostentatious just as for “ຮ” /r/, there is no voicing in Thai as well.

5. The case of (ິ), the hamza: The hamza is another one of the synonymous sounds in Thai if it is vowelized; for example, the word “abi” is pronounced ອົບີ /abi:/. If it is a final consonant and is not preceded by one of the vowels “alif, waw, ya” then its sound is pronounced in Thai; for instance, the word “Ma’mum” is pronounced ມະອົມູມ /ma?mu:m/, but if the hamza is a final consonant after a vowel, its sound is not pronounced in Thai. Voicing is omitted in Thai, for example the word "bad" /su:ʔ/ is

pronounced ସୁ /su:/ and the word “أسماء” /asma:/ is pronounced อัسماء /asma:/.

6. The issue of (ء) /ha:/ is another synonymous sound if it is a vowel. But if it is a final consonant, there is no corresponding sound in the Thai language. Rather, its sound is deleted when articulated as in the word “hamzah.” This is pronounced with the sound /hamzah:/ or /hamza:/ so it replaces the sound of /h/ with the hamza.

These sounds have exits, sounds, and properties with the Arabic language and the Thai language, thus there is no difficulty or issue with pronunciation for Thai students, who can pronounce them appropriately.

However, the sounds of Arabic that are difficult or problematic for Thai students are those that do not exist in Thai, whether they are derived from sounds that are similar to Thai sounds or sounds that do not exist in Thai.

Additionally, there are twenty-three Arabic sounds that are absent from Thai, and they are split into the following three groups:

1. The Arabic sounds that are equivalent to Thai sounds when they are initial consonants, but when they are final consonants, they are absent from the Thai language: the sound of ف /f/ ل /l/ ر /r/ ح /h/, which we call the different sounds.

2. There are five Arabic sounds that are not present in the Thai language but are similar to or homogenous with Thai sounds. د /d/ ت /t/ س /s/ ج /j/ خ /x/, which are what we call convergent sounds.

3. The Arabic sounds that are not found in the Thai language and their sounds are not close or homogeneous in the Thai language, which are thirteen sounds: ت /t/ د /d/ ط /tˤ/ ظ /ðˤ/ ز /z/ س /s/ ج /dˤ/ ق /q/ ع /q/ ح /h/ ل /l/ ر /r/ (mufakkhamah) which we call different sounds as well.

Table 6:

Graphic table showing similar consonant sounds between Arabic and Thai

Arabic and Thai consonants	Place of articulation	Phonetic symbols	Manner of articulation	Voiced and unvoiced
د	Denti-Alveolar	/d/	Plosive/Affricate	Voiced
ڌ	Alveolar	/d/	"	"
ڌ	Denti-Alveolar	/t/	"	Unvoiced
ڌ	Alveolar	/t/	"	"
س	Denti-Alveolar	/s/	Fricative	"
س	Alveolar	/s/	"	"
س	Alveolar	/s/	"	"
خ	Velar	/x/	"	"
ڌ	"	/kh/	Plosive/Affricate	"
ڜ	post-alveolar	/f/	Palatal, Fricative	"
ڇ	"	/ch/	Plosive/Affricate	"

Table 6 provides a graphic table showing similar sounds between Arabic and Thai consonants. Here it is obvious that there are subtle differences between Thai and Arabic that can potentially confuse students causing them to mix up these sounds during Arabic pronunciation.

Table 7:

Arabic sound chart for sounds not present in the Thai language.

Place of articulation	Arabic consonants	Phonetic symbols	Manner of articulation	Voiced and unvoiced	Plain and emphatic
Dental	ث	/θ/	Fricative	Unvoiced	Plain
	ذ	/ð/	Fricative	Voiced	"
	ظ	/ðˤ/	"	"	Emphatic
Denti-alveolar	ط	/tˤ/	Plosive	Unvoiced	"
	ض	/dˤ/	"	Voiced	"
	ز	/z/	Fricative	"	Plain
	ص	/sˤ/	Fricative	Unvoiced	Emphatic
Post-alv./Palatal	ڙ	/dʒ/	Plosive	Voiced	Plain
Velar	غ	/ɣ/	Fricative	"	Plain
Uvular	ڦ	/q/	Plosive	Unvoiced	"
Pharyngeal	ڻ	/ʁ/	Fricative	Voiced	"
Denti-alveolar	ڙ emphatic	/V/	Approximant	Voiced	Emphatic
	ڙ emphatic	/r/	Trill	Voiced	Emphatic

Table 7 depicts Arabic sounds and their phonetics chart for sounds that do not exist in Thai.

4. Research Methodology

Thirty native Thai speaking students (18 females and 12 males) participated in a pronunciation test through a simple random sampling technique. The participants were third and fourth year students, with ages ranging from 19 to 24 years. They introduced themselves in Arabic demographically, followed by free expression. The average duration of their speech materials was two minutes each. Their voice recordings were analyzed by three Arabic experts to discern any mispronounced words.

5. Research findings

We found that some Arabic words were frequently mispronounced, with letters being added, omitted, or transformed. The findings showed that the respondents committed Arabic pronunciation errors in 222 words with 16 letters, as follows:

Table 8

Mispronounced sounds and error frequencies in pronunciation.

Consonant	Errors pronounced	Types of errors	Errors	Percentage
/θ/ ث	نم، ثلاثة، أكثر	Transformation* in to /s/	8	3.60
/dʒ/ ج	جديدة، إجابة، جنوب	Transformation* /j/	8	3.60
/h/ ح	استحمام، بحر، محمد	Transformation* /h/	46	20.72
/χ/ خ	بخير، خرجت، خالد	Transformation* /kh/	8	3.60
/ð/ ذ	أستاذ، نذهب	Transformation* /s/	21	9.45
/z/ ز	انزل، خبز، إيجازة	Transformation* /s/	3	1.35
/s/ س	أدرس	Transformation /ʃ/	1	0.45
/ʃ/ ش	عشرون	Transformation /s/	1	0.45
/sˤ/ ص	أصدقاء، صغير، صور	Transformation* /s/	25	11.26
/dˤ/ ض	حضرروا، أفضل، حضروا	Transformation* /d/	11	4.95
/tˤ/ ط	طبيب، مقاطعة، محطة	Transformation* /t/	22	9.90
/ðˤ/ ظ	محافظة، أنظر، أحظى	Transformation* /z/	2	0.90

Table 8

Mispronounced sounds and error frequencies in pronunciation. (cont.)

Consonant	Errors pronounced	Types of errors	Errors	Percentage
/ه/ ح	عليكم، لعبت، عرب، علوم	Transformation* /ه/	31	13.96
/غ/ غ	خسلته، اغتنست، شغل	Transformation* /غ/	3	1.35
/ق/ ق	قال، يستغرق، أقفر	Transformation* /ق/	17	7.65
/ل/ ل	فعلته، دخلت، جميل	Transformation* /ل/	8	3.60
	أجوع، أستطيع	Addition sound /ه/ after long vowel	4	1.80
	أنا، جامعة، لغة	Omission /ه/ and Addition /ج/	3	1.35
Number of errors			222	
Errors due to transformations of the Arabic sounds that do not exist in Thai				98.64%
Errors caused by omission and addition				1.35%

Table 8 indicates that most words mispronounced were influenced by the mother tongue, especially sounds of the words that have no equivalence in the Thai language. The most frequently mispronounced words or sentences are ح /ه/, ع /غ/, ص /ص/, ط /ط/, ذ /ذ/, and ق /ق/. It goes without saying that when speaking Arabic, or any other language for that matter, students make typical mistakes because of interference from the sound system of their mother tongue; in this case, the Thai language.

Perhaps the reason is due to the absence of these sounds in the Thai language, therefore students change these sounds to the sounds that are closer to their native Thai sounds as indicated in Table 8.

5.1 The phenomenon of sound errors observed from the participating students:

- **Omission (الحذف):** the phenomenon of suffixes in Arabic words. Many Thai students omit some sounds when pronouncing Arabic words. As

a result of the questionnaire, we found that students omit these sounds: for example, the omission of the (ا) /ʔ/ sound after (ج) /dʒ/ in the word (جامعة) and after (س) /s/ in the word (قاسم).

- **Addition** (الزيادة): The phenomenon of addition: we found that some students add some sounds when pronouncing Arabic words, for example: adding the sound (ا) /ʔ/ after the (ن) /n/ in the word (سنة) and after (غ) /ɣ/ in the word (لغة), and increasing the sound (ي) /j/ after (م) /m/ in the word (جامعة).

- **Transformation** (التبديل): the phenomenon of transformations. We found that students switch many Arabic sounds when pronouncing them, for example: transformation of the (ج) /dʒ/ to (ش) /ʃ/ in the word (إنجليزية); (ح) /ħ/ to (ع) /ʔ/ in the word (تفاح); the (ض) /dˤ/ to (د) /d/ in the word (أيضاً); (ع) /ʕ/ to (ء) /ʔ/ in the word (عليكم); (ث) /θ/ to (س) /s/ in the word (ثانية); (ش) /ʃ/ to (س) /s/ in the word (شعبة); (شمس) (شمس).

6. Conclusion and recommendations

Having previously examined the topics, problems, and difficulties that Thai students encounter while learning sounds in the Arabic language, and considering the outcomes of our study, we will now discuss some potential remedies for these problems in the following section.

1. Instructors should have a keen awareness of the characteristics and realities of Arabic sounds, as well as complete and accurate knowledge, particularly regarding the topics we have discussed in terms of the similarities, contrasts, and syntactic overlap between Arabic and Thai sounds.

2. Educational authorities should hold training sessions for lecturers unaware of this, prior or during the teaching process. This will significantly raise the standard of Arabic language teaching and learning.

3. One of the most crucial aspects of teaching Arabic sounds to students is that the instructors inform them of the value of sounds, their function in learning the language, the significance of pronunciation, and the advantages of correct pronunciation.

4. Instructors should also explain to the students the severity of these pronunciation faults by using several instances, such as, for instance, the difference between the words: “قلب” قلب and “كب” كَبْ”.

5. One of the most crucial factors for students to pronounce Arabic sounds correctly is practical practice and training that simulates the sounds of native or expert Arabic speakers from the very first lesson. If the instructor can speak Arabic correctly and have the students try to emulate them or use a different student proficient in pronunciation or who employs audio aids or video CDs for demonstrating proper pronunciation, that will help enhance students' pronunciations. In a practical sense, it is just repetition, practice, and practice that is the better and faster learning technique.

6. Instructors should provide each student with individualized attention to ensure that they pronounce Arabic correctly and work to fix any pronunciation issues that arise early on. If these issues are brought to the learners' attention and are not properly addressed, distortions are difficult to cure.

7. Higher education institutions might need to use audio-visual tools like audio recorders, movies, and language labs since younger students can practice Arabic sounds without being bored, unlike older students who can only do so through a lot of exercises. It is hoped at this stage that the student can distinguish specific Arabic sounds so that they can correctly understand the speech and use proper Arabic pronunciation. However, it may fail to materialize as many students do not know the correct pronunciation of some Arabic sounds, and the main cause of this problem is the effect of linguistic overlap between some Arabic and Thai sounds.

8. Regarding the technique for teaching Arabic pronunciation, instructors may need to demonstrate how the sound is made. To do this, instructors may either demonstrate using their own mouth to make the sounds of **د**, **ث**, **ظ** and or by using teaching aids like an artificial mouth, images of the sounds' exits, or videos that show the correct pronunciations.

9. Instructors should also take into account the proper sequencing of the steps when teaching Arabic sounds to Thai students.

10. Instructors should also learn Arabic as well as English phonological system rules to be able to put the learners on the right track whenever they deviate. For instance, when instructors master the difference between the place of articulation of /p/ and /d/, they will be able to explain it successfully and give the learners the ultimate tool so that they do not repeat their mistakes.

11. Instructors can recommend watching movies with Arabic subtitles. Most students enjoy watching drama, action, family, love stories and comedy.

12. Finally, Instructors can use movie excerpts to illustrate certain points, such as reductions and weak forms. If possible, students' textbooks should be accompanied with audiovisuals.

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