Into Intelligible Pronunciation Features of Thai English in

English as a Lingua Franca Context[1]

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Abstract

Regardless of whether or not Thai English, also known as 'Tinglish', has acquired a status of a 'new variety of English', it is undoubted that 'Thai English accent' exists among Thai people and involves unique Thai English phonological properties. This research paper examined pronunciation features of Thai English collected from 30 students from a private university in Thailand and compared the Thai English phonological properties to those in the Lingua Franca Core (LFC) proposed by Jenkins (2000). Participants were required to perform different tasks where they could use English naturally. From the findings, Thai English speakers typically operate with a smaller set of consonants (ThE: 17, RP: 24). In particular, there is no voicing contrast in fricative sounds, while most of the other consonant phonemes

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remain. In addition, most of the English vowels were replaced with Thai regional qualities and similar sets of vowels were observed (ThE: 19, RP: 20). After comparing to the LFC, six features were identified as problematic which could lead to intelligibility failure, including 1) consonant substitution, 2) final consonant devoicing, 3) deletion and substitution of [ɬ], 4) conflation of /l/ and /r/, 5) initial cluster simplification, and 6) non-tonic stress. On the other hand, six other features of Thai English features were considered intelligible in ELF, including non-rhotic pronunciation, vowel substitution, monophongization, syllable-timed stress, non-intonation pattern, and tone transfer. The Thai English pronunciation core from this research could be especially useful in English pronunciation teaching in Thailand, where learners can comfortably accommodate their English to achieve successful communications in international contexts.

Keywords: English as a Lingua Franca, Thai English, intelligibility, pronunciation features, non-native accent

Introduction

At present, the number of English speakers has grown unstoppably on the global level, and English has become a medium language of communication for many people around the world, including Asians. With this rapid growth of English, many people are acquainted with the fact that non-native speakers (NNSs) of English have now outnumbered native speakers (NSs). In this 21st century, English has become an international lingua franca with a vast majority of non-native speakers. This phenomenon is referred to as "English as a Lingua Franca" (ELF), also known as "English as an International Language" (EIL) from different perspectives. Seidlhofer (2006) defines English as a Lingual Franca as "any use of English

among speakers of different mother tongues and lingua-cultural backgrounds", across all the Kachru's three circles of World Englishes (Kachru, 1985).

Concerning English Language Teaching (ELT) in Thailand, the position of English as a Native Language (ENL) has also mainly been adopted in many educational institutions and the native speaker's rigid standards, especially the British and American ones, continue to gain supremacy. Regarding pronunciation norms, it is evident that the position of Received Pronunciation (RP) or General American (GA) accents are seen as prestigious and L2 learners are still encouraged to imitate RP or GA accents and other articulatory features of native English as closely as possible even though some of these features hinder intelligibility among non-native speaker interlocutors (Jenkins, 2000). Dalton & Seidlhofer (1994) addressed the concern of the ENL model stating that if RP or GA are treated as a norm, the pronunciation would be tied firmly with the idea of correctness instead of mutual intelligibility and accommodation.

Accordingly, the role of native norms which have been practiced all over the world, especially in the Expanding Circle countries, has been brought into question by many ELF scholars. Recent ELF research (e.g., Seidlhofer, 2006; Jenkins, 2012) has attempted to challenge the concept of the EFL paradigm and argued that English is being learned for international communication with people from different L1 backgrounds rather than for communication with native speakers. Besides, the language is no longer the property of its native speakers in the Inner Circle, as Widdowson (1994) argues, but a language for global communication. A native-like fluency is, therefore, no longer the primary need for most learners, nor is the communication with native speakers. In other words, non-native speakers

use English to communicate with other international non-native speakers with the ultimate

goal of successfully achieving communication purposes. The interaction of English, thus,

shifted from NNSs – NSs into NNSs – NNSs (Jenkins, 1998). This is true in Thailand where

Thai people often use English with other non-native speakers who come from different parts

of the world. The Thai-accented English spoken by Thai people involves the integration of

Thai phonological properties into the pronunciation of English, which is so called "Thai

English" or "Tinglish". Baker (2012) suggested that ELT in Thailand should be developed to be

more relevant to users of English as a lingua franca and leave the dominance of NS models

since any variety of English is distinctive and has its own pronunciation features. Kirkpatrick

(2017) also addressed the importance of ELF and stated that "the global learning of English

needs to be based on its global use." Recent research conducted by Promkandorn &

Burutphakdee (2018) also confirmed that Thai university students did not rely entirely on NS

norms for their pronunciation (RP & GA), but a mixture of the two varieties together with

interference from the students' first language (L1 interference). Furthermore, an early study on

ELF by Jenkins (1998) also pointed out that learners should be led towards the goal of

comfortable production of core sounds as well as to accept and promote the use of L1 norms.

However, even when ELF values diversity and different varieties of English, it has

brought a concern regarding intelligibility issues. Jenkins' Lingua Franca Core (2000),

therefore, has been implemented to ensure intelligibility among different L1 speakers. The

pronunciation features provided in the LFC, in Jenkin's view, could enable speakers to

communicate successfully with other ELF speakers. With this regard, this research aims to

investigate how Thai speakers accommodate their pronunciation in lingua franca contexts by

identifying phonological features and phonological processes of Thai English. After that, the pronunciation features of Thai English found in this research would be compared to the features in LFC to propose pronunciation core of Thai English which is expected to be intelligible in English as a Lingua Franca contexts.

Research Questions

    1. What are phonological features of Thai English?

    2. What could be Thai English pronunciation core based on the Lingua Franca Core proposed by Jenkins (2000)?

Literature Review

1. Phonological Differences between Thai and English

    To understand how Thai learners speak English, it is first 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 the following tables.

Table 1

Thai Consonantal Phonemes (adapted from Narksompong, 2007)

	Bilabial	Labio-dental	Alveolar	Post-alveolar	Palatal	Velar	Glottal
Plosives	p^h		t^h			k^h	
	P		t			k	ʔ
	B		d				
Fricatives		f	s				h
Affricates				$tɕ^h$			
				tɕ			
Nasals	m		n			ŋ	

	Bilabial	Labio-dental	Alveolar	Post-alveolar	Palatal	Velar	Glottal
Lateral			l				
Trill			r				
Glides	w				j		

Table 2

English Consonantal Phonemes (adapted from Roach, 2009)

	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		

The table above shows that some English phonemes that do not occur in the Thai phonology may cause some difficulties in pronunciation. The highlighted items in Table 2 are English phonemes which 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 [ʔiːˌsiː], 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 the following figure.

Figure 1

Thai Monophthongs (adapted from Narksompong, 2007)

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

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, ə, 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 8 diphthongs, whereas Thai has 3 diphthongs. In addition, the number of English consonants and vowels is a lot greater than that of the Thai inventory. Sounds of English which do not exist in Thai may likely pose a great challenge for Thai learners of English to utter. Thus, it is very likely that Thai people

would pronounce English words by substituting Thai phonological features when they pronounce difficult/non-existent sounds in English.

2. *The Lingua Franca Core (LFC)*

To respond to the concept of ELF regarding pronunciation teaching, Jenkins (2000) proposed a Lingua Franca Core (LFC) which brings linguistic difficulties of L2 speakers into account. She argued that the pronunciation of English could be more achievable for learners of English if 'standard' pronunciation were ignored and more neutral, universal, simplified forms were taught (Jenkins, 1998). These shared features, even with deviations from the standard norms, rarely cause communication breakdown or misunderstandings among non-native speakers (Kirkpatrick, 2011). The Vienna-Oxford International Corpus of English (VOICE) and the Asian Corpus of English (ACE) are two highly precious resources of effective ELF. These two resources enable scholars to compare the use of ELF in European (VOICE) environments and Asian (ACE) environments.

Table 3 below sums up the pronunciation goals of English as a Foreign Language (EFL) VS. English as a Lingua Franca (ELF). The LFC features are obtained from Jenkins' empirical research and ensured that the pronunciation would be intelligible in ELF interactions.

Table 3

Comparison of EFL VS. ELF Goals (adapted from Zoghbor, 2011)

	EFL goals	ELF goals
Core features		
1. Inventory of Consonants	- all sounds - RP non-rhotic /r/ - GA rhotic /r/ - RP intervocalic [t] - GA intervocalic [ɾ]	- All sounds except /θ/, /ð/, and [ɬ] - rhotic /r/ only - RP intervocalic [t] only - Allophonic variation permissible within phonemes
2. Phonetic requirements	- rarely specified	- Aspiration after /p/, /t/, /k/ at initial position
3. Consonant clusters	- all word positions	- word-initially
4. Vowel quantity	- long-short contrast	- long-short contrast
5. Nuclear (tonic) stress	- important	- critical
Non-core features		
1. Vowel quality	- close to RP or GA	- L2 (consistent) regional qualities
2. Weak forms	- Essential	- unhelpful to intelligibility
3. Connected speech	- all	- inconsequential or unhelpful
4. Stress-timed rhythm	- important	- does not exist
5. Word stress	- critical	- unnecessary/ can reduce flexibility
10. Pitch movement	- essential for indicating attitudes and grammar	- unteachable/ incorrectly linked to NS attitudes/ grammar

Methodology

1. Participants

Pronunciation features from this study were obtained from students from a private university in Thailand. The subjects were selected from students who were enrolling in an English foundation course using a purposive random sampling method. Thirty students were qualified and participated in this study.

2. *Instruments*

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

1) *Presentation*: Students were asked to complete a presentation individually on selected topics as part of their learning activities. They were assigned to record a short video and submit it to a teacher. By using a video clip where they can record videos anywhere at convenience, it was expected that students would be relaxing and, thus, natural spoken data could be obtained.

2) *Reading passage*: In order to collect further phonological features in the LFC, students were also asked to read a short passage. The passage was easy to read and made the participants feel comfortable. Reading a short passage is one part of a classic sociolinguistic interview[2] to gather natural spoken data. This method was developed and later modified by Labov (1966). The speech was digitally recorded for further analysis.

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[2] The classic sociolinguistic interview consists of four parts, ranging from the most formal to casual styles: (i) reading a list of minimal pairs, (ii) reading a list of words in isolation, (iii) reading a short narrative, and (iv) talking with the interviewer.

In addition to the two tasks, classroom observation was 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. Observation was also essential in case that sounds collected from the two tasks have not yet covered the LFC core features.[3]

3. Data Analysis

1. All speech recordings were replayed, transcribed, and identified by the researcher and two research assistants who were also linguist specialists for credibility.

2. Pronunciation features of Thai English including consonants, vowels, and suprasegments were analyzed and identified from the recordings.

3. Ambiguous items would further be analyzed by using a computerized program named "PRAAT" and "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 assistant for checking the auditorily disputed words.

4. After all English pronunciation features were identified, they would be compared to the LFC features proposed by Jenkins (2000) in order to see which features should be included in Thai English pronunciation core.

5. The researcher would eventually introduce a Thai English pronunciation core which could be intelligible and applicable in ELF contexts.

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[3] The research instruments have been validated by three specialists and approved by the Office of Research Ethics, ... University, with Certificate of Exemption No. 63/022.

Findings

Phonological Features of Thai English

From the findings, Thai English speakers typically operate with a smaller set of consonants (17 phonemes) than in native varieties of English (24 phonemes). In particular, there is no voicing contrast in fricative sounds, while most of the other consonant phonemes are maintained. In addition, similar sets of vowels were observed (19 ThE vowels VS 20 vowels in RP English). There are also short and long vowel contrasts in Thai English, except for the vowels /ɤː/ and /oː/.

Table 4

Consonant Inventory of Thai English

	Bilabial	Labio-dental	Alveolar	Post-alveolar	Palatal	Velar	Glottal
Plosives	p		t			K	
	b		d				
Fricatives		f	s				h
Affricates				tɕʰ			
				tɕ			
Nasals	m		n			ŋ	
Liquids			l r				
Glides	w				j		

The description of Thai English (ThE) vowel in this research is based on the words provided in Wells' Standard Lexical Sets (Wells, 1982). Keywords in Lexical Sets are shown in capitalized letters.

Figure 2

Thai English's Vowels and Diphthongs.

Monophthongs:

	Front	Central	Back
Close	I i:		u u:
	KIT FLEECE		FOOT GOOSE
Close-mid	E e:		ɤ: o:
	NECK FACE		NURSE GOAT
Open-mid	ɛ ɛ:		ɔ ɔ:
	TRAP SQUARE		LOT THOUGHT
Open		a a:	
		CUP START	

Diphthongs:

aj	ɔj	aw	ia	ua
FLIGHT	BOY	CROWN	NEAR	POOR

The data analysis revealed that Thai English exhibits a number of interesting and unique phonological properties, particularly evident in the use of suprasegmental features. All phonological processes found under this study are listed below.

1. Consonant Substitution. When there are no equivalent sounds in Thai, the following substitutions normally occur in Thai English pronunciations. Sounds with no substitutions are not represented with a dash mark (-).

Table 5

Sound Substitutions in Thai English

English Consonants	Sound Substitutions	
	Initial and Medial	Final
/b/	-	[p̚]
/d/	-	[t̚]
/g/	[k]	[k̚]
/f/	-	[f], [p̚]
/v/	[w]	[f], [p̚]

English Consonants	Sound Substitutions	
/θ/	[t]	[t̚]
/ð/	[d]	[t̚]
/z/	[s]	[s], [t̚]
/ʃ/, /tʃ/	[tɕʰ]	[tɕʰ], [t̚]
/ʒ/	[tɕʰ]	[tɕ], [t̚]
/dʒ/	[tɕ]	[tɕ], [t̚]
[ɫ]	-	[w], [n]
/r/	[ɾ, l]	sound omission

These substitutions represent regional variants as they are considered phonetically close enough to the target sounds. These approximations to English sounds generally involved transfer from L1 system.

2. Final Consonant Devoicing. From the data collected, voiced obstruents (stops, fricatives, affricates) often become devoiced at word-final positions as in the following examples.

guard	/gɑːd/	[kaːt̚]	/d/ ® [t]
improve	/ɪmˈpruːv/	[im.pʰruːf]	/v/ ® [f]
change	/tʃeɪndʒ/	[tʃeːŋtɕ]	/dʒ/ ® [tɕ]

3. Deletion, Substituion, and Vocalization of Dark ‹l› [ɫ]. As dark ‹l› [ɫ] is not present in Thai phonology, several processes occur to replace [ɫ]. The first process is sound deletion in which [ɫ] is deleted at word-finally as in ‹hopeful› [hoːp.fuː]. The second one is the substitution of [ɫ] with [n] as found in ‹fashionable› [fɛː.tɕʰɤn.ne.bɤn]. The last process found from the data

collected is "l-vocalization" which is the use of a vowel or semi-vowel in place of dark 'l' as found in 'counsel' [kʰɔn.sew]. This has also been reported in other varieties of English. Deterding, Wong & Kirkpatrick (2008) reported l-vocalization as one of Hong Kong English features, while Hung (2000) used [w] as an alternative notation, such as *feel* where l-vocalization can be transcribed as [fiu] or [fi:w].

4. Non-Rhotic Pronunciation. From the findings, the majority of the participants dropped /r/ when it occurred after vowel or at syllable-final position. This makes Thai-English non-rhotic variety. This can be the influence of RP pronunciation where /r/ is dropped post-vocalically. In addition, /r/ is not part of Thai final sound; therefore, it is usually silenced. The transliteration of English words into Thai also guides Thai speakers to drop 'r'. For instance, the word 'motor' is transliterated as "มอเตอร์" /mɔ:tɤ:/ with 'r' as a silenced sound. As a consequence, most Thai speakers apply this same rule to the pronunciation of English. Some tokens collected are below.

cover	/ˈkʌv.ə/	[kʰoː.wɤ:]	/r/ ® Æ
part	/pɑ:t/	[pʰa:t]	/r/ ® Æ
start	/stɑ:t/	[sta:t]	/r/ ® Æ

5. Conflation of /l/ and /r/. The use of [l] in place of [r] was sometimes found in Thai English both in initial position and in consonant clusters. For example,

resource	/rɪˈzɔ:s/	[liː.sɔ:s]	/r/ ® [l]
project	/ˈprɒdʒ.ekt/	[plo:.tɕek]	/pr/ ® [pl]

decrease /dɪˈkriːs/ [diː.kʰliːs] /kr/ ® [kl]

6. Cluster Simplification. While there can be up to four final clusters in English, Thai syllable structure allows only one segment finally (Noobutra, 2019). Thus, although simplification of clusters in Thai English are sometimes found onset, most of them occur at final position, notably by omitting the final segment in the cluster. For example,

rest /rest/ [res] /st/ ® [s]

development /dɪˈve.ləp.mənt/ [de.we.loːp.men] /nt/ ® [n]

second /ˈse.kənd/ [se.kan] /nd/ ® [n]

7. Vowel Substitution. Thai English speakers replaced English vowels with the nearest quality in L1. The table below summarizes Thai English vowels with keywords from Well's lexicon set.

Table 6

Thai English Vowel Realizations

Keyword	RP	ThE	Examples
KIT	ɪ	i	ship, sick, milk
DRESS	e	e, eː	step, neck, *friend**[4]
TRAP	æ	ɛ, ɛː	back, tap, *hand**
LOT	ɒ	ɔ	stop, sock, pot
STRUT	ʌ	a	cup, stuck, blood
FOOT	ʊ	u, uː	put, bush, *full, good*
BATH	ɑː	aː	staff, brass, ask
CLOTH	ɒ	ɔː	cross, long, Boston

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[4] * = Short/long vowel variations exist in the complementary distribution of vowels DRESS, TRAP, FOOT, PRICE, MOUTH when a final segment is voiceless/voiced, respectively.

Keyword	RP	ThE	Examples
NURSE	ɜː	ɤː	hurt, lurk, burst
FLEECE	iː	iː	creep, speak, leave
FACE	eɪ	eː	tape, cake, rate
PALM	ɑː	aː	father, bra, spa
THOUGHT	ɔː	ɔː	taught, sauce, broad
GOAT	əʊ	oː	soap, joke, home
GOOSE	uː	uː	loop, shoot, tool
PRICE	aɪ	aj, *aːj*	write, *high, try*∗
CHOICE	ɔɪ	ɔj	noise, join, toy
MOUTH	aʊ	aw, aːw	house, count, *crowd*∗
NEAR	ɪə	ia	beer, sincere, fear
SQUARE	eə	ɛː	fair, pear, where,
START	ɑː	aː	far, sharp, bark
NORTH	ɔː	ɔː	for, born, tore
FORCE	ɔː	ɔː	sport, porch, story
CURE	ʊə	iaw	pure, secure
POOR[5]	ʊə	ua	sure, tour, mature
happY	ɪ	iː	copy, taxi, committee
lettER	ə	ɤː	paper, figure, weather
commA	ə	aː	quota, vodka, sofa

8. Monophthongization. Three out of eight RP's diphthongs are pronounced as plain long vowels in Thai English. These include vowels in FACE, GOAT, and SQUARE pronounced as /eː/, /oː/, /ɛː/ respectively. The collected instances are as follows.

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[5] POOR is not part of the standard lexical set, but has been added as CURE and POOR vowel realizations are contrast in Thai English.

specu<u>late</u>	/ˈspe.kju.leɪt/	[spek.kuː.leːt]	/eɪ/ ® [eː]
<u>pro</u>gram	/ˈprəʊ.græm/	[pʰroː.krɛm]	/əʊ/ ® [oː]
rare	/reə/	[rɛː]	/eə/ ® [ɛː]

9. Syllable-Timed Stress (No vowel reduction). Like many Southeast Asian languages, Thai is said to be a syllable-timed language 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 full vowel and the pronunciation is often based on the spelling. For example,

recommend	/re.kəˈmend/	[rek.kʰɔm.meːnd]
operation	/ɒ.pəˈreɪ.ʃən/	[oː.pʰɤ.reː.tɕʰan]
company	/ˈkʌm.pə.ni/	[kʰɔm.paː.niː]

10. No Nuclear Stress. The findings indicated that most participants did not exercise any particular stress on words they would like to focus nor attention on the last content word. This is called 'tonic stress' or 'nuclear stress'. In English, when speakers want to bring out a special meaning or to clarify what they say, they often place stress on that word. For example,
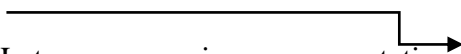
"Do you know the ORIGIN of your name?"

"Give me the BOOK!"

However, this phenomenon was rarely found among Thai learners and only a few participants did so. Most of them did not place any special emphasis on words which carry the

most prominent meaning. The use of nuclear stress enables listeners to pay particular attention to words with the most salient part of the message.

11. No Clear Pattern of Intonation. In terms of intonation, there was no discernible pattern discovered. The majority of the intonation was monotonous and flat. If intonation is used, it is most likely to be falling. For example,

RP	Thai English
Let me summarize my presentation.	Let me summarize my presentation.
Do you have any questions?	Do you have any questions?

12. Tone Transfer. Tone is one of the most distinctive features of Thai English. Most of the participants carry Thai lexical tones to some of the English words uttered, resulting in heavily Thai-accented English pronunciation.

For example,

reduction	/rɪˈdʌkˌʃən/	[rīː.dák,tɕân]
maximum	/ˈmæk.sɪ.məm/	[mɛ́k.sī.mâm]
interesting	/ˈɪn.trə.stɪŋ/	[īn.tʰɤ̄ː.rés.tîŋ]

The above examples show that, instead of lexical stress, Thai learners have tried to apply Thai tones to each English syllable. As Isarankura (2018) mentioned, the use of high tone or rising tone of Thai students in English pronunciation were likely to be percieved as stress in English.

Discussions

Proposal for Thai English Phonological Core

The previous section has revealed a number of Thai-English phonological features derived from the analysis of thirty Thai university students from a range of study fields. These features are identified as Core and Non-core features in Lingua Franca Core by Jenkins (2000). As some of these features of pronunciation are not necessary for mutual understanding in ELF interactions from her empirical study, Jenkins claims that they do not need to be focused or learned by speakers.

As a consequence, this section identifies Thai English pronunciation features that should be included in the ELF pronunciation model based on Jenkins' LFC features. The explanation will be divided into three groups including consonant inventory, vowel inventory, and suprasegmental features.

1. **Consonant Inventory.** Jenkins (2000) suggested that all English consonants should be retained excluding /θ/ and /ð/ and phoneme substitutions are allowed as long as the pronunciation does not overlap with another phoneme. Other requirements include aspiration of /p, t, k/ at word-initial position, the use of rhoticity, intervocalic /t/ as [tʰ], and full clusters at word-initially. The table below illustrates phonological features of Thai English with a brief description and examples. In addition, the last column indicates whether such a feature is intelligible or not based on the LFC model; 'YES' suggests that such features should be intelligible, while 'No' shows that the features could block intelligibility in ELF interactions.

Table 7

Description of Consonant Features of Thai English

Phonological features in Thai English	Description	Examples	ELF Intelligibility
Consonant			
1. Consonant substitution	Non-existent sounds are replaced by similar sounds. /θ/ and /ð/ are replaced with /t/ and /d/ respectively. Other fricative sounds are substituted by Thai's nearest quality.	- ‘theme’ /θiːm/ ® [tiːm] - ‘game’ /ɡeɪm/ ® [keːm]	‘NO’ except the substitutions of /θ/ and /ð/ with /t/ and /d/, and /tɕ/ and /tɕʰ/ for /dʒ/ and /tʃ/.
2. Final consonant devoicing	Obstruents become devoiced at word-final position.	- ‘above’ /əˈbʌv/ ® [a.boːf] - ‘apologize’ /əˈpɒl.ə.dʒaɪz/ ® [a.pʰoː.lo:.tɕais]	‘NO’ Voicing state should maintain its contrast.
3.1 Deletion and substitution of dark [ɫ] with [n]	- Dark [ɫ] is either deleted, replaced with [n]	- ‘cheerful’ /ˈtʃɪə.fəl/ ® [tɕʰia.fuː] - ‘miracle’ /ˈmɪr.ə.kəl/ ® [mi.ra:.kʰɤn]	‘NO’ Dark [ɫ] could be pronounced as clear ‘l’ or ‘w’, not other sounds.
3.2 Vocalization of dark [ɫ] to [w]	- [ɫ] is vocalized to [w]	- fail ® [few]	‘YES’
4. Non-rhotic pronunciation	‘r’ is not pronounced at post-vocalic position.	- ‘march’ /mɑːtʃ/ ® [maːtɕʰ] - ‘scar’ /skɑːr/ ® [skaː]	‘YES’ Non-rhotic pronunciation could be intelligible as an influence from RP.
5. Conflation of /l/ and /r/	/l/ is interchangeably used in place of /r/ at initial position and in clusters.	- ‘redeem’ /rɪˈdiːm/ ® [liː.diːm] - ‘problem’ /ˈprɒb.ləm/ ® [plɔ.blem]	‘NO’ /l/ and /r/ should be pronounced as separate sounds to avoid

Phonological features in Thai English	Description	Examples	ELF Intelligibility
			phoneme overlapping.
6. Cluster simplification	Clusters are reduced to a single consonant, both at initial and final position.	- 'prepare' /prɪˈpeə/ ® [pʰiː.pɛː] - 'defect' /ˈdiː.fekt/ ® [diː.fek] - 'risk' /rɪsk/ ® [ris]	'YES' Initial clusters simplification could result in unintelligibility, while final cluster simplification may not do so.

From the collected data, most of the Thai English consonant features are problematic for intelligibility, except the use of /t/ for /θ/ and /d/ for /ð/ as they are also found in many East Asian varieties. Even Jenkins stated that sound substitutions are permissible, and it was found that most of the ThE substitutions caused sounds to overlap among different phonemes, except the substitution of /tɕʰ/ for /tʃ/ and /tɕ/ for /dʒ/. By applying the concepts of Lingua Franca Core, the conflation of /r/ and /l/, thus, would also lead to intelligible failure.

Furthermore, final consonant sounds were found with more issues since Thais tried to reduce the contrasts of English final sounds to match the eight final sounds in Thai. The proposal for Thai English pronunciation for initial and final consonants is demonstrated in Table 8 below (ü = 'YES' suggesting that such sounds could be intelligible in ELF, c = 'NO' suggesting that such sounds might block intelligibility in ELF).

Table 8

Proposal for Intelligible Pronunciation of Thai English Consonants

English consonants	Sound substitutions		ELF Intelligibility	Proposed Pronunciations in ELF contexts	
	Initial and Medial	Final		Initial and Medial	Final
/b/	-	[p̚]	c	/b/	/b/
/d/	-	[t̚]	c	/d/	/d/
/g/	[k]	[k̚]	c	/g/	/g/
/f/	-	[f], [p̚]	c	/f/	/f/
/v/	[w]	[f], [p̚]	c	/v/	/v/
/θ/	[t]	[t̚]	ü	/t/	/t/
/ð/	[d]	[t̚]	ü	/d/	/d/
/z/	[s]	[s], [t̚]	c	/z/	/z/
/ʃ/	[tɕʰ]	[tɕʰ], [t̚]	c	/ʃ/	/ʃ/
/ʒ/	[tɕʰ]	[tɕ], [t̚]	c	/ʒ/	/ʒ/
/tʃ/	[tɕʰ]	[tɕ], [t̚]	ü	/tɕʰ/	/tɕʰ/
/dʒ/	[tɕ]	[tɕ], [t̚]	ü	/tɕ/	/tɕ/
[ɫ]	-	[w]	ü	-	/w/ or /l/
		[n]	c		
/r/	[ɾ, l]	-	c	/r/	/r/

Therefore, four sound substitutions could be used without affecting intelligibility. These include /t/, /d/, /tɕʰ/, /tɕ/ for /θ/, /ð/, /tʃ/, and /dʒ/ respectively.

As for the production of dark [ɫ] which has proven problematic for most learners, Jenkins proposed that regular substitution with either clear /l/ or /ʊ/ [w] could be applicable for ELF intelligibility. As a result, in regard to Thai English pronunciation, the deletion of ·l· and

substitution with [n] would obstruct intelligibility, while vocalization to [w] as found from the data would not.

In terms of rhoticity, Jenkins suggested pronouncing 'r' in all environments as it matches the English spelling. Deterding and Mohammad (2016), however, argued with Jenkins in terms of the status of rhoticity in LFC and claimed that this feature is uncertain and debatable when many varieties also adopt non-rhoticity feature as an influence from RP. From the pronunciation of Thai English, the data revealed that most Thai people do not pronounce 'r' when it occurs after vowels. So, non-rhoticity in English could be acceptable in ELF interactions.

Regarding the aspiration of /p, t, k/ word-initially, Thais can meet the ELF intelligibility requirement as most of initial stops were pronounced with aspiration. However, it should be noted that there may be some misleading Thai transliteration which guides the unaspiration of /p/ in some words e.g. protein "โปรตีน", paper "เปเปอร์", etc. Likewise, this same kind of transliteration also occurs with the sound /t/ at intervocalic position, in which /t/ is transliterated as an unaspirated segment, such as petroleum "ปิโตรเลียม", fighter "ไฟท์เตอร์", etc.

For consonant clusters, Jenkins emphasized that clusters should not be reduced at initial position. When tackling cluster simplification, two regular methods used by NNSs are to simplify complex syllables either by deletion or addition. In Jenkins' proposal of LFC, consonant deletion in clusters is more of a threat to intelligibility than consonant addition (e.g. Japanese use of 'product' as [pə.rɒ.dʌ.kʊ.tɔ]). From the data collected, Thai speakers were found simplifying clusters both at initial and final positions in the form of deletion. Hence,

more attention should be paid to pronounce full clusters initially, while final cluster simplification (often with the sound /t/ or /d/ e.g. scri<u>pt</u>, be<u>nd</u>) was not an obstruction to intelligibility since they are more challenging to articulate smoothly.

As a result, the proposal for Thai English consonant inventory based on the data collected and the comparison to Lingua Franca Core is as follows.

Figure 3

Proposed Thai English Consonant Inventory for ELF Intelligibility

	Bilabial		Labio-dental		Alveolar		Post-alveolar		Palatal	Velar		Glottal
Plosives	p	b			t	d				k	g	
Fricatives			f	v	s	z	ʃ	ʒ				h
Affricates							tɕʰ	tɕ				
Nasals		m				N				ŋ		
Liquids					l	r						
Glides		w							j			

2. Vowel Inventory. Jenkins (2000) mentioned that Non-Native Speakers of English could use different vowel regional allophones as long as short-long vowel contrasts are maintained. She also emphasized that vowels differ widely in quality from one variety to another. Therefore, it should not be prioritized in L2 teaching. From the findings, English vowels are replaced by the nearest vowel quality in Thai. There are six short vowels and eight long vowels of Thai English, as illustrated in the following figure.

Figure 4

Thai English Vowels

	Front	**Central**	**Back**
Close	i iː		u uː
Mid	e eː		ɤː oː
	ɛ ɛː		ɔ ɔː
Open		a aː	

For diphthongs, Jenner (1995), in his re-examination of English diphthongs, concluded that only three closing diphthongs /aʊ/, /aɪ/, and /ɔɪ/ were common to all NS varieties and necessary for general intelligibility. From the data collected in Thai English, eight diphthongs in RP are reduced to 5 diphthongs, while the other three are monophthongized. The five diphthongs include /ai/, /ɔi/, /au/, /ia/, and /ua/.

The table below demonstrates two types of phonological processes involving vowels in Thai English. It can be inferred that both processes do not block intelligibility in ELF interactions.

Table 9

Description of Vowel Features of Thai English

Phonological features in Thai English	Description	Examples	ELF Intelligibility
Vowel			
1. Vowel substitution	English vowels are replaced by Thai's nearest quality.	- 'younger' /jʌŋ.ə/ ® [jaŋ.kɤː] - 'depart' /dɪˈpɑːt/ ®[diː.pʰaːt]	'YES' Even when substituted with Thai's nearest vowel quality, contrasts between short and long vowels exist.
2. Monophthongization	Three diphthongs /eɪ, əʊ, eə/ are pronounced as plain vowels.	- 'maintain' /meɪnˈteɪn/ ® [meːn.tʰeːn]	'YES'

	- ‹chose›
	/tʃəʊz/ ® [tɕʰoːs]

Suprasegments. Lingual Franca Core identifies ‹nuclear stress› as the only requirement regarding suprasegmental features. All phonological processes related to suprasegments in Thai English as listed in Table 10 are considered non-core and, therefore, do not affect intelligibility. Nevertheless, Thais can still not meet the nuclear stress requirement as most people exercise flat intonation without particular emphasis on any syllables that carry the most prominent meaning (contrastive stress) or unmarked stress (the last content word stress). Thus, more focus should be paid to nuclear stress.

Table 10

Description of Suprasegmental Features of Thai English

Phonological features in Thai English	Description	Examples	ELF Intelligibility
Suprasegments			
1. Syllable-time stress (No weak form)	Stress is distributed equally to each syllable, resulting in no vowel reduction.	- ‹consumer› /kənˈsjuː.mər/ ® [kʰɔn.suːm.mɤː] - pollution /pəˈluː.ʃən/ ® [pʰɔn.luː.tɕʰɤn]	‹YES›
2. No nuclear stress	No particular word receives the most stress at sentence level.	My presentation will be divided into three aspects. (No particular stress on any words)	‹NO›
3. No clear intonation pattern	Intonation is monotonous.	I'm going to cover three areas. (With flat tone)	‹YES›
4. Tone transfer	English words were pronounced with the five Thai tones.	- project /ˈprɒdʒ.ekt/ ® [prō.tɕèk] - investment /ɪnˈvest.mənt/ ® [īn.wés.mén]	‹YES›

Conclusion

This study has identified twelve phonological features of Thai English and analyzed whether they were intelligible based on Lingua Franca Core proposed by Jenkins in 2000. The problematic features identified in this research cover five consonant features and one suprasegmental feature, including 1) consonant substitution, 2) final consonant devoicing, 3) deletion and substitution of dark [ɫ], 4) conflation of /l/ and /r/, and 5) initial cluster simplification, and 6) non-tonic stress. Vowel usage of Thai English did not contrast to features proposed in the Lingual Franca Core, and thus, can be used for intelligible communication. The other six features investigated under this study were regarded as unproblematic in ELF communications and are considered regional variants including 1) non-rhotic pronunciation, 2) vowel substitution, 3) monophthongization, 4) syllable-timed stress, 5) no intonation pattern, and 6) tone transfer.

While several features have been identified as problematic in ELF communications, the occurrence of a single feature would not lead to intelligibility failure, but a combination of several features in a string. The pronunciation model proposed under this study could be a minimum standard to safeguard intelligibility in different L1 interactions. However, it is worth mentioning that this model presents only a 'tendency' of Thai English pronunciation core, not a fixed representation of how people should speak. As Jenkins stated in her YouTube lecture:

.. we did that [research] for quite a long time, but then we realized that actually, you can't really look at ELF like that.. You can't say it's got certain features... that we could

teach… It's such a very fluid, very flexible, very variable phenomenon because it's so diverse…

We look at how hybrid ELF is, how people invent different ways of using English, how people use a lot of accommodation…., adjusting [English] for the benefits of your communication partner (ELF Pron, 2016).

In addition, Kirkpatrick (2011) also claimed that a multilingual who is using English in lingua franca contexts does not need to sound like a native speaker, but they can be allowed to "sound just like a multilingual" to retain their L2 identity. While the LFC remains debatable among English scholars, changing the priority of English language teaching and evaluation away from native-speaker standards and exposing students to a variety of English varieties appears to be gaining acceptance globally. Hino (2016) observed that English speakers in Japan are frequently discouraged from participating in international discussions by their fear of making a mistake, and that if they could overcome this anxiety, they might be able to use the language more freely.

As a result, as English multilingual teachers, it is recommended to provide learners with appropriate targets and goals where they would not be judged purely based on native standards, but by the ability to use language successfully in lingua franca contexts. The fact is that Thai teachers' placing too much emphasis on English grammar and native-like fluency may not enable learners to employ English in their daily lives; rather, it tends to add burden and undermine their confidence and motivation (Kongkerd, 2013). Thus, learners should be encouraged to acquire comfortable production of core items to meet their communication needs. Additionally, they should be able to adjust their pronunciation to make it more

understandable to specific interlocutors and contexts. However, this is not to say that native standards should all be abandoned as standard English can still warrant all contexts of English usage (Suntornsawet, 2019) and most researchers agree that speakers from the Inner Circle are still important (Trudgill, 2005). But the most vital point is, again, to encourage learners to speak English more confidently and clearly with the belief that their English together with accommodation skills could be intelligible in international contexts. As Buriphakdi (2008) stated, "English is not a master but an additional communicative tool to enhance their possibility of being someone equally important as others". Thai learners should be able to leave their English classes with confidence, not the anxiety of making errors.

Limitations and Suggestions of the Study

The pronunciation features collected under this study were limited to Thai learners who were undergraduate students. Therefore, it would be better to cover people who use English in the real job settings. Future research using larger samples with various L1 groups and different job settings would serve to reinforce the findings. Furthermore, the Thai English pronunciation core proposed in this study resulted from comparing core and non-core features only from the LFC proposed by Jenkins (2000). This could be a huge area for scholars and researchers to bring the proposed features into intelligibility measurement and examine them in natural settings.

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