L1 Transfer in the Production of Fricatives and Stops by Pattani-Malay Learners of English in Thailand

Hambalee Jehma[1] & Supakorn Phoocharoensil[1]

[1] Language Institute of Thammasat University, Thammasat University, Bangkok, Thailand

Correspondence: Hambalee Jehma & Supakorn Phoocharoensil, Prince of Songkhla University International College (PSUIC), Prince of Songkhla University, 14, 12th Floor, LRC Building, Kanjanawanij Rd., Ko Hong, Hatyai, Songkhla, 90110, Thailand. Tel: 66-7428-9413. E-mail: jehmahambalee@gmail.com

Abstract

This study investigated the English fricative and stop pronunciation errors produced by Pattani-Malay learners of English. The participants, speaking L1 Malay, were recruited from fifth and sixth graders at Thamwittaya Mulniti School, Yala province, Thailand. The major research instruments used to examine the errors were the word list reading task and the sentence reading task. The findings of this research demonstrate that Pattani-Malay learners of English seemed to have difficulty in producing errors in some specific English fricative sounds in particular positions. The medial voiced labiodental fricative /v/ and the medial voiced interdental fricative /ð/ were apparently the most problematic. The errors in pronouncing the voiced labiodental fricative /v/ and the voiced interdental fricative /ð/ in the initial and final positions were ranked second, followed by the final voiced palato-alveolar fricative / / errors and the final voiceless interdental fricative / / errors respectively. The results revealed that the learner's problems in pronouncing English fricatives and stops are mainly attributed to first language transfer.

Keywords: error analysis, fricatives, L1 transfer, Pattani-Malay, stops

1. Introduction

Bohn and Flege (1992) mentioned that the similarities of some sounds in different languages will not help language learners to produce the sounds similar to their first language correctly, and most researchers agree that there are a lot of difficulties in pronunciation of the languages which are different from their mother tongue (Bohn & Flege, 1992; Trofimovich, Gatbonton, & Segalowitz, 2007). Many studies focusing on the error analysis of pronunciation have shown that the most errors produced by the L1 speakers of Malay and Indonesian, which are really close to Pattani-Malay, are fricatives and stops. For instance, Aman (2011) confirmed that the realization pattern for the word initial voicing contrast in Malay plosives is short-lag for voiceless plosives and vs. voicing-lead for voiced plosives. English, however, has a long-lag vs. short-lag distinction. Moreover, Mathew's (2005) study also reported on similar results. That is, the errors were made by Indonesians in the environment and features that are not found in their first language. In particular, when voiced final stops /b/, /d/, and, /g/ were realized erroneously, they were mostly devoiced. Furthermore, voiceless final stops /p/, /t/, and /k/ were mostly unreleased, which is the case in the phonology of the first three languages mentioned. However, the final /z/ elision predominated, / / was substituted by the alveolar sibilant /z/, and / / was mostly replaced by the alveolar /s/. In addition, Azizi, Jamil and Omar (2013) proved that L1 does have certain influence on the pronunciation of the English language among L1 Malay speakers. The subjects in the study tended to substitute other sounds existing in their L1 for the target fricative and stop sounds of English consonants. Therefore, this present study mainly focuses on these two problematic sounds.

The present-study findings are hoped to give the English language teachers a hand in teaching their students' English fricative and stop pronunciation. The error analysis used in the study shows the errors the students actually make. Accordingly, it will provide a valuable understanding for the teachers in order for them to be aware of the way the students speaking L1 Pattani-Malay really learn the sound system and the difficulties they are going to encounter in English fricative and stop pronunciation. With the findings, teachers can learn how to prepare their lesson plans and the procedures needed to achieve their students' English pronunciation mastery. Moreover, it is also expected that the students who are learning English as a foreign language will reap some

benefits from this study as well, since they will be able to notice the different fricative and stop sounds in target English that do not exist in the L1 Pattani-Malay, and they can practice and finally correctly produce those unfamiliar sounds.

2. Literature Review

2.1 Fricatives and Stops in Malay and English

As Malay is one of the Indonesian branches of Austronesian language member like the Indonesian language, it is spoken widely in South East Asian countries, e.g. Malaysia, Indonesia, Singapore, Brunei Darussalam, and the Philippines (Le Roux, 1998). In standard Malay, there are 17 consonants (b, d, t, g, l, r, k, s, h, m, n, ŋ, , , t ,), 2 glides (j, w), 6 monophthongs (i, e, a, u, o, ə) and 3 diphthongs (ai, au, ua) (Sariyan, 2004, as cited in Lodge, 2009), although the Arabic scripts are sometimes borrowed in order to construct some Malay sounds which appear in the Jawi writing system (Umar, 2007). Since there are many Malay consonants and vowels borrowed from English, the English learning of students who speak L1 Malay can be affected by L1 Transfer (Phoon, 2010). Tables 1- 3 below display the sound system used in the Malay language: the phoneme inventory of Malay consonants, Malay consonants, and examples of Malay words.

Table 1. The phoneme inventory of Malay consonant sounds

	Labial	Alveolar	Post-alveolar*	Palatal	Velar	Glottal	Labial-velar
Plosive/Affricate	p b	t d	tʃ dʒ		k g	(ʔ)	
Fricative	(f) (v)	s (z)	(ʃ)		(x)	h	
Nasal	m	n	ɲ		ŋ		
Trill		r					
Approximant				j			w
Lateral		l					

Soderberg & Olson, 2008

Table 2. Malay consonants

		Bilabial	Labio-dental	Dental	Alvelolar	Palato-alveolar	Palatal	Velar	Glottal
Plosive	*voiceless*	p			t			k	
	voiced	b			d			g	
Affricate	*voiceless*					t			
	voiced								
Fricative	*voiceless*				s				h
	voiced								
Nasal	*voiceless*								
	voiced	m			n			ŋ	
Lateral	*voiceless*								
	voiced				l				
Trill	*voiceless*								
	voiced				r				
Semi- vowel	*voiceless*								
	voiced	w					j		

Adapted from Umar, 2007

Table 3. Examples of Malay words

Consonant sounds	Word sounds	Malay words	Meaning
/p/	paraŋ	parang	'machete'
/b/	baraŋ	barang	'thing'
/t/	tua	tua	'old'
/d/	dua	dua	'two'
/k/	kad i	kaji	'study'
/g/	gad i	gaji	'wage'
/t /	t ari	cari	'search'
/d /	d ari	jari	'finger'
/r/	rumah	rumah	'house'
/m/	masih	masih	'still'
/n/	nasi	nasi	'rice'
/ /	a ian	nyanyian	'song'
/ŋ/	ŋəri	ngeri	'horror'
/s/	sari	sari	'essence'
/h/	hari	hari	'day'
/j/	bajaŋ	bayang	'shadow'
/w/	bawaŋ	bawang	'onion'
/l/	laki	laki	'male'

Soderberg & Olson, 2008

Malay consonant sounds are divided into two main groups, i.e. primary consonant sounds and secondary consonant sounds, but there are fewer secondary consonant sounds since they are borrowed from other languages (Hassan, 2005). Although Malay originally had four vowels, nowadays certain dialects, including Standard Malay, have six vowels, namely /i/, /e/, /a/, /ə/, /o/ and /u/. However, the vowels /e/and /o/ are much less common than the other four.

In English, there are mainly six stops in English: /p/, /t/, /k/, /b/, /d/, and /g/, and there is also the glottal stop / /, which is produced when the articulators come so close together that no air can escape between them. In other words, they occur when the velum is raised so that the air stream escapes through neither the oral cavity nor the nasal cavity. A stop can be defined as a consonant articulation with these specific characteristics: one articulator is moved against another, or two articulators are moved against each other. To form a stricture, there is no air allowed to escape from the vocal tract. This stricture, then, has been formed and air has been compressed behind it and it is finally released. To be more specific, if the air behind the stricture is still under pressure when the stop is released, the escape of the air will probably produce noise loud enough to be heard called a *plosion*. In other words, there are four phases in stop production. The first phase is called the *closure phase*. The phase is when the articulator or articulators move to form the stricture before the second phase occurs. The second is when the compressed air is stopped from escaping and it is called the *hold phase*. After this phase, the articulators used to form the stricture are moved in order to allow air to escape and this phase is called the *release phase,* which is followed by the final phase occurring right afterwards, called the *post-release phase* (Roach, 2000).

English fricatives are of two major categories in terms of voicing quality: voiced fricatives, /v/, /ð/, /z/ and / /, and voiceless counterparts, /f/, / /, /s/ and / /, along with the glottal /h/. The distinguishing feature of the fricative sounds is that when they are produced, air escapes through a small passage and makes a hissing sound. To be precise, the labiodental fricatives /f/ and /v/ are produced when the lower lip is in contact with the upper teeth, yet the fricative noise is never very strong and is scarcely audible in the case of /v/. In addition, the dental fricatives / / and /ð/ are produced when the tongue is actually placed between the teeth. However, the tongue is normally placed inside the teeth with the tip touching the inside of the lower front teeth and the blade touching the inside of the upper teeth. The air also escapes through the gaps between the tongue and the teeth. Additionally, the fricatives /s/ and /z/ are alveolar fricatives with the same place of articulation as /t/ and /d/. They are produced

when the air escapes through a narrow passage along the centre of the tongue, and the sounds produced are comparatively intense. Moreover, the fricatives / / and / / are called palato-alveolar, which means their place of articulation is partly palatal, partly alveolar. The tongue is in contact with an area slightly further back than that for /s/ and /z/. The air escapes through a passage along the centre of the tongue as in /s/ and /z/ but the passage is a little wider. Apart from these, there is another fricative for which articulation is glottal known as the glottal fricative /h/. That is, the narrowing that produces the friction noise is between the vocal folds. When the sound is produced, it is moving the vocal folds from wide apart to close together. (Roach, 2000)

2.2 Contrastive Analysis (CA) and Error Analysis (EA)

Fries (1945) and Lado (1957) proposed the concept of Contrastive Analysis (CA) aimed at systematically investigating the similarities and differences between the native language and the target language and predicts the difficulties that a learner might face while learning a new language (as cited in Chang, 1996). Tseng (2008) supported the notion that similarities of two languages will facilitate learning but differences will increase the difficulties. The advocates of CA strongly believed that a more successful pedagogy would result when the analysis of the native language and the target languages are taken into consideration. It is widely agreed that learner errors produced are derived from the negative transfer related to linguistic differences of the two native speaker language systems (Barkhuizen & Ellis, 2005). In addition, two hypotheses are proposed by CA. First, the strong version of CA claims that the errors made in learning a target language by the native speakers of a specific language can be predicted through CA. The weak version, in contrast, posits that CA can describe the errors or the difficulties made by language learners due to the similarities and differences between their mother tongue and the target language (Wardhaugh, 1970). Thus, the CA has become problematic. Since many of the errors made by language learners cannot be predicted by CA or do not occur, and some do occur without any prediction of CA. The CA method, consequently, has been rejected and researchers have shifted their emphasis to a new alternative method called Error Analysis (EA) (Ellis & Barkhuizen, 2005).

According to Burt, Dulay & Krashen (1982), the term *error* refers to a systematic deviation from a selected norm or set of norms. In the context of the study, using standard American English or other standard varieties of native English will not be considered deviant. Corder (1967) stated that EA is closely related to the study of error treatment in language learning and teaching, and it is very important for today teaching methodology. In other words, EA is an examination of those errors committed by students in both spoken and written media. Corder (1974) stated that the study of errors is part of the investigation of the process of language learning. In this respect, it methodologically resembles the study of the acquisition of the mother tongue. It provides us with a picture of the linguistic development of a learner and may give us indications as to the learning process. Furthermore, EA is a very significant aid in the language learning process. Weireesh (1991) states that the making of errors can be used as a device to identify and explain difficulties faced by learners. It is also a reliable observation to design a remedial teaching method (as cited in Darus & Subramaniam, 2009). In addition, the EA is considered as the monitoring and analysis of learner language. It regards an error as a deviation and potentially important for the understanding of the processes of second language acquisition (Candling, 2001 as cited in Chang, 1996).

2.3 First Language (L1) Transfer

Trask (1996) defined L1 transfer as the imperfections in the use of one language as a result of the influence of another language, such as a foreign accent in speaking in second language. In other words, Odlin (1989) stated that transfer is the influence resulting from similarities and differences between the target language and any other language that has been previously acquired. Dulay et al (1982) classified transfer into positive and negative transfer in referring to the automatic and subconscious use of old behavior in new learning situations. To be more specific, the positive transfer results in correct performance since the new behavior is the same as the old one. The effects of positive transfer are only determinable through comparison of the language use between L1 and L2, and similarities may produce positive transfer (Odlin, 1989). In contrast, the negative transfer is the result of differences between target and native language and can result in errors, underproduction, overproduction and miscomprehension due to misperceptions of target language sound (Odlin, 1989). Flege (1995) emphasized the similarity between the L1 and the L2. L2 sounds that are similar to L1 sounds are difficult to acquire as the learner does not perceive them or classify them as different and hence does not set up a new category of contrast. In terms of phonetics, when the learners become familiar with the sound system of an L2, large phonetic differences between an L2 speech sound and the closest sound in the L1 inventory will promote phonetic learning. To illustrate, Gass and Selinker (2008) confirmed that if a learner comes from a language that has no phonetic contrast between two sounds e.g. /l/ and /r/ and is learning a language where that contrast is obligatory, the learner will have difficulty. Nevertheless, if the first language and the target language both have the same

contrast, there will be little difficulty in learning.

2.4 Related Studies on L1 Transfer in English Pronunciation

Aman (2011) studied some English plosives in the word initial position produced by Malay speakers. Specifically, it was a study of the initial plosives voicing contrast in the speech performance of learners of English whose first language was Malay and native speakers. The investigation confirmed that although English and Malay have similar phonemic contrast for plosives, the phonetic property pattern differs. The realization pattern for the word initial voicing contrast in Malay plosives is short-lag for voiceless plosives versus voicing-lead for voiced plosives. English, in contrast, has a long-lag versus short-lag distinction.

Mathew (2005) also investigated the error pronunciation of consonants made by a group of EFL learners, native speakers of Indonesian, Gayo and Acehnese. His study was limited to the final stops /p/, /b/, /t/, /d/, /k/ and /g/. The study found that the errors were made in the environment and related to features that were not found in their first language. AH, Aman and Kechot (2012) also conducted a study of 'Production and Perception of English Word Final Stops by Malay Speakers'. The goal of the study was mainly to investigate the production and perception of final stops by L2 learners whose first language was Malay. The subjects selected for the study were 16 male and 7 female Malay students. They were asked to give a short interview before recording given sounds. The findings of the study revealed that the Malay students' realization of final stops in L2 was largely identical to their L1 usage.

Moreover, Azizi, Jamil and Omar (2013) also conducted a study entitled 'Debunking the Nation of Nativization in the Pronunciation Variation at Segmental Level among Non-Native ESL Teachers in Sabah, Malaysia'. The subjects of the study were English language teachers of Kadazan ethnic background working in the area of Tuaran and Tamparuli in Sabah, Malaysia. The study investigated pronunciation variations. CA was used in the study in order to analyze the data gathered from the actual utterances of the subjects. The findings of the study showed that L1 does have influence on the pronunciation of the English language. The subjects in the study tended to substitute other sounds existing in their L1 for the target sounds of English consonants. Ibrahim, Kamarudin and Ramachandran (2007) conducted a comparative study of Chinese ESL learners from Malaysia and the People's Republic of China in their pronunciation of /r/ and /l/. Both groups of participants were enrolled in ESL classes in Malaysia at the time of the study. The results indicated that the ESL students from Malaysia generally had more problems in pronouncing /r/ than students from the People's Republic of China, due to Malay L1 interference.

2.5 Research Questions

There are two main research questions according to the problems stated in the previous section:

1) What are the common characteristics of fricative and stop pronunciation errors produced by Thai students speaking L1 Pattani- Malay?

2) To what extent does L1 influence the English fricative and stop pronunciation of Thai students speaking L1 Pattani-Malay?

2.6 Hypotheses

The formulated hypotheses are as follows:

Hypothesis 1:

The errors with fricatives and stops in English were anticipated. The participants were also expected to have problems with individual sounds, such as improper articulation of these sounds. Moreover, there are English fricatives and stops which do not exist in Malay and therefore the subjects replace those sounds with some other sounds which exist in their native language. In other words, they have difficulty producing the sounds which do not exist in their mother tongue.

Hypothesis 2:

The participants have difficulty in pronouncing initial, medial and final English fricatives and stops. They also have some problems in pronouncing some English words containing fricatives and stops which do not exist in L1 Malay.

3. Methodology

3.1 Participants

The subjects were randomly selected from students who were learning English as a foreign language as a required subject in the school of Thamvittaya Mulniti, Yala province, Thailand. The school was located in the

city center of Yala Province. There were approximately 6,000 students in the school, including 2,000 males and 4,000 females. They were separated from each other by the buildings. The male students were taught in one building and the females taught in another building. Moreover, the schedule of the study was different from other government schools. That is, the students are taught from Saturday to Thursday, and Friday is the only holiday in a week. The study system in a day was also different. They were taught Islamic studies in the morning for five periods and another five academic studies were taught in the afternoon.

3.2 Procedure and Instrumentation

The language exposure questionnaire was employed in this research. Adapted from Na Ayudhya (2002), the questionnaire consists of two parts. The first part concerns the frequency of doing activities using central Thai, Southern Thai, and Pattani Malay. The second part is on the frequency of doing activities using English. All the subjects were asked to finish the questionnaire so that the researcher could use the scores for the sampling. In addition, two read aloud tasks were given to the participants for pronunciation. The first task concerned pronouncing single words. There were fifteen groups of words for the participants to pronounce. There were three words in each group and all of the words were focused on fricatives and stops in three positions, namely, the initial, medial and final positions. However, there were some positions excluded in the task since the sounds never exist in these specific positions. To illustrate, the voiced post-alveolar fricative / / in the initial position and the voiceless glottal fricative /h/ in final position were omitted. In addition, the participants were asked to perform a second task, i.e., a sentence read aloud task. The task comprised forty three sentences. All of them included fricative and stop sound words. They were all grammatically correct and meaningful. The sound produced by the participants was recorded via the Audio Memo program on the iPhone 4s before using the percentage in analyzing the data.

3.3 Data Collection and Data Analysis

The data collection was conducted at Thamwittaya Mulniti School in southern Thailand. The participants were asked to finish two kinds of data collection procedures. 80 Mathayom five and six students (59 Mathayom-5 students and 21 Mathayom-6 students) were asked to complete the Language Exposure Questionnaire. Participants whose language proficiency, language experience, or mother tongue were too different from others were excluded from the study so that it would be possible to select the most appropriate ones as participants. Each of the respondents was asked to do the pronunciation task individually in a quiet room. They were required to pronounce in both the first task, saying single words with fricatives and stops in every position (initial, medial and final) and the second task, concerning the fricative and stop sounds in the sentence type task. After the data were recorded, they were carefully listened to and the errors made by the participants were identified. Each error was counted when the participants wrongly pronounced a single word. Some ambiguous sounds pronounced by the participants were listened to by the native speaker since the researchers were not sure if it was an error. They were then categorized into different kinds of error. After that, the frequency of each error was calculated. In addition, all the errors were grouped according to the positions and different kinds of fricatives and stops, namely the initial voiced and voiceless fricatives, the medial voiced and voiceless fricatives, the final voiced and voiceless fricatives, the initial voiced and voiceless stops, the medial voiced and voiceless stops, and the final voiced and voiceless stops. The numbers of errors were finally counted and recorded as percentages. As for the second task, the recorded data were carefully listened to and the errors made by the participants were identified. All the steps were similar to those done in the first task, yet the focus was on the sound in a single word in the whole sentence. Where the participants made errors they were analyzed according to what sounds the participants substituted. Errors were finally counted and recorded as percentages as in the first task.

4. Findings

In response to the first research question, Thai students speaking L1 Pattani-Malay were found to produce errors in pronouncing both fricatives and stops in initial, medial and final positions. The most common errors are displayed in the tables throughout this chapter. They are divided into two main categories: the errors in isolation and the errors in sentences.
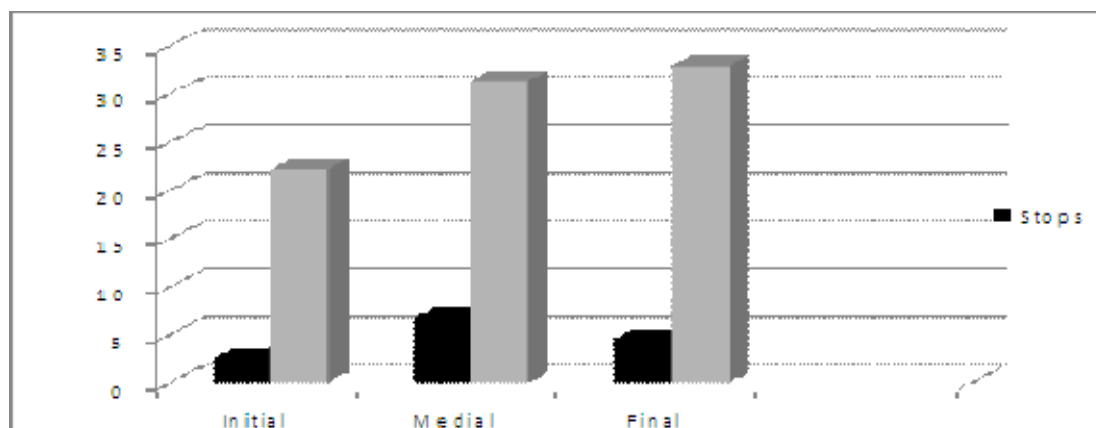
Figure 1. Percentages of errors in pronunciation of stops and fricatives in isolation

Figure 1 shows that the participants wrongly pronounced the fricatives with higher frequency than stops in all positions. Specifically, they mispronounced the fricatives in the final position with the highest frequency (32.95 %), while the fricatives in the medial and initial positions were ranked second (31.14 %), and third (22.16 %) in error frequency respectively. On the other hand, the medial stops were erroneously pronounced with the highest frequency (6.62 %), compared to the other final and initial stops. The participants wrongly pronounced the final and initial stops with 4.5 % and 2.37 % of total errors.
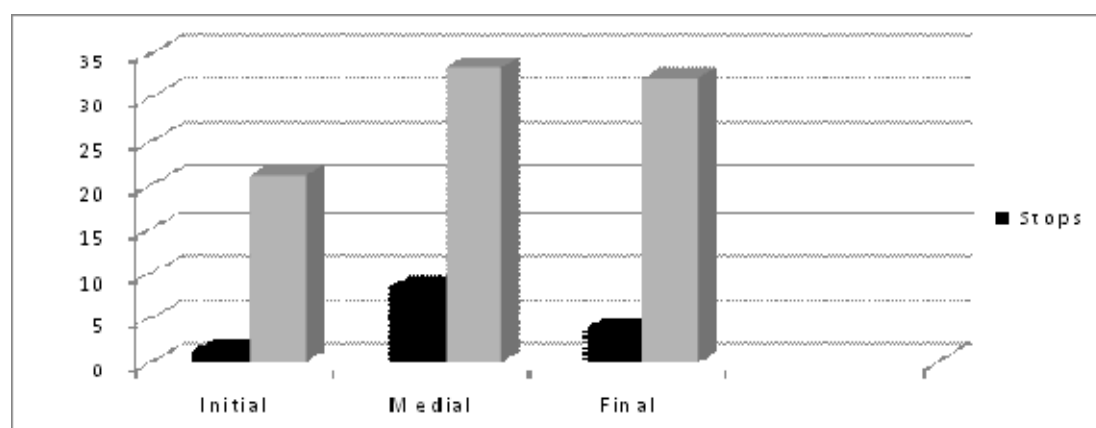

Figure 2. Percentage of errors in pronunciation of stops and fricatives in sentences

Figure 2 indicates that the participants wrongly pronounced the fricatives more often than the stops in all positions. To be specific, the medial fricatives were mispronounced with the highest frequency (33.34 %), while the errors on the final and initial fricatives were ranked second (32.14 %), and third (21 %) respectively. Similarly, the participants also erroneously pronounced the medial stops with the highest frequency (8.43 %), compared to the stops in other positions. They mispronounced the final and initial stops with error rates of 3.82 % and 1.27 % respectively.

5. Discussion

5.1 L1 Transfer

The findings show that six significant sounds seemed to be the most difficult for articulating by the participants whose first language was Pattani-Malay; these were the voiced labiodental fricative /v/, the voiced interdental fricative /ð/, the voiced alveolar fricative /z/, the voiced palato-alveolar fricative / /, the voiceless interdental fricative / /, and the voiceless palato-alveolar fricative / /. The participants incorrectly produced these sounds in all positions with the highest frequency both in isolation and in the sentence task. Although some fricatives do exist in the participants' L1, for example, /s/ and /h/, Malay fricatives are not as rich as their English counterparts. As Phoon (2010) stated, seven English consonants, /v/, /f/, /z/, / /, / /, /ð/ and / /, do not exist in Malay.

Overall, the voiced labiodental /v/ was found to represent the highest frequency of error occurrences in all positions in both tasks, and the highest frequency of the erroneous production was in the medial position. All participants erroneously pronounced the /v/ sound in the medial position. The majority of them substituted the /w/ sound for the target sound /v/, while some of them substituted /f/ and /p/ for the /v/. The same phenomenon occurred in the Djajadiningrat's research (2011). The researcher conducted the study in mapping pronunciation errors. The results corroborated the current study in that the voiced labiodental fricative /v/ was found to cause the highest frequency in error production. The study also confirmed that the participants in the study substituted the /f/ for the target sound /v/. However, the /v/ sound in the final position was ranked the highest frequency error in pronouncing the sound (80%). 70 % of the participants produced errors in pronouncing the /v/ sound in the medial position, and another 50% of them wrongly pronounced the /v/ sound in the initial position.

As Brown (1988) stated, it is likely that the participants' L1 lacks certain consonant sounds required by the standard pronunciation of the English language; when or while speaking the target language, i.e. English, the participants resorted to adapting certain sounds available in their L1 to make up for the differences.

Another sound the participants with L1 Pattani-Malay had difficulty in pronouncing was the voiced interdental fricative /ð/. The errors were found in every position of the words in the second task, with the medial position error rate the highest. All the participants wrongly pronounced the target sound /ð/ in the medial position, along with the other positions, initial and final, which, however, had the errors with less frequency than in the medial position. The participants substituted the sounds which exist in their L1, namely /d/, /t/ and / / for the target sound /ð/ due to the L1 transfer, which is in line with Djajadiningrat's (2011) study. The participants with the L1 of Indonesian erroneously pronounced the /ð/ sound in the medial position with the highest frequency (80%), compared to the other initial and final positions. They also substituted the /t/ or /d/ sounds for the target sound in the initial and medial positions, but some of them replaced the target sound with the /s/ as seen in this study, and some of the Pattani-Malay L1 participants replaced the target sound with the sound / /. Apparently, the L1 does have an influence on second language acquisition, particularly in pronunciation, as confirmed by Azizi, Jamil and Omar's (2013) study. The participants in their study replaced the target sound /ð/ with either /d/ or /t/. A similar error was found in the participants with Malay L1 in Enxhi, Tan and Yong's (2012) study. Since the target sound /ð/ does not exist in their native language, it was replaced with another voiced sound /d/.

These findings were supported by two studies. First, Tiono and Yostanto (2008) revealed that the participants in their study made errors in pronouncing the target sound /ð/, which does not exist in the Indonesian phonetic system. There were four deviations made by the participants. They were the replacement of /ð/ with /d/, /t/ and / /. Some of these deviations could be found in all of the three positions and some could only be noticed in either one or two positions. Moreover, the participants in the study also produced errors in pronouncing both the voiced palato alveolar fricative / / and the voiced alveolar fricative /z/, for these sounds do not exist in their L1 Pattani-Malay. The participants erroneously pronounced the / / sound in both medial and final positions, yet the error in the initial position did not occur since there is no / / in the initial position in English. However, the frequency of errors in the medial position was higher than in the final position. The participants substituted the sounds /s/ and / / for the medial fricative / / and / / was substituted by the sound /t/ or /g/ in the final position. The L1 transfer revealed in this study also confirmed the findings of past studies, e.g. Djajadiningrat (2011). The participants with L1 Indonesian wrongly pronounced the target sound / / in the medial position. They substituted the sound /s/ for the target sound / /. Mathew (2005) also found the same errors. Acehnese does have / / in its phonemic inventory so that this was the most common substitution for / /. In a similar vein, other participants with Indonesian L1 in Tiono and Yostanto's (2008) study substituted the /d/, /z/, /s/ and / / sounds for the / / sound. In the voiceless fricatives, the participants also wrongly pronounced some sounds; the two voiceless fricatives ranked with the highest frequency of errors in pronouncing the sounds were the / / and / /. That is, the participants incorrectly pronounced the voiceless interdental / / in all positions. However, the errors in pronouncing the sound in the final positions occurred with the highest frequency, followed by those in the medial and the initial respectively. The participants replaced the / / sound with other sounds which exist in their L1, namely /t/ and /d/, though some of them substituted the sound / / for this sound.

The phenomenon was confirmed by other studies conducted in similar contexts. The study with non-native ESL teachers whose L1 were Malay by Azizi, Jamil and Omar (2013) found that the sample had difficulty in pronouncing the target sound / / since it does not exist in Malay. Furthermore, the voiced post-alveolar fricative / / was mispronounced though the occurrence of the error was less than that occurring in other fricatives stated earlier. The participants wrongly pronounced the / / sound in the final position with the highest frequency compared to the other positions which were equal. To be precise, the participants replaced the /t /, /t/, /j/ and /s/ sounds for the target sound / / in the initial position, and the substitution of /t/, /s/, /d/ and /t / occurred in the

replacement of the / / sound in the medial position. There were also four sounds, /t/, /s/, / / and /t / replacing the sound / / in the final position. The phenomenon showed that the participants frequently substituted the familiar sounds from their L1, namely /t/, /d/, /s/ and /t /, for the target sound / / in English which does not exist in their L1.

5.2 Developmental Errors

The findings show that there were some errors produced by the participants in the study due to developmental factors. To be precise, the voiced and voiceless stops in the initial and medial positions, namely the voiced bilabial stop /b/, the voiced alveolar stop /d/, and the voiced velar stop /g/ were replaced with the sounds /p/, /t/, and /k/ with the highest frequency, compared to the other stop sounds. The phenomenon also appeared in the study by Mathew (2005), which found that the final voiced stops were mostly devoiced. Therefore, the phenomena could be explained by looking at the developmental process factors. To illustrate, the Gayo speakers in the study also replaced the voiced bilabial stops /b/, /d/ and /g/ sounds with the sounds /p/, /t/, and /k/ respectively, the same error as those shown in this study. This factor was mentioned by Dulay and Burt's (1974) study. They found that a large proportion of errors in acquiring English could be explained as developmental errors. In addition, the phenomenon was confirmed by another study by Flege and Davidian (1984), who stated that one might argue that the devoicing of /b/, /d/ and /g/ by Spanish subjects was also the result of a transfer process. Nevertheless, it was the result of a developmental process. There was no certain information regarding the frequency of word-final /p/, /t/ and /k/ in the speech of monolingual native speakers of Mexican Spanish. However, Mexican Spanish has no native words ending in /p/, /t/ and /k/, making it unlikely that the Spanish subjects used a Spanish phoneme as a substitute for English /b/, /d/ and /g/. This inference is further confirmed by the observation that the Chinese subjects, whose native language has no stops in word-final position, also devoiced /b/, /d/ and /g/.

6. Pedagogical Implications

The findings from the study would lead to certain pedagogical implications. Since the results of the present study emphasize the importance of the understanding and realizing Pattani-Malay English learners' phonological errors concerning fricatives and stops, the syllabus should necessarily contain the phonetic and phonological items that the learner needs to learn and/or finds problematic. The problematic features should be specified and focused when assessing the Pattani-Malay English learners. Moreover, a teaching program for the pronunciation of English fricative and stop sounds for the Pattani-Malay L1 learners could order the items to be included based on the frequency of errors. The numbers of participants who realized each target phoneme could be used as indication of difficulty, the more common errors being addressed first (Mathew, 2005). In addition, the teaching materials in pronunciation of English fricatives and stops should include these erroneous sounds found in the study and ordered based on the frequency, difficulty, the role of the first language and the relative importance of the different phonemes of English (Lowes, 1990). In addition, the normative data in the present study can serve the prerequisite to the eventual establishment of standardized phonological perception practice especially the fricatives and stops for Pattani-Malay speaking learners so that they can specifically prepare pronunciation teaching in which the teachers can use some teaching methodology, namely a minimal pair in order to increase perception of differences between the phonemes of English as well as the production of adequately different realizations of them (Mathew, 2005). Furthermore, the study suggests that the EFL teachers themselves should be aware of the actual errors committed by EFL learners speaking L1 Pattani-Malay and should familiarize themselves with the correct pronunciation of the problematic fricative and stop sounds presented in the study so that they will be able to act as a role model for their students. The teachers should also give them ample authentic practice to overcome these difficulties in order to avoid their deviant pronunciation, which may become fossilized unless corrected in time.

7. Conclusion

The pronunciation of English is very important to all English L2 learners since they are required to pronounce it correctly and effectively (Breitkreutz et al., 2001) for an accurate understanding in communication. The stops and fricatives are two categories of English sounds that seem to be the difficulties in articulating by learners of English. The findings of this study proved that L1 does have certain influence in the pronunciation of English stops and fricatives. The fricative and stop sounds which are absent in the Pattani-Malay dialect seem to be replaced with other sounds that are almost similar to the English stops and fricatives. That is, the majority of the participants with Pattani-Malay L1 substituted the /w/ sound for the target sound /v/ though some of them replaced the /f/ and /p/ for the /v/.Moreover, the participants replaced the target sound /ð/ with either /d/ or /t/ in all positions. However, the error in the medial position was ranked the highest. Furthermore, the participants

substituted the sounds /s/ and / / for the medial fricative / / and it was substituted by the sound /t/ or /g/ in the final position. Moreover, they also replaced the /z/ sound in the medial position with /s/ and / / sounds, yet some of them replaced the sound with /s/ or /k/. The study also showed that the participants frequently replaced their familiar sounds in their L1, namely /t/, /d/, /s/ and /t / for the target get sound / / in English which never exists in their L1. Accordingly, other errors found in the study can be explained by the developmental factors. To indicate, the voiced and voiceless stops in the initial and medial position, namely the voiced bilabial stop /b/, the voiced alveolar stop /d/ and the voiced velar stop /g/ were replaced with the other sounds, i.e. /p/, /t/ and /k/ respectively as confirmed by Macken and Ferguson (1981) that the developmental processes is considered to be problematic in nature and the individual learners will show the effect of various developmental processes during speech learning.

8. Recommendations

This study is a first step towards describing and accounting for pronunciation errors - particularly in stops and fricatives - of Pattani-Malay speakers from the southernmost provinces of Thailand. Investigation of errors in production of other English phonemes is recommended. Moreover, future research could include testing of children of different age groups in order to investigate whether age is a factor. More precisely, a longitudinal study could be conducted on children as individual factors, such as gender and parents' educational background are stable over time in a longitudinal study. Therefore, researchers could observe the relationship between age and phonological changes. Such longitudinal studies should provide a true depiction of children's phonological development, the extent which cross sectional results align with longitudinal data indicates the true developmental function. Moreover, since there was only one group of Pattani-Malay speakers observed in this study, studies of other student groups with L1 Thai or other Thai dialects from different regions are suggested. Not only are children with different L1 recommended as subjects to study, but also bilingual Thai-Pattani-Malay children are suggested as a group which could provide valuable data. Finally, to overcome the difficulties in pronouncing the specific problematic sounds in English, research in teaching methodology concerning phonological genres is recommended. In other words, experimental study in teaching methodology related to the pronunciation problems identified is needed since the results could provide effective tools to help the learners master the pronunciation.

References

AH, S., Aman, R., & Kechot, A. S. (2012). Production and Perception of English Word Final Stops by Malay Speakers. *GEMA Online® Journal of Language Studies, 12*(4), 1109-1125.

Aman, R. (2011). An acoustical study of English plosives in word initial position produced by Malays. *The Southeast Asian Journal of English Language Studies, 17*(2), 23-33.

Azizi, A. A., Jamil, S. S., & Omar, H. M. (2013). Debunking the notion of nativization in the pronunciation variation at segmental level among non-native ESL teachers in Sabah, Malaysia. *International Journal of Pedagogical Innovations, 1*(10), 1-10.

Bohn, O. S., & Flege, J. (1992). The production of new and similar vowels by adult German learners of English. *Studies in Second Language Acquisition*, *14*(2), 131-158. http://dx.doi.org/10.1017/S0272263100010792

Brown, A. (1988). *The pedagogical importance of consonantal features of the English of Malaysia and Singapore*. Singapore. Singapore University Press.

Burt, M., Dulay, H. C., & Krashen, S. (1982). *Language Two*. Oxford University Press. New York.

Candling, R. B. (2001). *Vocabulary and language teaching*. New York: Longman Inc.

Chang, Y. N. (1996). *Chinese learners' perception and production of the vowels: /e/. /ei/, /o/,& /ou/ in English by contrastive analysis*. Unpublished M. A. Thesis, National Cheng Kung University, Taiwan.

Corder, S. P. (1967).The significance of learners' errors. *International Review of Applied Linguistics*, *5*, 160-170. http://dx.doi.org/10.1515/iral.1967.5.1-4.161

Corder, S. P. (1974). Error analysis. In J. L. P. Allen, & S. P. Corder (Eds.), *Techniques in applied linguistics*. Oxford. Oxford University Press.

Darus, S., & Subramaniam, K. (2009). Error analysis of the written English essays of secondary school students in Malaysia: A case study. *European Journal of Social Science*, *8*(3), 483-495.

Djajadiningrat, I. (2011). The mapping of pronunciation error. *Seminar Semester Genap, 1*(1), 7-11.

Dulay, H. C., Burt, M., & Krashen, S. (1982). *Language two*. Oxford University Press. New York.

Ellis, R., & Barkhuizen, G. (2005). *Analysing learner language*. New York. Oxford University Press.

Enxhi, S. Y., Tan, B. H., & Yong, M. F. (2012). Speech disfluencies and mispronunciations in English oral communication among Malaysian undergraduates. *Chance*, *1*(7), 19-32.

Fatt, K., Rashid, R., & Selamat, R. (1997). *Pengajianmelayu 1*. Selangor: Longman Malaysia Sdn.

Flege, J. E. (1995). Second language speech learning: theory, findings, and problems. In W. Strange (Ed.), *Speech Perception and Linguistic Experience: Issues in Cross-Linguistic Research* (pp. 233-277). York Press. Timonium, MD.

Flege, J. E., & Davidian, R. D. (1984).Transfer and developmental processes in adult foreign language speech production. *Applied Psycholinguistics*, *5*(4), 323-347. http://dx.doi.org/10.1017/S014271640000521X

Fries, C. C. (1945). *Teaching and learning English as a foreign language*. Ann Arbor. University of Michigan Press.

Gass, S., & Selinker, L. (2008). *Second Language Acquisition: An Introductory Course* (3rd ed.). Routledge/Taylor Francis. New York.

Hassan, A. (2005). Language planning in Malaysia: The first hundred years. *English Today*, *84*, 3-12. http://dx.doi.org/10.1017/S0266078405004025

Ibrahim, W., Rahela, N., Kamarudin, M. F., & Ramachandran, S. D. (2007). A comparative study of Chinese ESL learners from Malaysia and the People's Republic of China in their pronunciation of/r/&/l.

Lado, R. (1957). *Linguistics across cultures*. Ann Arbor: University of Michigan Press.

Larsen-Freeman, D., & Long, M. H. (1991). *An Introduction to second language acquisition research*. New York: Longman.

Le Roux, P. (1998). To be or not to be… the cultural identity of the Jawi (Thailand). *Asian Folklore Studies, 57*, 223-255. http://dx.doi.org/10.2307/1178753

Lodge, K. (2009). *A critical introduction to phonetics*. New York: Continuum International Publishing Group.

Lowes, R. (1990). *Towards a rationale for the development of materials for the teaching of pronunciation to speakers of Castillian Spanish*. Unpublished Masters thesis, Institute of Education, University of London.

Macken, M. A., & Ferguson, C. A. (1981). Phonological universal in language acquisition. *Annals of the New York Academy of Sciences*, *379*(1), 110-129. http://dx.doi.org/10.1111/j.1749-6632.1981.tb42002.x

Mathew, I. (2005). Errors in pronunciation of consonants by learners of English as a foreign language whose first languages are Indonesian, Gayo and Acehnese. *Monash University Linguistics Papers, 3*(2), 29-44.

Na Ayudhya, S., P. (2002). *Models of mental lexicon in bilinguals with high and low second language experience: An experimental study of lexical access*. Ph.D. Dissertation, Linguistics Department, Chulalongkorn University.

Odlin, T. (1989). *Language transfer: Cross-linguistic influence in language learning*. Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/CBO9781139524537

Phoon, H. S. (2010). *The phonological development of Malaysian English speaking Chinese children: A normative study*. New York: University of Canterbury.

Roach, P. (2000). *English phonetics and phonology*. Cambridge: Cambridge University Press.

Sariyan, A. (2004). *Tertibmengarang: Asas retorik untuk pelajar dan pendidik*. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Soderberg, C. D., & Olson, K. S. (2008). Indonesian. *Journal of the International Phonetic Association*, *38*, 209-213. http://dx.doi.org/10.1017/S0025100308003320

Tiono, N. I., & Yosta, A. M. (2008). A Study of English Phonological Errors Produced by English Department Students. *k@ ta*, *10*(1), 79-112. http://dx.doi.org/10.9744/kata.10.1.79-112

Trask, R. L. (1996). *A dictionary of phonetics and phonology*. London: Routledge.

Trofimovich, P., Gatbonton, E., & Segalowitz, N. (2007). A dynamic look at L2 phonological learning: Seeking processing explanations for implicational phenomena. *Studies in Second Language Acquisition*, *29*, 407-448. http://dx.doi.org/10.1017/S027226310707026X

Tseng, Y. W. (2008). *Taiwanese EFL learners' interlanguage variation of English /　/, /　/, /　/*. M. A. Thesis.

Providence University, Taiwan.

Umar, U. (2007). An investigation into the Melayu dialect spoken in Bang Bua Thong, Bangkok and its origins. *KasemBundit Journal*, *2(8)*, 83-94.

Wardhaugh, R. (1970). The contrastive analysis hypothesis. *TESOL Quarterly, 4*(2), 123-130. http://dx.doi.org/10.2307/3586182

Weireesh, S. (1991). How to analyze interlanguage. *Journal of Psychology & Education, 9*, 113-122.