

## Towards the Phonology of Thai English

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Received: July 8, 2022

Revised: December 8, 2022

Accepted: December 13, 2022

### Abstract

Thai English or 'Tinglish' is an emerging local English variety spoken by Thai people to other English speakers who share different lingual and cultural backgrounds. This study was set to identify phonological features of Thai English and its phonological processes. The speech data were collected from 30 university students who were in different majors at a private university. The data were obtained through three different tasks, including presentations, reading passages, and class observations. The recording analysis revealed that Thai English includes a smaller set of consonant phonemes (17 phonemes) compared to English (24 phonemes). It is particularly evident in fricative sounds where there is no voicing contrast, while most of the other consonant phonemes remain the same. In addition, nineteen Thai English vowels were observed in which the original English vowels are replaced by Thai regional qualities; three diphthongs are pronounced as plain long vowels. For suprasegmental features, Thai English speakers tend to equally stress each syllable, and there is no vowel reduction. Besides, each syllable is equipped with a Thai tone according to certain rules.

**Keywords:** Thai English, Phonological Features, World Englishes, English as a Lingua Franca, Pronunciation

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## Introduction

The changing dynamics of English in international contexts have led to intense questioning regarding the importance of the native-speaker pronunciation model of English. As the world becomes more globally connected, English has served as a communication tool where the vast majority of its speakers are non-native. The term ‘World Englishes,’ then, has been brought on ground to refer to different varieties of English that have been developed since the nineteenth century in Kachru’s three circles of English (Kachru, 1985). Once English is spread to different parts of the world, the language itself is inevitably deviated from its original form across different linguistic levels, namely phonology, morphology, syntax, and discourse, while it is more notably in a phonological level than in other kinds (Jenkins, 2002). Singapore, for instance, is an outer circle nation where English has been nativized and formed ‘Singlish,’ a distinctive Singapore English variety, which reflects linguistic characteristics that indicate the influence of local languages, such as the final ‘lah’ and distinctive stress patterns (Holmes, 2013).

As of Thailand, the country is categorized as the expanding nation in Kachru’s circle. English was first introduced in the early 1800s in the reign of King Rama IV (Darasawang, 2007) and is taught as a foreign language in compulsory education. Up to now, the country has welcomed millions of tourists a year and English has been utilized as a lingua franca (ELF) to communicate with other English speakers in many contexts. The language serves a wide range of functions within the country such as in trade, media, and tourism. Many Thai speakers, therefore, need to make necessary adjustments to their speech when they take part in international communication. These adjustments often involve linguistic features which are shared with ENL (English as a Native Language), and features that could be different from ENL which have arisen through language contact between ELF speakers and through the influence of speakers’ first language on their English (Jenkins, 2009). As a result, the emerging characteristics of linguistic variations of English in Thailand have been observed. Whether by inherent

physiological difficulty or by the influence of Thai as a mother tongue, the way Thai people use Thai English, or so-called ‘Tinglish,’ is distinctive and full of interesting properties. Accordingly, this paper aims to

- 1) explore pronunciation features of Thai English together with their allophonic variations
- 2) identify phonological processes which have arisen in Thai English.

## Literature Review

### World Englishes and English as a Lingua Franca

This study is laid upon the concepts of World Englishes (WE) and English as a Lingua Franca (ELF) paradigms. The spread of English on a global level can be represented in terms of three concentric circles, including the inner circle, the outer circle, and the expanding circle (Kachru, 1985). Inner Circle nations are countries where English is spoken as first language (ENL), e.g. the USA and Australia. Outer Circle represents countries having been previously colonized and using English as a second language (ESL) e.g. India and Singapore. And lastly, Expanding Circle nations included countries where English is used in addition to other languages (EFL) e.g. Japan and Thailand.

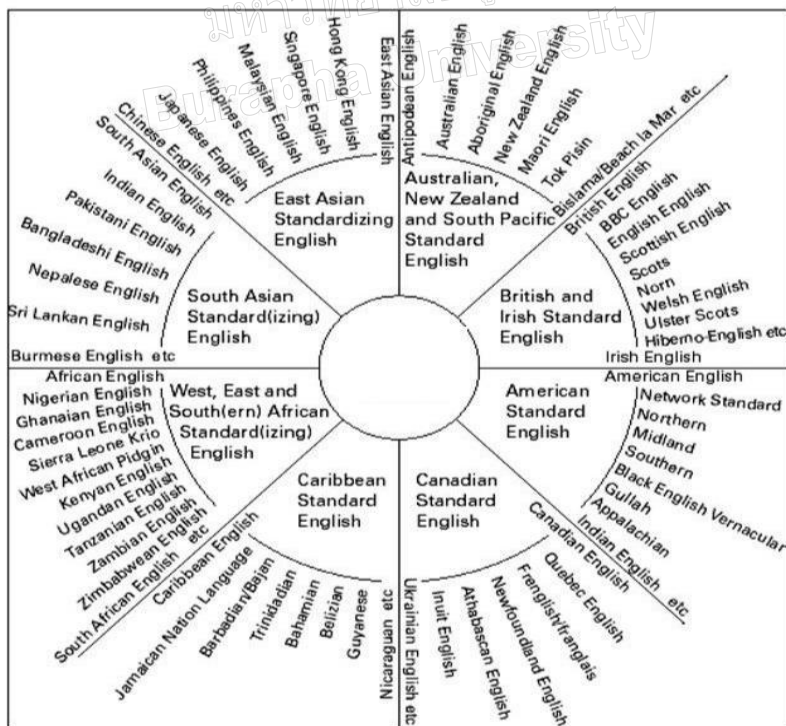
According to Jenkins (2002), speakers in the Inter Circle often set standards for other Englishes to follow, while speakers in the Outer Circle often nativized, institutionalized, and developed their local variety of English. The Expanding Circle varieties, on the other hand, are usually regarded as ‘performance’ varieties without any official status and dependent on the standards set by native speakers in the Inner Circle. Jenkins uses the term ‘World Englishes’ for any English – irrespective of which ‘circle’ it fits into. She further suggested that we should stop discriminating against speakers of non-native English. All these varieties are varieties of English regardless of whether or not they are considered to be “standard,” “educated,” or who their speakers are (Jenkins 2009). In recent years, her interest has moved towards the use of English

as a lingua franca, ‘the common language of choice, among speakers who come from different lingua-cultural backgrounds.’ Seidlhofer (2013) noted that a lingua franca has no native speaker by definition, and ELF is seen as a communicative tool between individuals who do not share either a common native language or culture.

The following figure illustrates an alternative perspective of World Englishes, represented from McArthur’s perspective.

Figure 1

McArthur’s Circle of World Englishes



Note. From “Language, Society and Power: An Introduction” by A. Mooney & B. Evans, 2015, Routledge, p. 202.

What is represented in McArthur’s Circle shows the possibility of talking about all English varieties as unspecified and unbiased. English all over the globe could embrace a considerable level of variations in different linguistic levels, ranging from phonology to discourse.

Phonological differences between Thai and English

In order to understand how Thai learners speak English, it is also essential to see how the phonological systems of Thai and English are different. In terms of consonants, there are 21 Thai consonant phonemes, while English has 24 phonemes, as shown in Table 1 and Table 2 below.

Table 1  
*Thai Consonantal Phonemes*

	Bilabial	Labio-dental	Alveolar	Post-alveolar	Palatal	Velar	Glottal
Plosives	p <sup>h</sup>		t <sup>h</sup>			k <sup>h</sup>	
	p		t			k	ʔ
	b		d				
Fricatives		f	s				h
Affricates				tʃ <sup>h</sup>			
				tʃ			
Nasals	m		n			ŋ	
Lateral			l				
Trill			r				
Glides	w				j		

*Note.* From “Phonetic Alphabet of Thai Consonant Phonemes” by J. Narksompong, 2007, *A Study of Thai Phonological Features that Cause Pronunciation Problems for Thai People* [Master’s Thesis], Thammasat University, p. 10.

Table 2  
*English Consonantal Phonemes*

	Bilabial	Labio-dental	Interdental	Alveolar	Post-alveolar	Palatal	Velar	Glottal
Stops	p			t			k	
	b			d			g	
Fricatives		f	θ	s	ʃ			h
		v	ð	z	ʒ			
Affricates					tʃ			
					dʒ			
Nasals	m			n			ŋ	
Liquids				l	r			
Glides	w					j		

Note. From “Chart of English Consonant Phonemes” by P. Roach, 2009, *English Phonetics and Phonology: A Practical Course* (4th ed.), Cambridge University Press, p. 52.

The table above shows that some English phonemes that do not occur in Thai phonology may cause some difficulties in pronunciation. The highlighted items in Table 2 are English phonemes that do not exist in the Thai phonological system. These sounds include /g/, /v/, /θ/, /ð/, /z/, /ʃ/, /ʒ/, /tʃ/, and /dʒ/. In attempting to tackle the problem of sounds nonexistent in Thai, Thai students are likely to substitute Thai sounds for English sounds, e.g. easy [ʔiː.sɪː], game [keːm], etc. (Kanokpermpoon, 2007).

Regarding vowels, the vowel system of the Thai language is composed of 18 monophthongs (9 short vowels and 9 long vowels) and 6 diphthongs. The length of the vowel phonemes is an important characteristic used to distinguish the meaning of words in Thai (Ariyapitipun, 2003). The 18 short and long vowel contrasts are shown in Table 3.

Table 3

*Thai Monophthongs*

	Front		Central		Back	
High	i	iː	ɯ	ɯː	u	uː
Mid	e	eː	ɤ	ɤː	o	oː
Low	ɛ	ɛː	a	aː	ɔ	ɔː

*Note.* From “Phonetic Symbols for Thai Vowel Phonemes” by J. Narksompong, 2007, *A study of Thai Phonological Features that Cause Pronunciation Problems for Thai people* [Master’s Thesis], Thammasat University, p. 17.

In addition, diphthongs in the Thai vowel system are called “falling diphthongs” because they are made by gliding down from high vowel positions to the low vowel position. There are 3 diphthongs, including /ia/, /ɯa/, and /ua/.

As for English, the language has a large number of vowel phonemes. There are 7 short vowels /ɪ, e, æ, ʌ, ɒ, ɒ, ʊ/ and 5 long vowels /iː, ɜː, aː, ɔː, uː/. Moreover, there are additional 8 diphthongs, including /iə/, /eə/, /ʊə/, /eɪ/, /aɪ/, /ɔɪ/, /əʊ/, and /aʊ/ (Roach, 2009).

In summary, vowel and consonant inventories in English and Thai are relatively different both in quality and quantity. While there are 18 monophthongs in Thai, there are only 12 monophthongs in English. Additionally, English has eight diphthongs, whereas Thai has three diphthongs. In addition, the number of English consonants and vowels is much greater than that of the Thai inventory. Previous studies regarding English pronunciation by Thai people have been largely observed (Kanokpermpoon, 2007; Narksompong, 2007; Piyamat & Deekawong, 2021) in the previous decades. However, those studies primarily focused on consonantal issues and applied the traditional EFL (English as a Foreign Language) approach where non-native speakers were often judged based

on the native standards. Any deviations from the native norms were considered errors and represented inaccurate uses of English. This study, on the other hand, was based the analysis on the ELF (English as a Lingua Franca) approach which considers the usage of Thai English as another variant of World Englishes without making any judgement.

## Research Methodology

This research was a qualitative synchronic study conducted to describe how Thai people use English (so-called “Thai English”) in a present day and further identify the phonological processes underlying these linguistic features.

### Participants

Thirty students enrolling in an English foundation course were selected to participate in this study using a purposive random sampling method. The selected subjects were studying at a private university and were from different study fields. Thus, the participants in this study were from varying backgrounds of English, ranging from A2 to B2 levels to represent the actual use of Thai English by Thai people whose exposure to L2 could be different.

### Instruments

To obtain the most natural data of language use, the students were required to perform the following tasks:

1) *Presentation*: Students were asked to complete a presentation on selected topics as part of their learning activities. They were assigned to record a short video and submit it to a teacher.

2) *Reading Passage*: In order to collect further phonological features, students were also asked to read a short passage which was easy to read and made the participants feel comfortable. The speech was digitally recorded for further analysis.

In addition to the two tasks, classroom observations were also carried out by the researcher where the students’ pronunciation in classrooms was



observed to confirm the pronunciation features and identify further issues which might have arisen.

### Data analysis

This study analyzed Thai English consonants and suprasegments by comparing to the Standard English (RP) presented by Roach (2009), while vowel realizations are based on Wells' Standard Lexical Sets (Wells, 1982) as shown in the following figure.

**Figure 2**

*Conceptual Framework*



*Note.* by Suthinee Peerachachayanee, designed on September 18,<sup>th</sup> 2022.

The research analysis procedures were as follows:

1. All speech recordings were replayed, transcribed, and identified by the researcher and two research assistants who were language specialists for credibility.
2. Pronunciation features including consonants, vowels, and suprasegments were analyzed and identified from the recordings.
3. Ambiguous items were further analyzed by using a computerized program named “PRAAT” and/or “Audacity” to view their spectral content as there may be subjectivity, which was a primary concern since the analysis relied heavily on the analysts’ perception. The use of acoustic analysis was employed to provide more reliable and detailed information of variants and could be used as an additional tool for checking the auditorily disputed words.

4. After all Thai English pronunciation features were identified, the researcher would categorize them into different phonological processes.

Results

Phonological features

This section provides pronunciation features of Thai English as collected from the field which is categorized into consonant inventory, vowel inventory, and suprasegmental features.

1. Consonant Inventory

1.1 Initial and medial consonants

This part demonstrates how English phonemes are pronounced by Thai students. Initial and medial consonants are grouped together as the same pattern was observed. Sounds in square brackets represent phonetic realizations. Word transcriptions given in this article are presented without Thai tone marks.

Table 4

Thai English Consonant Allophonic Variations (Initial and Medial)

Plosives	Fricatives	Affricates	Liquids
p [p <sup>h</sup> , p]	f [f]	tʃ [tʃ <sup>h</sup> ]	l [l]
t [t <sup>h</sup> , t, t̚]	v [w]	dʒ [dʒ]	r [r, ɹ, ɾ, ɻ]
k [k <sup>h</sup> , k]	θ [t]		
b [b]	ð [d]	Nasals	Glides
d [d]	s [s]	m [m]	w [w]
g [k]	z [s]	n [n]	j [j]
	ʃ [tʃ <sup>h</sup> ]	ŋ [ŋ]	
	ʒ [tʃ <sup>h</sup> ]		
	h [h]		

### Plosives /p, t, k, b, d, g/

For voiceless plosives /p, t, k/ in English, Thai people have no difficulties pronouncing the sounds as they are existent in Thai phonology. Aspiration of plosive consonants was also found at the word-initial/medial position, e.g. ‘present’ /<sup>h</sup>prez.ənt/ → [p<sup>h</sup>riː.sen], ‘talk’ /tɔːk/ → [t<sup>h</sup>ɔːk].

However, /p/ in some words did not show aspiration as they were influenced by Thai orthography and the prevalent use of English loanwords in the media. A transliteration of English spelling into Thai alphabetic notion produces [p] as unaspirated segments in some words, e.g. ‘program’ (โปรแกรม) /<sup>h</sup>prəʊ.ɡræm/ → [proː.krɛːm], percent (เปอร์เซ็นต์) /pəˈsent/ → [pɔː.sen].

In addition, the phoneme /t/, when occurring at the medial position, can be realized in 3 ways, including [t<sup>h</sup>], [t], and [t̚], with [t<sup>h</sup>] as the most frequently pronounced sound, e.g. ‘presentation’ /<sup>h</sup>prez.ən.teɪ.ʃən/ → [priː.sent<sup>h</sup>ɛː.tɕ<sup>h</sup>ɔːn], ‘winter’ /<sup>h</sup>wɪn.tə/ → [wɪn.t<sup>h</sup>ɔː].

When t occurs at an intervocalic position, Thai speakers tended to pronounce the sound as an unaspirated [t], e.g. ‘meeting’ /<sup>h</sup>miː.tɪŋ/ → [miː.t̚ɪŋ], ‘party’ /pɑː.ti/ → [pɑː.tiː]. It is also noteworthy to remark that the occurrence of voiced t [t̚] as an influence from GA was quite rare. Only 3 participants showed the variation of [t̚], and it was not consistent.

The phoneme /k/, on the other hand, is often aspirated and realized as [k<sup>h</sup>], e.g. ‘keep’ /kiːp/ [k<sup>h</sup>iːp], ‘square’ /skwe/ → [sk<sup>h</sup>wɛː].

Regarding the voiced plosives /b, d, g/ occurring initially and medially, Thais still maintain the phonemes /b/ and /d/ while substituting /g/ with [k] as /g/ is not present in Thai phonology, e.g. ‘born’ /bɔːn/ → [bɔːn], ‘good’ /ɡʊd/ → [kuːt].

### Fricatives and Affricates /f, s, h, z, v, θ, ð, tʃ, dʒ/

- /f, s, h/: These three phonemes remain in the pronunciation of Thai English.

- /z/: When this occurs as in 'zone' /zəʊn/, it becomes [so:n] through the substitution of its voiceless counterpart [s].
- /v/: When this occurs as in 'van' /væn/, it becomes [wæn] through the substitution of labial-velar approximant [w].
- /θ/ and /ð/: From many studies regarding difficulties of English pronunciation, Thai students were found to have problems with the pronunciation of interdental fricatives (Kanokpermpoon, 2007). Though some studies revealed that they sometimes substituted /θ/ and /ð/ with [s] and [z] respectively (Wei & Zhou, 2002), this study found that Thai students replaced with [t] and [d] only, e.g. 'thank' /θæŋk/ → [tæŋk], 'then' /ðen/ → [den].
- /f/, /ʒ/, /tʃ/, and /dʒ/: Thai speakers reduce the contrasts of voicing state and manner of articulation to the contrast of aspiration alone while pronouncing these phonemes. Thai has the phonemes /tʃ/ and /tʃʰ/, written as จ and ช, respectively. Thus, the two Thai phonemes are mostly used for the four English sounds.

English phonemes	ThE	Examples
ʃ	tʃʰ	shop /ʃɒp/ [tʃʰɔp]
tʃ		chair /tʃeə/ [tʃʰɛɪ]
ʒ		vision /'vɪʒən/ [wi.tʃʰan]
dʒ	tʃ	job /dʒɒb/ [tʃɔp]

### Nasals /m, n, ŋ/

The pronunciation of all nasal consonants remains the same in

Thai English.

**Liquids /l, r/**

Although Thai recognizes /l/ and /r/ as distinct phonemes, they also occur in free variation in colloquial speech. For example, เรา /raw/ could be pronounced as [law] in mostly informal contexts. This also applies to the pronunciation of Thai English regarding the /r/ phoneme.

Thus, when /r/ occurs as in 'road' /rəud/, it can be realized as [r], [ɹ], [ɾ], or [ɻ].

**Glides /w, j/**

The pronunciation of both glide consonants remains the same in Thai English.

**1.2 Final consonants**

A set of Thai final consonant phonemes include three major groups: unreleased voiceless plosives /p, t, k/, nasals /m, n, ŋ/, and glide finals /w, j/ under certain restrictions. Therefore, the pronunciation of most final consonants in Thai English could be grouped based on eight Thai final allophones which involve the pronunciation of /p, t, k, m, n, ŋ, w, j/.

Table 5

## Thai English Consonant Allophonic Variations (Final)

Final /p/ → [p̚, b, f, v]	Final /k/ → [k, g]
p [p̚]	k, g [k̚]
b [b]	
f [f]	
v [v]	
	Final /m/ → [m]
Final /t/ → [t, d, tʃ, dʒ, ʃ, ʒ, θ, ð, s, z]	Final /n/ → [n, ɲ]
t [t]	n [n]
d [d]	ɲ [ɲ, ɲ̃]
tʃ [tʃ <sup>h</sup> ]	
dʒ [dʒ]	
ʃ [ʃ <sup>h</sup> ]	
ʒ [ʒ]	
θ [θ]	
ð [ð]	
s [s]	
z [z]	
	Final /ŋ/ → [ŋ]
	Final /w/ → [w]
	w, l [w]
	aʊ [aw] <sup>2</sup>
	Final /j/ → [j]
	aɪ [aj]
	ɔɪ [ɔj]

The pronunciation of final consonants in Thai English is grouped and explained based on similar sound substitution patterns as follows.

<sup>2</sup> While English considers /aɪ, ɔɪ, aʊ/ as diphthongs, Thai alternatively treats them as a vowel followed by glide /w/ or /j/. This paper, thus, regards /aɪ, ɔɪ, aʊ/ as the same segments of /aj, ɔj, aw/ used in Thai.

1. /b/, /p/, /f/, /v/: These four phonemes are often realized as an unreleased voiceless bilabial plosive [p̚]. However, the substitution of [p̚] for /f/ and /v/ is less frequent, e.g. ‘describe’ /dɪˈskraɪb/ → [dɛskraɪp̚], ‘receive’ /rɪˈsiːv/ → [rɪˈsiːf] or [rɪˈsiːp̚].

2. /k/ and /g/: These two sounds are often realized as a single unreleased voiceless velar plosive [k̚], e.g. ‘make’ /meɪk/ → [meːk̚], ‘big’ /bɪɡ/ → [bɪk̚].

3. /t/, /d/, /θ/, /ð/, /ʃ/, /ʒ/, /s/, /z/, /tʃ/, /dʒ/: This forms the largest group for the substitution of an unreleased voiceless alveolar plosive [t̚]. The realization of [t̚] for alveolar plosives /t-/ /d/ and /θ-/ /ð/ was most common, while the same kind of substitution for other sounds was less frequent, e.g.

that	/ðæt/	[dæt̚]	
breathe	/briːð/	[briːt̚]	
reach	/riːtʃ/	[riːt̚]	or [riːtʃ <sup>h</sup> ]
judge	/dʒʌdʒ/	[tʃat̚]	or [tʃatʃ̚].

4. /m/, /n/, /ŋ/: These nasal consonants occurring at the word-final position remain the same in Thai English.

5. /ʌ/: The pronunciation of /ʌ/ at word-final position can be realized as [n], [w], [l], or omitted, e.g. ‘people’ /piː.pəl/ → [p<sup>h</sup>iː.p<sup>h</sup>ʌn]. In addition, dark l [ɫ] is either omitted or replaced with [w], e.g. ‘hopeful’ /həʊp.fəl/ → [hoːp.fuː], ‘will’ /wɪl/ → [wiw].

6. /r/: When /r/ occurs after vowels or at the word-final position, the tendency for most speakers is to omit it, e.g. ‘first’ /fɜːst/ → [fɜːs], ‘after’ /ɑːf.tə/ → [ɑːf.tɜː].

7. /w/ and /j/: English diphthongs /aɪ/, /ɔɪ/, and /aʊ/ were reanalyzed as a final consonant [w] and [j] following Thai final consonant system, e.g. ‘why’ /waɪ/ → [waːj], ‘how’ /haʊ/ → [haːw].

### 1.3 Consonant clusters

In Thai, voiceless plosives /p, p<sup>h</sup>, t, t<sup>h</sup>, k, k<sup>h</sup>/ can be followed by /ʌ/ and /r/ to form clusters at word-initially. In colloquial speech, clusters with such sounds are often reduced to a single consonant. For example, ครีป [k<sup>h</sup>rap̚] could be pronounced as [k<sup>h</sup>ap̚]. Thus, the tendency is that Thai speakers sometimes reduce English consonant clusters that include /ʌ/ or /r/ to a single consonant. In some cases, instead of omitting the sound, clusters including /r/ is usually conflated with /ʌ/, for example, ‘employee’ /ɪmˈplɔɪi/ → [em.p<sup>h</sup>ɔɪ.ji:], ‘treasure’ /ˈtreʒə/ → [t<sup>h</sup>le.t<sup>h</sup>ɔɪ]. Other types of clusters such as labial-velar cluster /kw/ and s-clusters (st-, sp-, sk-) remain the same.

For clusters occurring at the word-final position, there is a tendency of Thai English’s final clusters to be reduced, particularly the omission of the final segment although the deletion of the first segment can sometimes be found, e.g. ‘first’ /fɜːst/ → [fɜːs], ‘botox’ /ˈbɒt.ɒks/ → [bɒ:t<sup>h</sup>ɔk].

## 2. Vowel inventory

Wells’ Standard Lexical Sets (Wells, 1982) have been widely used among scholars to address the phonological and phonetic structures of various English accents in a simple and succinct manner. Therefore, the description of Thai English (ThE) vowel in this research is based on the words provided in the Lexical Sets.

### 2.1 Monophthongs

From the data analysis, 14 single vowels were observed. There are 12 vowels which are contrasted in length, namely /i/ - /iː/, /e/ - /eː/, /ɛ/ - /ɛː/, /a/ - /aː/, /ɔ/ - /ɔː/, and /u/ - /uː/; and 2 long vowels /ɜː/ and /oː/.

The following table summarizes the Thai English vowel allophones.



**Table 6**

*Summary of Vowel Realizations based on Wells' Lexical Sets (RP = Received Pronunciation, ThE = Thai English).*

RP	ThE	Keyword	RP	ThE	Keyword
ɪ	i	KIT	ʌ	a	CUP
	iː	happY			
iː	iː	FLEECE	ʊ	u	FOOT
e	e	NECK <sup>3</sup>	uː	uː	GOOSE
æ	ɛ	TRAP	ɔː	ɔː	THOUGH T
ə	aː	commA	ɒ	ɔ	LOT
	ʌː	lettER		ɔː	CROSS
ɜː	ʌː	NURSE	ɑː	aː	START

## 2.2 Diphthongs

In Thai English, 5 diphthongs were observed from the collected data, including /aj/, /ɔj/, /aw/, /ia/, and /ua/. The following table summarizes the Thai English diphthongs.

<sup>3</sup> The word NECK is used to represent the group rather than the typical word DRESS as Thai speakers pronounce DRESS with untypical long vowel, which contrasts with other words in the same group which is uttered with short vowel.

Table 7  
*Diphthong Realizations based on Wells’ Lexical Sets*

Centering diphthongs			Closing diphthongs		
RP	ThE	Keyword	RP	ThE	Keyword
Iə	ia	NEAR	eɪ	eɪ̯	FACE
eə	ɛɪ̯	SQUARE	aɪ	aj	PRICE
ʊə	ua	POOR	ɔɪ	ɔj	BOY
	iaw	CURE			
			əʊ	oɪ̯	GOAT
			aʊ	aw	MOUTH

Originally, there are eight diphthongs in the RP’s vowel system. Five of them /aɪ, ɔɪ, aʊ, Iə, ʊə/ have been substituted with the nearest quality of vowels in Thai, as shown below.

[aj]	[ɔj]	[aw]	[ia]	[ua]
FLIGHT	BOY	CROWN	NEAR	POOR

The other three /eɪ, əʊ, eə/ as found in FACE, GOAT, SQUARE in Well’s lexical sets were pronounced as long monophthongs, which were represented as /eɪ̯/, /oɪ̯/, /ɛɪ̯/ respectively. This phenomenon – where diphthongs are pronounced as long monophthongs – is also common in other varieties of English, including those of Scotland, Wales, North America, Singapore, Malaysia, and many countries in South-East Asia (Deterding & Kirkpatrick, 2006).

3. Suprasegmental features

As a syllable-timed language, Thai places equal stress on every syllable in a sentence and does not show vowel reduction in unstressed syllables, but retains full vowel quality and schwa [ə] is unlikely heard. Hence, the word ‘banana’ sounds like [baɪ̯.naɪ̯.naɪ̯] with more or less equal stress on all three syllables. This is in contrast to English which is a stress-timed language in

which a vowel within the stressed syllable is longer, louder, and higher in pitch, while a vowel within the unstressed syllable is reduced. So, the word ‘banana’ in RP sounds like [bəˈnɑːnə]. Some of the examples from the field are as follows.

RP	ThE
presenˈtation /prez.ənˈteɪ.ʃən/	ˈpreˈsenˈtaːtion [pʰriː.sen.tʰe.tʰan]
ˈcompany /ˈkʌm.pə.ni/	ˈcomˈpaːny [kʰɔm.pʰaː.niː]

With syllable-timed stress, weak forms were rarely observed in the data. Function words, such as ‘to’, ‘from’, auxiliary ‘have’, ‘her’, and so on were not reduced to schwa sound /ə/, and full vowel quality was retained. For example, I would like to [tʰuː] present about ..., I have [hɛːf] divided my presentation into three things.

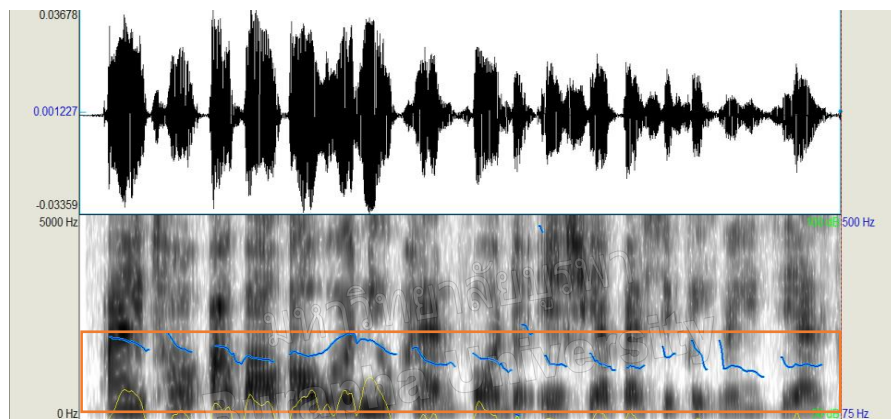
Apart from this, another frequently found pattern was final-syllable stress. It was evident from many participants that they often placed heavy stress on the final syllable of each word regardless of its function, as shown below.

RP	ThE
social /ˈsəʊ.ʃəl/	soˈcial /soː.tʰiːəw/
manager /ˈmæn.ɪ.dʒər/	manaˈger /meː.neː.tʰɜː/

Compared to RP, Thai English intonation seems to be simplified, flat, and unvaried. Most utterances in Thai English applied a falling intonation. Rising intonation was relatively rare. It was found in a few students, with sporadic and without clear patterns.

Figure 3

*Spectrogram of “I talked about our new plans for the Asia Pacific Region”*

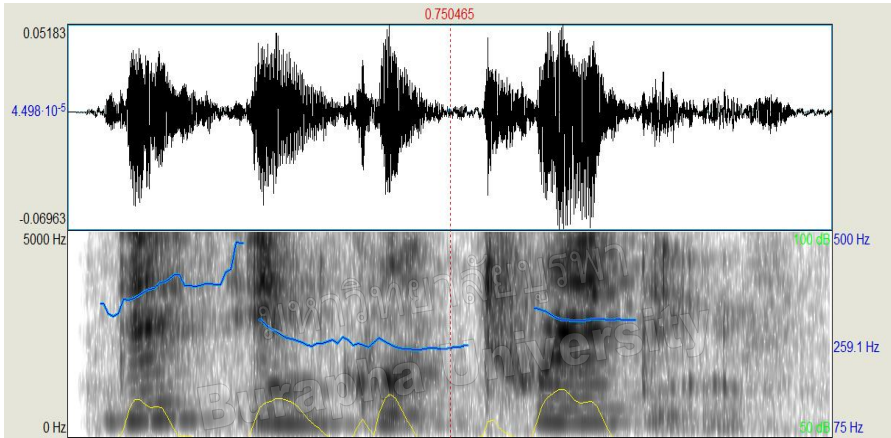


Note. by Suthinee Peerachachayane, captured from PRAAT on September 27,<sup>th</sup> 2021.

Apart from this, a few students placed stress on keywords to emphasize meanings, as shown in Figure 4 below. For instance, from the sentence “This includes three things” from a participant {F3}, the word ‘this’ got the highest pitch to emphasize the most prominent idea within the sentence (‘nuclear’ stress). In addition, the word ‘thing’, regarded as the last content word, also received a higher pitch (unmarked stress). Therefore, with these similar cases, nuclear stress – whether unmarked or contrastive – only occasionally occurred in a minority of the students.

Figure 4

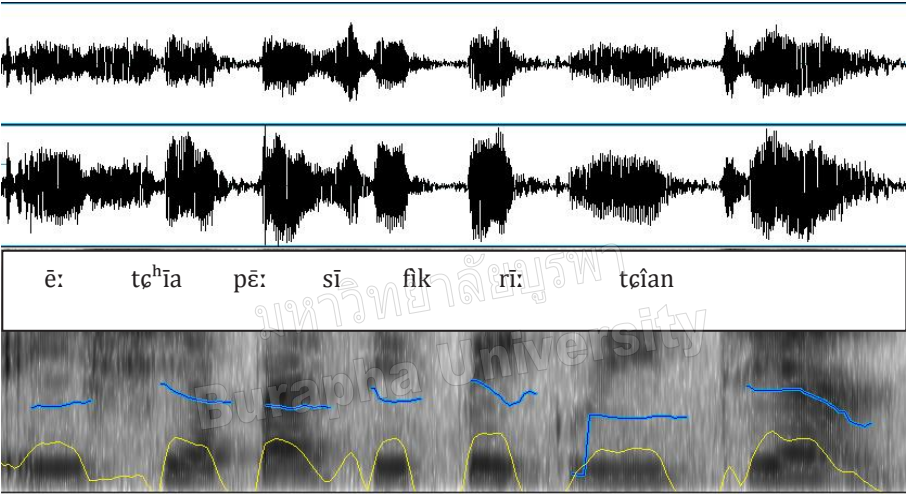
*Spectrogram of “This includes three things”*



Note. by Suthinee Peerachachayanee, captured from PRAAT on September 27,<sup>th</sup> 2021.

Besides, Thai is a tonal language which implies that pitch is lexically significant and varies in each syllable to suggest meanings. Thus, the way Thai speakers use pitch is not the same as it does in English, as pitch is not used to provide attitudinal or grammatical functions. However, pitch as used in the five Thai tones (mid, low, high, falling, rising) are likely to be carried to individual syllables in the pronunciation of English, as indicated in the blue line in the following figure.

Figure 5  
*Spectrogram of ‘Asia Pacific Region’*



*Note.* by Suthinee Peerachachayanee, captured from PRAAT on September 27,<sup>th</sup> 2021.

Conclusion

From the findings, Thai English speakers typically operate with a smaller set of consonants (17 phonemes) than in native varieties of English (24 phonemes). The most noticeable differences occur in fricative sounds, where most of them are substituted with Thai phonemes.

Table 8  
*Consonant Inventory of Thai English*

	Bilabial	Labio-dental	Alveolar	Post-alveolar	Palatal	Velar	Glottal
Plosives	p b		t d			k	
Fricatives		f	s				h
Affricates				tʃ <sup>h</sup> tʃ			
Nasals	m		n ɱ			ŋ	
Liquids			l r				
Glides	w				j		

Regarding vowel inventory, 19 vowel phonemes are observed, including fourteen single vowels and five diphthongs. The majority of the vowel phonemes in Thai English adopt Thai vowels into practice while still maintaining contrast in vowel quantity (short VS long).

Table 9  
*Monophthongs and Diphthongs of Thai English*

Monophthongs				
	Front		Central	Back
Close	i	iː		u uː
	KIT	FLEECE		FOOT GOOSE
Close-mid	e	eː		ɤː oː
	NECK	FACE		NURSE GOAT
Open-mid	ɛ	ɛː		ɔ ɔː
	TRAP	SQUARE		LOT THOUGHT
Open			a aː	
			CUP START	
Diphthongs				
aj	ɔj	aw	ia	ua
FLIGHT	BOY	CROWN	NEAR	POOR

After investigating Thai English pronunciation features, twelve phonological processes are reported and illustrated in the table below.

**Table 10**  
*Summary of Phonological Processes of Thai English*

Phonological Features in Thai English	Examples
<b>1. Consonant Substitution</b> Sounds that are not present in Thai phonology are replaced by similar sounds in Thai English although the substitutions of initial and final sounds can be varied. (See Table 4 and 5)	‘then’ /ðen/ → [den] ‘reach’ /ri:tʃ/ → [ri:tʃ <sup>h</sup> ]
<b>2. Final Consonant Devoicing</b> Stops, fricatives, and affricates are found devoiced when occurred at final position. This is particularly obvious with plosive consonants (b, d, g) as they were usually pronounced as voiceless inaudible release [p̚, t̚, k̚], respectively.	‘save’ /seɪv/ → [seɪf] ‘scrub’ /skrʌb/ → [skrʌp̚]
<b>3. Deletion, Substitution, and Vocalization of Dark ‘l’</b> As dark ‘l’ [ɫ] (the pronunciation of /l/ when preceding a consonant or occurs at the end of a word e.g. ‘help,’ ‘ball’) does not exist in Thai, speakers adopt three different ways to deal with the sound. 1. Deletion of sound: [ɫ] is deleted at word-finally. 2. Substitution with /n/: [ɫ] is substituted with /n/. 2. Vocalization to /ʊ/ or /w/: [ɫ] is vocalized to a semi-vowel [w] (becoming more vowel-like quality).	<i>Deletion:</i> ‘soul’ /səʊl/ → [so:]  <i>Substitution:</i> ‘political’ /pəˈlɪt.I.kəl/ → [p <sup>h</sup> oː.li.t̚ <sup>h</sup> i.k̚ <sup>h</sup> ɔ̃n]  <i>Vocalization:</i> ‘hotel’ /həʊˈtel/ → [hoː.t̚ <sup>h</sup> ew]
<b>4. Non-Rhotic Pronunciation</b> When /r/ occurs after vowel or at final position, the sound is omitted, making Thai English a non-rhotic variety.	‘march’ /mɑːtʃ/ → [mɑːtʃ <sup>h</sup> ]



Phonological Features in Thai English	Examples
<b>5. Conflation of /l/ and /r/</b> /l/ is used in place of /r/ at word-initial and in clusters.	'roam' /r <u>əʊ</u> m/ → [lo:ɪm] 'progress' /'pr <u>əʊ</u> .gres/ → [p <sup>h</sup> lo:gleɪs]
<b>6. Cluster Simplifications</b> Clusters are often reduced to a single consonant both at initial and final positions.	'trainee' /,treɪ <u>n</u> i:/ → [t <sup>h</sup> ɛ:n.ni:] 'recommend' /,rek. <u>ə</u> 'mend/ → [rek.k <sup>h</sup> ɔm.meɪn]
<b>7. Vowel Substitution</b> English vowels are replaced by Thai vowels with the nearest quality while vowel quantity (vowel length) still maintains.	'flood' /fl <u>ʌ</u> d/ → [flad] 'birth' /bɜ:θ/ → [bɔ:t]
<b>8. Monophthongization</b> Three diphthongs /eɪ, əʊ, eə/ are monophthongized into single vowels e.g. /eɪ, oɪ, ɛ:/	'space' /speɪs/ → [speɪs] 'fair' /feə/ → [fɛ:]
<b>9. Syllable-Timed Stress</b> Each syllable receives equal stress in a word. Thus, it is pronounced fully without vowel reduction (schwa sound /ə/).	'sofa' /'səʊ.fə/ → ['so:'faɪ] 'version' /'vɜ:ʒən/ → ['wɜ:'tʃ <sup>h</sup> an]
<b>10. No Nuclear Stress</b> Mostly, there is no particular stress on prominent words in a sentence.	"I'd like to go to Bangkok by plane." (No particular stress on any word to contrast meaning nor to highlight the last content word)
<b>11. No Clear Intonation Pattern</b> Intonation is likely monotonous. Rising or falling intonation is unsteady and mostly flat.	Do you have any questions? (no rising intonation for Wh-Questions).
<b>12. Tone Transfer</b> As all Thai syllables must carry one of the five tones, English words pronounced by Thais are systematically given these tones.	'ecosystem' /'i:kəʊ.sɪs.təm/ → [i:k <sup>h</sup> o:sis.têm]

In summary, this paper has illustrated that Thai English exhibits varying phonological variations which make the language distinct from other Southeast Asian Englishes. English sounds which do not exist in Thai are usually replaced by Thai sounds though the substitutions of initial and final consonants are not necessarily the same. For example, the sound /v/ was substituted with [w] initially and [f] finally, while the sound /θ/ was substituted with [t] at both positions. In addition, Thai English is regarded as non-rhoticity variety as an influence of the British accent or the fact that 'r' is not part of the Thai final sound. Regarding consonant clusters, they are often simplified to a single sound both at initial and final positions. When looking at syllable structures of Thai and English, it is obvious that English has a more complex set of clusters both at initial and final positions. The syllable structure of Thai is CCVC, while English is CCCVCCCC. English allows up to three clusters at onset and four clusters at coda. It is no wonder why Thais tend to simplify the cluster system at both positions. As a result, most of these features resulted from a lack of certain sounds or mismatched sound distribution in L1 phonology, resulting in consonant substitutions, consonant devoicing, cluster simplification, etc.

In terms of vowels, the use of regional vowel variants was found instead of English original vowel phonemes. According to Roach (2009), vowels are highly varied as a result of geographical variations and are typically different across varieties of English, even in Britain and North America. Thus, the fact that Thai English exhibits local variants is not unusual. These vowel variants are considered phonetically close enough to the target sounds in L1. For example, /ɜ:/ is replaced with /ɔ:/, which is phonetically similar. This is the same with diphthongs, where five of them have been substituted with the nearest quality of vowels in Thai, whereas the other three were pronounced as long monophthongs. This phenomenon – where diphthongs are pronounced as long monophthongs – is also common in other varieties of English, including those of Scotland, Wales,

North America, Singapore, Malaysia, and many countries in South-East Asia (Deterding & Kirkpatrick, 2006).

In terms of suprasegmental features, Thai is said to be a syllable-timed language, like many Southeast Asian languages, where stress is placed equally on every syllable. Thus, while some vowels in English are typically reduced to schwa [ə] in unstressed syllables, Thai speakers pronounce them as a full vowel and the pronunciation is often based on spelling. This phenomenon of reduced vowels is also observed in other English varieties with a syllable-timed pattern, such as Yoruba, French, and most SEA languages (Suntornsawet, 2019). Regarding intonation, there was no discernible pattern discovered. Lastly, one of the most interesting features of Thai English is the use of tone. The data revealed that most of the participants carry Thai lexical tones to all of the English words uttered e.g. ‘population’ [p<sup>h</sup>ɔp.p<sup>h</sup>ū.lē.t<sup>h</sup>ɔŋ], ‘message’ [més.sè:t<sup>h</sup>ɔŋ], resulting a melody-like pattern and reflecting heavily Thai-accented English pronunciation.

In conclusion, this article has illustrated several prominent features of Thai English phonology. Instead of viewing regionally accented English as ‘deficit’ or ‘nonstandard’, it is essential to embrace these linguistic variations and speak English, no matter what accent, with confidence with the goal of keeping meaningful communication in ELF settings. Finally, this study has opened a lot of possibilities for other scholars in ELF to bring the Thai English features into comprehension or intelligibility measurements.

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