THAI AND ENGLISH CONSONANTAL SOUNDS: A PROBLEM OR A POTENTIAL FOR EFL LEARNING?

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Abstract

This paper aims to examine similarities and differences between Thai and English consonants. It determines areas of difficulties when Thai students try to pronounce English consonantal sounds. It is found that English sounds which do not occur in the Thai phonology tend to pose great difficulty for Thai students to utter. Those sounds include ʔgʔ, ʔvʔ, ʔθʔ, ʔðʔ, ʔzʔ, ʔʃʔ, ʔʒʔ, ʔtʃʔ, and ʔdʒʔ. Sounds which exist in Thai but can occur in different environment, i.e. syllable position, are also prone to be difficult to pronounce. Such examples are /f/ and /s/. To tackle the problem of sounds nonexistent in Thai, Thai students are likely to substitute Thai sounds for the English sounds. In addition, the phenomenon where ʔlʔ and ʔɾʔ are used interchangeably in Thai tends to be transferred in pronouncing /l/ and /ɹ / in English with great challenges.

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Introduction

Regarding the analyses of Jotikasthira (1999), Bowman (2000), Ronakiat (2002), Arya (2003), and Tuaycharoen (2003) on a comparison between Thai and English phonology, this paper presents a rough idea of what aspects Thai students may encounter when learning to utter English consonants.

Consonant Sounds

There are 21 Thai consonant phonemes (Tuaycharoen, 1990) as follows:

As can be seen from both tables, the following section discusses similarities and differences between English and Thai consonantal sounds.

Plosives

In Thai, an aspiration is a key in distinguishing different phonemes. The aspirated counterparts of ʔpʔ, ʔtʔ, and ʔkʔ, i.e. ʔpʰʔ, ʔtʰʔ, and ʔkʰʔ indicate that they are different phonemes.

Examples:
ʔpʔ→ʔpaːʔ<◇◇ò>   ʔpʰʔ→ʔpʰaːʔ<◇/◇>
ʔtʔ→ʔtaːʔ<ᵤò>   ʔtʰʔ→ʔtʰaːʔ<·ò>
ʔkʔ→ʔkaːʔ<ᵢò>   ʔkʰʔ→ʔkʰaːʔ<◇◇ò>

Table 1: Thai Consonantal Sounds

	Bilabial	Labio-dental	Alveolar	Lamio-prepalatal	Palatal	Velar	Glottal
Plosive	p b pʰ		t d tʰ			k kʰ	ʔ
Nasal	m		n			ŋ	
Fricative		f	s				h
Affricate				tɕ tɕʰ			
Tap			ɾ				
Lateral			l				
Semivowel	(w)				j	w	

In English, there are 24 consonantal phonemes:

Table 2: English Consonantal Sounds

	Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Palatal	Velar	Glottal
Plosive	p b			t d			k g	
Nasal	m			n			ŋ	
Fricative		f v	θ ð	s z	ʃ ʒ			h
Affricate					tʃ dʒ			
Lateral				l				
Approximant	(w)			ɹ		j	w	

In English, an aspiration indicates allophonic distribution of a phoneme. It is not a feature to indicate phonemic realization of the sound.

As can be seen from the above two tables, voiceless aspirated phonemes in Thai, i.e. ʔpʰʔ, ʔtʰʔ, and ʔkʰʔ, are not problematic pronunciation in English initial syllable because, in English, the phonemes ʔpʔ, ʔtʔ, and ʔkʔ are pronounced with aspiration: [pʰ], [tʰ], and [kʰ]. When voiceless plosive phonemes in English are following the sound ʔsʔ, they are pronounced without aspiration, which is the same as Thai voiceless unaspirated phonemes ʔpʔ, ʔtʔ, and ʔkʔ. This can be generalized that when Thai students utter the sounds ʔpʔ, ʔtʔ, and ʔkʔ, they do not have any difficulty at all.

Examples:
Aspirated Feature of English Plosives
Voiceless Plosives
Voiceless Aspirated Bilabial Plosive [pʰ]
Examples
pan [pʰæn], pie [pʰaɪ], pat [pʰæt]
Voiceless Plosives
Voiceless Aspirated Alveolar Plosive [tʰ]
Examples
tie [tʰaɪ], ten [tʰen], tall [tʰɔːlˠ]
Voiceless Plosives
Voiceless Aspirated Velar Plosive [kʰ]
Examples
key [kʰiː], kite [kʰaɪt], can [kʰæn]

Examples:
Unaspirated Feature of English Plosives

spy → ʔspaɪʔ	not	[spʰaɪ][1]
stay → ʔsteɪʔ	not	[stʰeɪ][1]
sky → ʔskaɪʔ	not	[skʰaɪ][1]

A problem arises when Thai students learn to pronounce the sounds ʔpʔ, ʔtʔ and ʔkʔ in English final syllables. In Thai, the three sounds are pronounced with no audible release: [p˺], [t˺], and [k˺]. In English, however, the final sounds ʔ ʔpʔ, ʔtʔ, and /k/ are uttered in three different ways:
1. Aspiration: [pʰ], [tʰ], [kʰ],
2. Non-aspiration: [p], [t], [k], and
3. No audible release: [p˺], [t˺], [k˺]

Examples: *Pronunciation Variation*

Key words	Aspirated	Unaspirated	Inaudible
sop	[sɒpʰ]	[sɒp]	[sɒp˺]
lot	[lɒtʰ]	[lɒt]	[lɒt˺]
sack	[sækʰ]	[sæk]	[sæk˺]

Thai speakers who learn English voiceless plosives in final syllable tend to pronounce the final plosives with inaudible release. As a result, the inaudible release of the sound may confuse native speakers of English as not being pronounced at all. Thus, it is suggested that Thai speakers practise pronouncing English voiceless plosives finally with more puff of air (or with aspiration).

When it comes to voiced counterpart of English and Thai plosives, Thai learners do not have any difficulty in pronouncing the sounds ʔbʔ and ʔdʔ in English initial syllable at all since Thai phonology allows such phonemes to occur. The English voiced velar plosive ʔgʔ, however, may cause difficulty for Thai learners of English in uttering it correctly since there is no such sound in Thai. It is likely that the sound ʔgʔ in English is replaced with the Thai ʔkʔ – voiceless unaspirated velar plosive because the voice onset time (henceforth, VOT) in releasing the sound ʔkʔ is so short that English native speakers may perceive the sound as having voiced feature in it - ʔgʔ (Bowman, 2000). That is why it is so difficult for

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[1] Even though the pronunciation of [pʰ], [tʰ], or [kʰ] after the phoneme ʔsʔ is understood by native speakers of English, it might seem unnatural in actual speech (Ronakiat, 2002).

Thai learners to pronounce the ʔgʔ sound correctly, as they tend to pronounce it with its voiceless counterpart: ʔkʔ.

Examples:

good	[ɡʊ˖d]	→	[kʉ̌ːt˺]
ago	[əˈɡəʊ]	→	[àʔ koː]
league	[liːɡ]	→	[lǐːk˺]

All of the English voiced plosives, when pronounced in a final syllable, pose a lot of difficulty for Thai learners to master since, in Thai phonology, there is no voiced plosive occurring finally, and voiceless plosives: ʔpʔ, ʔtʔ, ʔkʔ, and ʔʔʔ, even though they can occur finally, they are pronounced with no audible release (hence, short VOT). In this case, it is suggested that when learning pronouncing English voiced plosives, Thai students try to vibrate their vocal cords to have voiced feature in each phoneme[1].

Nasals

Thai learners have no difficulty in uttering nasals in English (Ronakiat, 2002). In Thai, the sounds ʔmʔ, ʔnʔ, and ʔŋʔ occur initially and finally in a syllable. In English, the sounds ʔmʔ and ʔnʔ occur in an initial position of a syllable[2], and they, as well as the sound ʔŋʔ, occur finally in a syllable. That is why Thai students have no difficulty in pronouncing English nasals at all.

Even though Thai students do not have any difficulty in pronouncing nasals in English syllables, a problem arises when the sounds ʔmʔ and ʔnʔ function as a syllabic, meaning that they are pronounced without any vowel in pronunciation[3]. This function does not exist in Thai; therefore, it poses difficulty for Thai students to master.

Examples:

Syllabic m	*Syllabic n*
rhythm [ˈɹɪðm̩]	sudden [ˈsʌdn̩]
prism [ˈpɹɪzm̩]	listen [ˈlɪsn̩]

In order to practise pronouncing syllabics in English, it is suggested that Thai students place their articulators of the syllabic when they are uttering the consonant preceding it. This way, no vowel is pronounced and the syllabic occurs in English syllables.

The sound ʔŋʔ is usually spelled *ng* in English or is sometimes written as *nk* (Ronakiat, 2002).

Examples:

Spellings ng	*Spellings nk*
sing ʔsɪŋʔ	link ʔlɪŋkʔ
strong ʔstɹɒŋʔ	trunk ʔtɹʌŋkʔ

When words such as *sing* and *strong* are attached with a suffix –*er*, for example, Thai students are prone to be confused with the

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[1] In English, voiced and voiceless plosives can be identified as being pronounced differently by the length of the vowel preceding each plosive. If a voiceless consonant occurs before a long vowel, the vowel tends to be shortened. A short vowel, when followed by a voiced consonant, tends to be pronounced longer than it is normally uttered (Ronakiat, 2002).

Examples:

Shortened Vowel by Voiceless Consonants

peep	[piːp]	→	[pʰi˖p]
thought	[θɔːt]	→	[θɔ˖t]
seek	[siːk]	→	[si˖k]

[2] Even though the sound ʔŋʔ does not pose any difficulty for Thai students to pronounce in English syllable, it is prone to pose difficulty for English native speakers to utter it in Thai initials since ʔŋʔ only occurs finally in English.

[3] Syllabic consonants occur when a syllable ends in ʔpʔ, ʔbʔ, ʔtʔ, ʔdʔ, ʔmʔ, and ʔnʔ and the following syllable is unstressed and contains an ʔlʔ or ʔnʔ (Jotikathira, 1998: 4).

spellings and end in adding the sound ʔgʔ before the suffix.

Examples:
strong ʔstɹɒŋʔ →   stronger ʔˈstɹɒŋgəʔ
sing ʔsɪŋʔ   →   singer *ʔˈsɪŋgəʔ²

As can be seen from the above examples, the pronunciation of *singer* *ʔˈsɪŋgəʔ challenges Thai learners to utter it correctly. Therefore, it is recommended for Thai students to understand that when the root word is a verb ending in *ng*, after being added a suffix, it is pronounced ʔŋʔ with no intrusion of the sound /g/ at all (Ronakiat, 2002).

Examples:
sing ʔsɪŋʔ→ singer ʔˈsɪŋəʔ not *ʔˈsɪŋgəʔ
      → singing ʔˈsɪŋɪŋʔnot *ʔˈsɪŋgɪŋʔ
belong ʔbɪˈlɒŋʔ→belongings ʔbɪˈlɒŋɪŋzʔnot *ʔbɪˈlɒŋgɪŋzʔ

Fricatives

English fricatives impose great challenges for Thai students to pronounce them correctly since, in English, fricatives are very rich comparing to Thai three fricatives, namely ʔfʔ, ʔsʔ, and ʔhʔ. All of the three sounds occur initially in Thai syllable with no final fricatives at all. This is the reason why Thai students may find pronouncing English fricatives with difficulty.

An evidence of Ronakiat (2002) and Kanokpermpoon (2004) has indicated that English fricatives which are not difficult for Thai learners to utter in initial syllable includes ʔfʔ, ʔsʔ and ʔhʔ. Other English fricatives are difficult to pronounce due to the inexistence in the Thai phonology. Here are accounts of why English fricatives are so difficult to pronounce indeed.

In English initial position, voiceless fricatives ʔθʔ (mostly spelled in *th*) and ʔʃʔ (usually spelled in *sh*) tend to be challenging for Thai students to master (Ronakiat, 2002, and Kanokpermpoon, 2004). This is due to the fact that the two sounds do not exist in Thai initial syllable².

Example:

English word with initial th	*Mostly replaced with*
thin - ʔθɪnʔ	*ʔtʰinʔ
thanks - ʔθæŋksʔ	*ʔtʰɛŋkʔ

English word with with initial sh	*Mostly replaced with*
shoe - ʔʃuːʔ	*ʔtɕʰuːʔ
shop - ʔʃɒpʔ	*ʔtɕʰɔ́pʔ

All of the English voiceless fricatives ʔfʔ, ʔθʔ, ʔsʔ, ʔʃʔ (see Table 2 above), when occurring word finally, are likely to impose great difficulty for Thai students to pronounce since, based on the analysis of Thai plosives and nasals above, there are only four Thai final plosives ʔpʔ, ʔtʔ, ʔkʔ, and ʔʔʔ, and three final nasals ʔmʔ, ʔnʔ, and ʔŋʔ. All of them are pronounced inaudibly (cf. Abramson, 1972, and Tuaycharoen, 1990). Therefore, Thai students are prone to replace English final voiceless fricatives with their Thai finals or omit them.

Examples:

English words with final voiceless fricatives	*Replaced with*
puff - ʔpʌfʔ	*ʔpʰǎpʔ
breath - ʔbɹeθʔ	*ʔbɹétʔ

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[1] The asterisk (*) is marked in front of a word, phrase, or sentence to signify that such a starred word is not acceptable in English.

[2] Tuaycharoen (2003) has indicated that, presently, Thai students are likely to be influenced by Amerasian and Eurasian singers and actors who use ʔʃʔ for ʔtɕʰʔ, resulting in "most Thai youngsters appear to follow suit" (Tuaycharoen, 2003, p.50).

kiss - ʔkɪsʔ   *ʔkʰɨ́tʔ
cash - ʔkæʃʔ   *ʔkʰɛ́tʔ

English voiced fricatives ʔvʔ, ʔðʔ, ʔzʔ, and ʔʒʔ are likely to pose great challenges for Thai students to utter since all of them do not exist in Thai, both word initially and finally. As a result, the replacement of English voiced fricatives with Thai consonants tend to occur across three syllable positions, i.e. word initial, medial, and final positions.

Examples:

Initial Voiced Fricatives	*Replaced with*
van - ʔvænʔ	*ʔwɛ:nʔ
then - ʔðenʔ	*ʔdenʔ
zoo - ʔzu:ʔ	*ʔsu:ʔ
genre - ʔˈʒɒnɹɛʔ	*ʔtɕɔŋrɑ̂ʔ

Medial Voiced Fricatives	*Replaced with*
living - ʔˈlɪvɪŋʔ	*ʔlĭːpwîŋʔ
breathing - ʔˈbɹiːðɪŋʔ	*ʔbrĭːdîŋʔ
easy - ʔˈiːziʔ	*ʔʔĭːsîːʔ
pleasure - ʔˈpleʒəʔ	*ʔpʰrétɕʰɤ̂ːʔ

Final Voiced Fricatives	*Replaced with*
leave - ʔliːvʔ	*ʔlĭːpʔ
soothe - ʔsuːðʔ	*ʔsúːtʔ
please - ʔpliːzʔ	*ʔplĭːtʔ
beige - ʔbeɪʒʔ	*ʔbɛ̀ːtʔ

Regarding the above evidences, it is recommended that Thai students pay particular attention to the practice of English fricatives in any syllable positions. In practising, try articulating each sound correctly with a voiceless feature before moving towards the voiced counterpart. Here are examples of practice (see Kanokpermpoon, 2004 for more practice):

1. ʔfʔ - ʔvʔ
Practise by moving the lower lip towards the upper teeth by having a narrow gap between them. Try pronouncing with ʔfʔ before pronouncing it with the vocal cords vibrating.

2. ʔθʔ - ʔðʔ
Practise by moving the tongue tip towards the upper teeth or in between the upper and lower teeth. Leave a narrow gap between them. Try pronouncing the sound without vibrating the vocal cords before vibrating them.

3. ʔsʔ - ʔzʔ
Practise by moving the tongue blade towards the gum ridge by leaving a narrow gap between them. Pronounce the ʔsʔ sound before vibrating the vocal cords.

4. /ʃʔ - ʔʒʔ
Practise pronouncing the ʔʃʔ sound by moving the front and blade of the tongue towards the area behind the gum ridge. Raise the upper lip and pronounce the sound without vibrating the vocal cords. When being familiar with the sound, try pronouncing the same sound with vocal cords vibration.

For the English sound ʔhʔ, Thai students do not have any difficulty in pronouncing it due to the existence of the sound in Thai[1].

Examples:
hi - ʔhaɪʔ   hello - ʔheˈləʊʔ   he - ʔhiːʔ

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[1] Kanokpermpoon (2004) has accounted that /h/ which is silent in words such as honour, hour, and exhaust may, somehow, lead Thai students to pronounce it, resulting in its existence in the students' pronunciation.

Affricates

Regarding the Thai phonetics, there are only two affricates available, namely a voiceless aspirated alveolo-palatal affricate ʔtɕʰʔ and a voiceless unaspirated alveolo-palatal affricate ʔtɕʔ (Harris, 1972). Comparing these to English, there are two different phonemes available, i.e. ʔtʃʔ and ʔdʒʔ. The accounts of Thai learners' pronunciation may be seen from different researchers as follows:

Based on an analysis of Bowman (2000), Thai affricate ʔtɕʔ (or in Bowman's analysis ʔtʃʔ should not be a problem for Thai learners to utter "since the voice onset time of the vowel succeeding the articulation of Thai ʔtɕʔ is considerably shorter than for English ʔtʃʔ causing it to sound almost indistinguishable from English ʔdʒʔ" (Bowman, 2000: 45). On the same occasion, the Thai aspirated ʔtɕʰʔ tends to be similar to English ʔtʃʔ (in initial position) which is, therefore, substitutable accordingly.

In contrast to the analysis of Bowman (2000), Jotikasathira (1999) instantiates that the sounds ʔtʃʔ and ʔdʒʔ do not occur in Thai and they are considered problem sounds for Thai learners to utter.

Ronakiat (2002) accounts for the two English affricates comparing to the Thai affricates as follows:

1) Thai aspirated affricate ʔtɕʰʔ[1] is normally substituted for the English ʔtʃʔ since places of articulation of the two sounds are very close. As a result, the two sounds are quite similar to each other. However, to pronounce the English ʔtʃʔ correctly, it is recommended that Thai learners raise their tongue tips to the area behind the alveolar ridge, press the articulators tightly before gradually leaving the articulators.

2) In pronouncing the sound ʔdʒʔ of English, Ronakiat (2002) investigates that Thai learners of English use Thai unaspirated affricate ʔtɕʔ to substitute the target sound, resulting in a clear difference between voicing of the two sounds. Therefore, Thai learners of English should try to voice their sound with the same articulation as that of ʔtʃʔ to pronounce the sound ʔdʒʔ correctly.

In pronouncing the English affricates ʔtʃʔ and ʔdʒʔ in final position, Thai students tend to pronounce them with great challenges in the same way as that of English fricatives (cf. Fricatives section above) since, according to Ronakiat (2002), they tend to replace the sounds with Thai final plosives and nasals, that is ʔpʔ, ʔtʔ, ʔkʔ, and ʔʔʔ, and ʔmʔ, ʔnʔ, and ʔŋʔ, respectively.

Examples:

English words with final affricates	Replaced with
church - ʔtʃɜːtʃʔ	*ʔtɕʰɤ́ːt˺ʔ
George - ʔdʒɔːdʒʔ	*ʔtɕɔ́ːt˺ʔ

Lateral

Based on the two tables above, English and Thai laterals in the initial position are quite similar, so there is no problem for Thai learners of English to pronounce it wrongly.

When the lateral ʔlʔ occurs word medially and finally in English, the realization of the two positions is quite different from that of the initial position. In the words of Roach (2002), clear l, with the raise of the front of the tongue, "will never occur before consonants or before a pause" (Roach, 2002: 61), while the dark l, pronounced with the raise of the

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[1] Ronakiat (2002) presents that Thai learners usually use ʔtɕʰʔ in place of using the English sounds ʔʃʔ and ʔtʃʔ correctly. As a result, the Thai learners' use of ʔtɕʰʔ to replace the two sounds may end in an inability to distinguish the English fricative and affricate, ʔʃʔ and ʔtʃʔ, correctly and that impedes successful communication.

back of the tongue, "will never occur before vowels" (Roach, 2002: 61).

In an analysis of Ronakiat (2002), dark l which occurs word finally in English tends to pose a great challenge for Thai learners of English to master since they usually replace the dark l in the final position with Thai nasal /n/ or omit it. This results in a mispronunciation of the dark l in the final position correctly.

Examples:
English words with   *Replaced with*
  final lateral
  ball - ʔbɔːlˠʔ   *ʔbɒnʔ
  call - ʔkɔːlˠʔ   *ʔkʰɔːʔ

Approximants

In English, there are three approximants, i.e. ʔwʔ, ʔjʔ, and ʔɹʔ. However, the two approximants /w/ and /j/ are available in Thai with a tap ʔɾʔ.

Ronakiat (2002) accounts for the difference between Thai and English ʔwʔ in that the English ʔwʔ is pronounced with more rounded and protruded lips than that of the Thai ʔwʔ, but this does not challenge Thai learners to master[1].

When considering the sound ʔjʔ of English and Thai, Thai learners of English do not have any difficulty in pronounce it due to the similarity of the sound ʔjʔ across both languages[2].

The English sound ʔɹʔ has two distinctions in pronunciation in terms of rhotic accent and non-rhotic accent. British English is considered a non-rhotic accent because the spelling "r" is pronounced only when it occurs word initially. In American English, however, the "r" is pronounced across syllable positions and most Americans use a retroflex approximant ʔɻʔ interchangeably with ʔɹʔ (Deterding and Poedjosoedarma, 1998; and Roach, 2002).

Examples:
      British English   *American English*
red   ʔɹedʔ   ʔɹedʔ
bird   ʔbɜːdʔ   ʔbɝdʔ
car   ʔkaːʔ   ʔkaɹʔ

When Thai learners of English try to utter the English sound ʔɹʔ, two potential problems arise as follows (Ronakiat, 2002):

1) The Thai presently have used ʔlʔ in place of /l/ and ʔɾʔ in Thai syllable and this tends to transfer to the pronunciation of English ʔɹʔ[3]. This results in a misunderstanding in their speech.

Examples:
       English   *Thai*
read   ʔɹiːdʔ   *ʔlĭːt˦ʔ
lead   ʔliːdʔ   ʔlĭːt˦ʔ

2) The use of Thai tap ʔɾʔ in stead of using the English ʔɹʔ (in careful reading) results in a mispronunciation of the English "r".

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[1] Deterding and Poedjosoedarma (1998) instantiate that "many Americans do make a contrast between pairs of words such as *which/witch, where/wear, why/Y, etc.*" because "most American linguists regard this as a sequence of sounds /hw/ (pp.60-61).

[2] A difficulty in pronouncing the English sound /j/ arises when it occurs secondly as a consonant cluster after the sounds /f/, /v/, /h/, /t/, /d/, and /n/ in British English, and the sounds /f/, /v/ and /h/ in American English. Thai learners tend not to pronounce it correctly due to the nonexistence of such a cluster in Thai (Ronakiat, 2002). Word examples of this phenomenon are *few, view, huge, two, due, new*.

[3] Tuaycharoen (2003) presents that, presently, Thai students tend to use ʔɹʔ in stead of pronouncing the Thai ʔɾʔ. This is fostered by Amerasian and Eurasian singers and actors who substitute the English ʔɹʔ for the Thai ʔɾʔ.

Examples:

	English	*Thai*
read	ʔɹiːdʔ	*ʔɾĭːt˧ʔ
red	ʔɹedʔ	*ʔɾéːt˧ʔ

In order to pronounce the sound ʔɹʔ correctly, it is recommended that Thai learners of English raise their tongue tips approximately to the area behind the alveolar ridge, but never make a contact to the roof of the mouth. During articulating, they have to vibrate their vocal cords and optionally round and protrude their mouth.

Conclusion

The number of English constants is a lot greater that those of the Thai consonants. Sounds of English which do not exist in Thai are likely to pose a great challenge for Thai learners of English to utter. Possible solutions for the Thai to tackle the difficulty are to use their Thai phonetics in place of the English sounds or to omit the target sounds completely.

With careful consideration on the differences between the two sound systems, Thai learners of English can make a lead to a better pronunciation and to successfully speak English with a better confidence.

Acknowledgements

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