

## A Systemic Review of Thai-Accented English Phonology

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### **Abstract**

The expansion of the English language produced by non-native speakers has, in recent decades, been discussed by applied linguists from various theoretical perspectives. The discussion has highlighted evidence showing that the multiplicity and diversity of English uses have given rise to an acceleration in the rate of inter-variety contacts where pronunciation, as it is claimed, is the principle factor in international intelligibility. Further, it has been demonstrated that difficulty in intelligibility increases with the typological distance between interlocutors' first languages, referring to the distinct way that English pronunciation is strongly shaped by the phonetics of speakers' first language. Consequently, a careful examination of the typological distance between speakers' L1 and the target language—English—is compelling for the underpinning of the teaching and learning of pronunciation. Unfortunately, in English language teaching pedagogy, variations in pronunciation may be neglected in favor of other factors. In addition,

pronunciation teaching experts stress that the study of pronunciation should be developed by locally-based educators, researchers, and authorities who are exposed to the relevant socio-cultural context, rather than being dominated by native speaker scholars based in Anglophone countries. Thai English pronunciation is considered to be one of the minor accents in World Englishes, and some local English language educators in Thailand may have insufficient in-depth knowledge of the linguistic characteristics of this accent. Presented here is a systematic review of Thai-accented English phonology, analyzed and synthesized via a review of relevant literature: the characteristics of Thai-accented English are clearly displayed, providing a reference for future researchers aiming to explore further Thai-accented English. The review can also be applied to other L1-influenced Englishes in the Southeast Asian region which possess similar phonological and phonetic characteristics.

**Keywords:** Thai-accented English, phonology, pronunciation teaching

### **The Comparative Phonology Studies of Thai and English**

Generally speaking, English is not seen as the language of Thailand compared to other countries in the Southeast Asian region. However, recently English has been made the working language of the country as part of ASEAN's development (Draper, 2012). Regarding English pedagogy in Thailand, it is agreed among local English educators that there are many problematic areas that need to be addressed such as teaching methods and quality of English teachers (Kirkpatrick, 2012). Wei and Zhou (2002) have pointed out that

pronunciation is the most neglected unit in English language teaching in Thailand. From their observation, a large number of Thai students cannot pronounce English at the intelligible level and their findings are in line with other studies in the field. Those segmental problematic features are, for example, the pronunciation of voiced as voiceless, consonant clusters, monophthongization, /θ/ and /ð/ as /s/ and /z/, and /v/ as /f/. Graham (2021) has also agreed that there are problems in Thai students' pronunciation of English and this is partly caused by a lack of appropriate teacher training in teaching pronunciation. More specifically, regarding pronunciation teaching, as illustrated in Suntornsawet (2019), the challenge regarding the concept of English as an international language relates to what level of intelligibility can be considered acceptable across different varieties of English. The effect of differences in L1 background on English pronunciation can lead to international intelligibility failure and communication failure as elucidated by numerous studies in the field such as the Interlanguage Talk Data (ILT) in Jenkins (2000) and the investigation of ASEAN community English talk of Kirkpatrick (2010). In this regard, it is crucial that both local English educators and learners need to have a clear understanding of the phonological typological differences between the learners' L1, or Thai, and the target language, which is English. With such an insight, more appropriate and effective teaching materials, methods, techniques, and research can be developed specific to the problematic speaking units found in the learners.

Even though there are sporadic reports on comparative studies of Thai and English phonology (Kruatrachue, 1960; Luksaneeyanawin, 2005; Smyth, 1987), there are still not many systematic, experiential, and experimental studies of common problematic pronunciation features in Thai English. Even in the most recent research investigating problems in pronunciation English by Thai learners, Jaiprasong (2020) presents the literature of contrastive studies of Thai and English

pronunciation from only two sources which are from 1997 and 2010, respectively. Most of the work was based on the review of other L2 pronunciation of English. Jaiprasong (2020) clearly states that to the best of her knowledge, there have been no systematic studies investigating English pronunciation pronounced by Thai speakers especially those focusing on stress pattern and compound vowels. In addition, among the limited research on Thai-English pronunciation, most of the existing ones focus only on the scenario of the specific problems such as Isarankura (2018) who has looked into stress and tones and Jaiprasong (2020) who has examined stress. The review of the overall characteristics of Thai-English pronunciation that cover all segmental features cannot be found. On the contrary, the systematic review of Thai-English grammar can be found more abundantly in the field. For example, Iwasaki and Ingkaphirom (2005) have compiled a compendium of research on Thai-English grammar. In short, a systematic review of Thai-English pronunciation is yet to be published. However, a systematic review of Thai-English pronunciation would help local educators to reconceptualize teaching English pronunciation and support the move toward an endonormative teaching of English as L2.

### **History and Status of English in Thailand**

The historical basis of English in Thailand was born as a response to the threat of colonization. The willing adoption as a political tool to protect Thai sovereignty demonstrates that Thailand is an example of the linguistic phenomenon of using the English language to serve her own sociolinguistic will, contexts, and functions. The first contact with English in Thailand or Siam (the former name of Thailand) was witnessed in the reign of King Nang Klao (Rama III: 1824–1851) when American missionaries were assigned to teach the language to young royal children (Aksornkul, 1981) as illustrated by the famous story of *Anna and the King of Siam* (Landon, 1944). Later, during the

reign of King Mongkut (King Rama IV: 1851–1868), the tremendous adversity of not knowing English was apparent (Masavisut et al., 1986). With growing concern about the English-speaking presence and the changes it brought, English was introduced to the royal palace. English was initially restricted to royal family members and elite groups in Siam, but was gradually disseminated and became accessible to middle-class Thais in the reign of King Vajiravudh (Rama VI: 1910–1925) (Masavisut et al., 1986). Foley (2005) has discussed the modern use of English in Thailand, stating “[t]he paradigm has shifted and Thais are using English mainly with other non-native speakers of English, and only to a lesser extent with native speakers” (p. 6). In recent decades, used as a foreign language, English has become increasingly crucial both in local and global contexts. It is the language of Thailand abroad and has become a symbol of modernity (Huebner, 2006).

### **Thai-Accented English Phonology**

It is evident that most EIL phonology studies explore various world English accents such as Singaporean English, Indian English, and African English. However, a systematic and high-quality study of Thai-accented English has received little to no attention in the literature and justification for its low representation can be attributed to the fact that English use within Thailand is limited and has not been classified as an identifiable variety of English. The ever-increasing presence of English in Thailand and its potential for development require a critical examination of its intra-function role. Currently, there are a limited number of studies which focus on such aspects (e.g., Buriphakdi, 2008; Goddard, 2005; Huebner, 2006; Masavisut et al., 1986; Watkhaolarm, 2005).

There is a substantial deficit in Thai-accented English pronunciation research (Trakulkasemsuk, 2012). If Thailand wants to participate in the growing global economy, the use of English can no

longer be considered a luxury but a necessity (Foley, 2005) and as such requires critical examination in literature. Early work was conducted as a doctoral thesis by Kruatrachue (1960), the more updated version can be found in Smyth (1987) as a chapter in a book. Other than these two main references on Thai English phonology, reports on Thai English pronunciation have been only sporadic throughout academic journals and presentations. In general, the existing works illustrate that the inexistence of English fricative sounds, voicing quality, and final consonant clusters are considered problematic issues in Thai English pronunciation. Nevertheless, there is a requirement that the detailed phonology of Thai-accented English be systematically explored by initially looking at the sound system of each language followed by the synthesis of Thai-accented English. To address this concern, the remainder of this article is devoted to a systemic review of Thai-accented English phonology.

Thailand and its neighbors speak languages from three major language families: Austro-Asiatic (Khmer and Vietnamese), Tai Kadai (Thai and Lao), and Tibeto-Burman (Burmese). As such, the most significant linguistic characteristics shared among these languages are a tendency to be monosyllabic (with some exceptions), lexical tone (except Khmer), a large inventory of consonants, very limited consonant clusters, and syllable-timed speech. In addition, among consonants in the languages of this region, voicing quality is not a distinctive feature but rather aspiration; i.e., there are often two series of stops: aspirated versus unaspirated. Unlike Thai, English is reflexive and non-tonal language.

### ***Segmental Features***

Regarding Thai and Lao, two members of the Tai Kadai language family, as a general rule, each syllable consists of an initial consonant or consonant cluster followed by a vowel or vowel cluster, which can

then be followed by a final consonant, usually a nasal sound or unreleased stop. More specifically to Thai phonotactics, not only is there no final consonant cluster, but there are also very limited consonant clusters in the initial position of a word. As illustrated here, there are only 11 combinations of consonantal patterns allowed to occur at the initial position of the syllable: /kr/, /kl/, /kw/, /k<sup>h</sup>r/, /k<sup>h</sup>l/, /k<sup>h</sup>w/, /pr/, /pl/, /p<sup>h</sup>r/, /p<sup>h</sup>l/, and /tr/. Timyam (2010) has reported that English permits onset consonants of up to three sounds with very strict constraints on shape. The first is /s/, the second is a voiceless stop /p, t, k/, and the third is a liquid /r, l/ or a glide /w, y/. Furthermore, English permits up to four consonants in the coda position, and the patterns can be very varied such as /skt/ as in *risked*, /nds/ as in *hands*, /sts/ as in *texts*, and /fθs/ as in *twelfths*. Figure 1 presents the consonant distribution of Thai and English and clearly demonstrates the lack of consonant clusters in the final position of words in Thai, similar to most East Asian languages, while English allows far more flexible final consonant clusters. This is a unique problem in English pronunciation for this region: simplified consonant clusters.

### Figure 1

*Consonant Distribution of Thai (Kruatrachue, 1960, p. 92)*

	<b>Initial</b>	<b>Medial</b>	<b>Final</b>
<b>Thai</b>	C		C
C	CC		CC
<b>English</b>	C		C
C	CC		CC
CC	CCC	CCC	CCC
			CCCC
CCCC			

Notes. C represents Consonant

Regarding consonantal sounds, English has 25 consonantal sounds of which voicing quality is the main distinctive feature, whereas Thai overall has 44 letters, but the actual consonant sounds in the language are less as some letters are no longer used and other letters are similarly pronounced. In the Thai language, there are 21 consonants (Table 1) which function differently as the initial and final syllable depending on the phonotactic constraints of the language.

**Table 1***Consonants in Thai Language*

Manner	Place	Labial	Labio-Dental	Alveolar	Post-Alveolar	Palatal	Velar	Glottal
Stop		[p] [p <sup>h</sup> ][b]		[t] [t <sup>h</sup> ][d]			[k] [k <sup>h</sup> ]	[ʔ]
Fricative			[f]	[s]				[h]
Affricate					[tʃ] [tʃ <sup>h</sup> ]			
Nasal		[m]		[n]			[ŋ]	
Trill				[r]				
Approximants						[j]	[w]	
Liquid				[l]				

Stylistic and regional variations also influence speech sounds produced in Thai. Bradley (2009) claims that the major consonantal variable in central Thai is /r/, which is always replaced by /l/. Moreover, it is often the case that both /r/ and /l/ are omitted when they are in the initial clusters; i.e. /pla/ as /pa/ meaning fish, /k<sup>h</sup>rab/ as /k<sup>h</sup>ab/ meaning a politeness marker for a male speaker. Additionally, the consonant cluster /k<sup>h</sup>w/ can be found as /f/ in some areas; i.e. /k<sup>h</sup>wa:/ as /fa:/. The use of certain consonantal variables as mentioned indicates stylistics and social stratification in the Thai language. The use of /f/ and /l/ instead of /k<sup>h</sup>w/ and /r/, respectively, is found more in lower status people in society or those from rural areas.



When compared with English, it is evident that English has more consonantal sounds than Thai, as shown in Table 2.

**Table 2**

*English and Thai Consonants (Smyth, 1987, p. 345)*

p	b	f	v	θ	ð	t	d
s	z	ʃ	ʒ	tʃ	dʒ	k	g
m	n	ŋ	l	r	j	w	h

According to Smyth (1987), shaded phonemes are those that are equivalent or near equivalent in Thai and should, therefore, be perceived and articulated without great difficulty when they occur at the initial position of the syllable. Unshaded phonemes are those that can result in problems in Thai-accented English. The most comprehensive and precise analysis regarding this can be drawn as follows; in pronouncing English sounds that do not exist in Thai, Thai people make the substitution as illustrated below (Figure 2).

**Figure 2**

*The Substitution of Thai Sounds in English Speech (Smyth, 1987, p. 345)*

English:	/v/	/θ/	/ð/	/ʃ/	/z/
Thai approximation:	/w/	/t/ /s/	/d/ /t/ /s/	/tʃ/	/s/

Pronunciation errors arise when the shaded consonants occur at the final position of the syllable. To elaborate, Thai has eight final consonant phonemes only, and consonant cluster is never allowed. As a result, English final consonants and cluster pronunciation difficulties are simply solved with a change in pronunciation to a single consonant. Moreover, such transformations are systematic-like and not random, demonstrated as follows (Figure 3).

**Figure 3**

*The Substitution of Thai Sounds in English Speech (Smyth, 1987, p. 345)*

English:	<u>/d/ /θ/ /ð/ /s/ /z/ /ʃ/ /ʒ/ /tʃ/ /dʒ/</u>	<u>/v/ /f/</u>	/l/
Thai approximation:	/t/	/p/	/n/

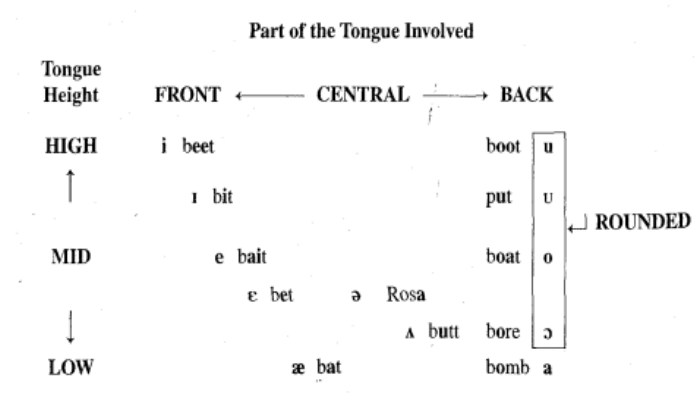
Noted above are the major sound patterns of the Thai language which distinctly affect the English pronunciation of Thai speakers. The substitution of Thai sounds for English sounds as illustrated appears to be rule-governed, predictable, and not randomly produced by Thai speakers.

Luksaneeyanawin (2005) has revealed that the significant phonotactic constraints of the Thai language make Thai English pronunciation problematic. In Thai, /f/, /r/, and /l/ sounds can only occur at the beginning of the syllable, while the only three fricative sounds in Thai: /s/, /f/, and /h/ can never occur at the final position. Moreover, /r/ in Thai is an alveolar trill rather than the rhotic sound as in standard English. Also, the voiceless stop is aspirated at the initial position but unaspirated elsewhere. In addition, in English voiceless stops /p, t, k/ are audible when released at the end of a syllable while in Thai final sounds are always inaudible. Furthermore, an alveolar stop /t, d/ is retroflex before /r/, as in *trout* and *drive*. A bilabial nasal /m/ may be labiodentals before a labiodentals consonant /f, v/ as in *symphony* and *emphasis*. A vowel is nasalized before a nasal consonant as in *can* and *dome*, and a stressed vowel is lengthened before a voiced single consonant in the same syllable as in *bid* and *robe*. These are samples of English phonotactics that are different from Thai that can possibly lead to pronunciation errors in Thai-accented English.

Regarding the vowels in English, there are twelve monophthongs and three diphthongs as illustrated in Figure 4.

**Figure 4**

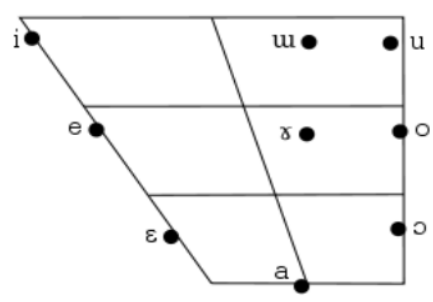
*American English Vowels (Fromkin, Rodman, & Hiyams, 2003, p.254)*



Regarding the Thai language, according to Tingsabadh and Abramson (1993), there are monophthongs, diphthongs, and even triphthongs. Figure 5 demonstrates Thai monophthongs.

**Figure 5**

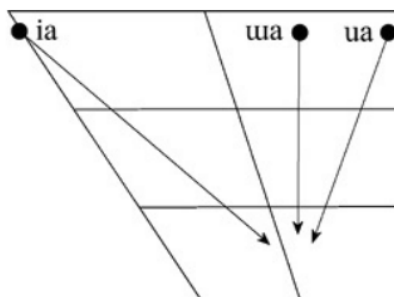
*Thai Monophthongs (Tingsabadh & Abramson, 1993, p.25)*



Besides the abundance of monophthongs, Thai also has diphthongs which are illustrated in the vowel chart in Figure 6.

**Figure 6**

*Thai Diphthongs (Tingsabadh & Abramson, 1993, p.25)*



Phonetically represented, diphthongs of Thai can be presented as /a:j/, /aj/, /a:w/, /aw/, /i:a/, /ia/, /iw/, /u:a/, /ua/, /u:j/, /uj/, /e:w/, /ew/, /ε:w/, /u:a/, /ua/, /ɾ:j/, /ɔ:j/, /o:j/. As illustrated, Thai diphthongs consist of both short and long vowels. Thai has three triphthongs, and they are all long vowels, namely [iaw], [uaj], and [uaj]. Nevertheless, most of the work investigating Thai phonology claims that Thai has only monophthongs and diphthongs and only the work of Tingsabadh and Abramson (1993) has raised the issue of triphthongs. When compared with English, it is clear that Thai has a richer system of monophthongal sounds. Therefore, vowel pronunciation is not considered a critical problem for Thai's speaking English. The comparison of vowel sounds between Thai and English is illustrated in Table 6.

**Table 6**

*English and Thai Vowels (Smyth, 1987, p.344)*

i:	ɪ	e	æ	ei	aɪ	ɔɪ
ɑ:	ɒ	ɔ:	ʊ	aʊ	əʊ	ie
u:	ʌ	ɜ:	ə	eə	ʊə	aʊə

The shaded phonemes are the sounds that have equivalent or near equivalents in Thai and hence are pronounced without great difficulty, while the unshaded phonemes are those inexistent in Thai speech sounds. Therefore, Thai English pronunciation of vowels tends

to be problematic in the area of the diphthong. When pronouncing diphthongs, Thais tend to pronounce them in a way that leads to the second segment appearing less prominent than the first segment and even pronounced as long pure vowels such as /eɪ/ as /e:/. Also, Thais fail to glide English and the plain vowels are used as /eɪ/ in day, say, and play are pronounced with /e:/. Importantly, English weak vowels such as schwa, which is one of the most significant sound features of English, leads to many problems in Thai-English pronunciation. When pronounced by Thai's, they are not as weak as they should be due to the influence of the L1 syllable timing that every syllable must be assigned equal weight resulting in errors of stress in Thai-accented English. Furthermore, English centering sequence such as /ɪr/ tends to be pronounced as two separate syllables /i/ and /r/, and English front and back vowels can be further fronted and further backed. Luksaneeyanawin (2005) has discussed a more notable point regarding vowels that all front and back vowels can occur at the first segment, gliding to high back vowels in the second segment, and can be considered rising closing diphthongs in which the second segment is more prominent. All back and central vowels can occur as the first segment, gliding to high front vowels as the second segment (they can be considered rising closing diphthongs where the second segment is more prominent) and short and long pairs of vowels are different only in quantitative terms. Although vowels are not given an emphasis in Jenkins' (2000) LFC, a study of Thai and English phonology reveals that Thai and English possess vowel use differences.

### ***Suprasegmental Features***

In members of the Tai Kadai language family, each syllable has tones which can be ranked through five levels based on the pitch of the syllable. The five tones produce a melodious and lyrical language. As Thai is a monosyllabic and tonal language, the meaning of words is heavily varied through the tones assigned to the syllable, and thus the

lexis in Thai is contrasted by the tone assigned as seen in the examples from Timyam (2010) below:

/k <sup>h</sup> ā̄/	-	remain the same position
/k <sup>h</sup> à/	-	galangal
/k <sup>h</sup> á/	-	kill
/k <sup>h</sup> á/	-	commerce
/k <sup>h</sup> á:/	-	leg

The major suprasegmental features frequently found in English phonology that cause problems for East Asian pronunciation of English are rhythm, intonation, and stress. Thai's rhythm is syllable-timed as opposed to stress-timed in English. This is a significant influence driving Thai-accented English, as well as other East Asian English. The syllabic pattern of rhythm results in vowels that are equally fully pronounced. As such, in strongly Thai-accented English, reduced vowel pronunciation and stress placement are rarely found. There are numerous works in the field which have investigated the phenomenon of syllable-timed languages on English pronunciation; however, to date they have focused on other major accents, such as Singaporean English (Deterding, 1994, 2001) and Malaysian English (Baskaran, 2008; Rajadurai, 2004).

Stress placement in English is considered a well-known problem in Thai English pronunciation. Stress is habitual and naturally demonstrated in the connected speech of native English speakers, however, the pattern of stress can vary and requires acquisition on a word-by-word basis (Timyam, 2010). Timyam (2010) further explains that despite the difficulty in defining the finite rules for determining stress placement in words, native speakers correctly allocate stress to a word they are unfamiliar with or have not encountered before. This implies that there should be some systematic rules of stress in English. The general factors taken into consideration regarding the placement of stress in a word are the morphological structure, grammatical category, the number of syllables contained, and the phonological structure.

Intonation or the use of pitch at a sentence level also helps to distinguish different types of utterances in English while in Thai this phenomenon does not exist. Broadly speaking, there are four basic types of utterances in English, each of which is associated with a particular intonation pattern: rise and fall, and there are grammatical and interactional functions attached to each. For example, when the intonation falls at the end, it is a statement, and when the intonation is raised at the end of a sentence, it sounds a question. Additionally, when the intonation is slightly raised, it indicates incompleteness.

### ***Thai-accented English Phonology Features***

After reviewing the phonological characteristics of both Thai and English, it is evident they possess a relatively different phonology, and interference of Thai L1 phonological characteristics on English pronunciation clearly results in the unique pronunciation of Thai-accented English. The information of Thai-accented English phonology provided in this section was conducted via a review and synthesis of the existing literature as described. The overall picture of this phenomenon is illustrated in Table 7.

**Table 7**

*Comparison of Phonological Features between English, Thai-English, and Thai*

<b>Aspects</b>	<b>English sound system</b>	<b>Thai – English</b>	<b>Thai sound system</b>
Devoicing	/z/, /d <sub>3</sub> /, /ʒ/, /g/	<b>/k/, /k<sup>h</sup>/ used instead of /g/</b> <b>/s/ used instead of /z/</b> <b>/tɛ/ used instead of /d<sub>3</sub>/</b> <b>/tɛ<sup>h</sup>/ used instead of /ʒ/</b>	No /z/, /d <sub>3</sub> /, /ʒ/, /g/ in Thai (systematic gap)
Shift in terms of place and/or manner of articulation	Interdental fricatives /ð, θ/ and voiced labio-dental fricative /v/	<b>/t/, /d/, /f/ used instead of /ð, θ, v/</b>	No /ð, θ, v/ sounds.

<b>Aspects</b>	<b>English sound system</b>	<b>Thai – English</b>	<b>Thai sound system</b>
Reduced initial aspiration	Aspiration occurs in the ONSET; unaspirated consonants only occur after /s/	<b>Aspiration is used interchangeably.</b>	Contrast between aspirated and unaspirated sounds
Deletion of final consonants	Final consonants can be in a cluster form.	<b>A cluster is pronounced as a single consonant.</b>	Final consonant is not in a cluster form but in a single form and fricatives do not occur.
Cluster reduction	Clusters in the ONSET and CODA vary.	<b>Deletion of cluster</b>	Clusters in the ONSET occur only /l, r, w/, no CODA cluster
Stress in words	Stress patterns are fixed.	<b>Variation in use of stress</b>	No stress patterns
Heavy-end stress: tone groups as intonation patterns	Utterances are divided into tone groups and marked by unit-final intonation patterns.	<b>Tone groups in pronunciation are not used - intonation is not clear.</b>	Not intonation language but tone language
Lack of reduced vowels	Vowels in unstressed syllable are reduced to schwa (Weak form).	<b>No reduced vowels or weak forms – all vowels are pronounced equally.</b>	No stress distinction by terms of tones
Monophthongization	Glides	<b>Glides omission - diphthongs with glides are pronounced as plain vowel</b>	No glides



As demonstrated, after comparing Thai and English phonology, three significant factors were found, namely a systematic difference in segmental features, differences in phonotactic constraints, and a systematic difference in suprasegmental features, although vowels were not considered a critical contributor in Thai-accented English pronunciation.

### ***Systematic gap in segmental features***

Certain sounds such as /g, ð, θ, v/ exist in English but not in Thai. Hence, Thai speakers tend to produce them via the assimilation process, resulting in the production of /k, t, d, f, w/, respectively. In other words, the speaker tends to change such sounds or assimilate them to the more familiar sounds of their L1 system.

### ***Differences in phonotactic constraints***

Consonant clusters are commonplace in English, and several consonants are permitted at both the initial and ending position of a word. On the contrary, in Thai, consonant clusters are only observed at the initial position of words and the permitted form is much more restricted than that of English. Hence, Thai speakers have a tendency to omit, delete, or reduce the production of clusters in English pronunciation.

### ***Systematic gap in suprasegmental features***

That Thai is a tonal and syllable-timed language and English is an intonation and stress-timed language heavily affects the English pronunciation of Thai speakers. A lack of vowel reduction and stress are the results of this difference. To elaborate, in Thai, vowel reduction and stress are not distinctive features, whereas they are in English which results in the disparity between standard and Thai-accented pronunciation.

Such synthesis of Thai-accented English presented in this research is accompanied by Luksaneeyanawin (2005) who indicates that there are three major phonological problems for segmental features between Thai and English which lead to the pronunciation of

Thai English. These three problems are 1) systematic difference, 2) structural difference, and 3) differences in phonetic realization. Systematic difference refers to the differences in types and numbers of sounds existing between languages. For example, in Thai, there are only three fricatives /f, s, h/, but in English there are nine, /f, v, ð, θ, s, z, ʃ, ʒ, h/. As for the structural differences, this is related to differences in syllable structure and sound sequencing in the syllable. To elucidate, both Thai and English have the /l/ sound, but this sound is only observed at the initial position of words in Thai, while it is found at the initial and ending position of words in English. Finally, the difference in phonetic realization is the difference in the phonetic details of a certain sound. For example, /r/ is considered trill in Thai but rhotic in English. Regarding suprasegmental features, Luksaneeyanawin (2005) purports that stress in English and tones in Thai are crucial in the production of Thai-English pronunciation. In Thai, stress always falls on the last syllable of the word, resulting in the same oral production in L2 English.

In addition to the results obtained by Luksaneeyanawin (2005), Deterding and Kirkpatrick (2006) investigated ASEAN English pronunciation and discovered that the major phonological features of English pronunciation of ASEAN speakers were the reduction of consonant clusters, change in dental fricatives, merging of long and short vowel sounds, reduced initial aspiration, lack of reduced vowels, stressed pronouns, and heavy end-stress. These aspects of English pronunciation are relatively similar to the characteristics of the Thai-accented English pronunciation reviewed.

The final phenomenon to be discussed, which was not recorded in any EIL literature but was in the majority of Thai English phonology comparative studies such as Kruatrachue (1960), Smyth (1987), and Kanokpermpoon (2007), is called *orthographic interference*. It is simply defined as the influence of confusion in spelling on pronunciation. It is reported that Thai English learners make numerous pronunciation errors when pronouncing newly encountered words due to the mismatch between pronunciations and spelling in English (Smyth, 1987); for example, both /ð/ and /θ/ are spelled as “th.” The ability to

accurately distinguish between the two sounds sharing the same spelling form is considered an innate ability of native speakers. Kanokpermpoon (2007) also notes that Thai English learners with low proficiency have difficulty pronouncing the /ŋ/ sound correctly when it is followed by suffixes such as {-er}. Instead, they tend to pronounce it as /k/ clinging to the form of 'g' preceding that suffix. The situation is exacerbated when English sounds are represented by Thai spelling. To exemplify, in the Thai system of spelling final consonant, the phoneme /p/ is used in correspondence to all /p<sup>h</sup>/, /p/, /b/, and even /f/ (Kruatrachue, 1960, p. 103). This is recognized as the phenomenon of orthographic interference, and for English non-native speakers it leads to the mispronunciation of English. The use of the Thai spelling system of English words may cause confusion for learners regarding the original pronunciation.

### **Conclusion**

Given the high frequency of phonological discrepancies between Thai and English, it is unreasonable to assume that all discrepancies will result in international intelligibility failure. This notion is exemplified in research looking at Singaporean English, which, as one of the most famous varieties of English in Asia, has been investigated worldwide, however, only four major studies (Date, 2005; Gupta, 2005; Kirkpatrick & Saunders, 2005; Setter, 2005) are raised here. Consensus has yet to be reached among researchers regarding the phonological features that result in the intelligibility failure of Singaporean-accented English. For example, Setter (2005) identified missing final consonant clusters as an impediment to intelligibility while Date (2005) listed the replacement of dental fricatives with alveolar plosives and the reduction of final consonant clusters as interfering with the intelligibility of Singaporean English. As demonstrated, the reported phonological features considered a threat to the intelligibility of the same accented English are inconsistent.

The Inner Circle varieties of English are considered stress-timed with weak forms with reduced vowels naturally and commonly occurring in the connected speech of native speakers of English. The

prevalent feature in non-native varieties of English pronunciation is the less frequent use of reduced vowels and consonant cluster simplification. However, there is a lack of continuity in the literature as to which features result in the greatest impediment to intelligibility. Deterding (2012), Jenkins (2000), and Cruttenden (2014) reported that weak forms were not demonstrated as a threat to intelligibility. While for cluster simplification, Jenkins (2000) commented that initial and medial cluster simplifications were. With the huge disparity between Thai and English phonology leading to the obvious influence of Thai L1 on English pronunciation, it is imperative that English educators and researchers in Thailand conduct more empirical research on the intelligibility of Thai-accented English in order to establish the pronunciation core and design effective pronunciation teaching and assessment guidelines for international communicative purposes.

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