The phonological interference of Patani Malay and Thai in English on grade 4 students who speak Patani Malay as mother tongue

ภาวะแทรกซ้อนระดับเสียงจากภาษามลายูปาตานีและไทยในภาษาอังกฤษของนักเรียนชั้นประถม 4 ที่พูดมลายูปาตานีเป็นภาษาแม่

Received: *December 25, 2018*
Revised: *April 24, 2019*
Accepted: *September 4, 2019*

Nurulhusna Paramal
นูรุลฮุสนา ปารามัล
Research Institute for Languages and Cultures of Asia, Mahidol University
สถาบันวิจัยภาษาและวัฒนธรรมเอเชีย มหาวิทยาลัยมหิดล
nurulhusna.prm@gmail.com

Abstract

Patani Malay speakers are exposed to a multi-lingual context. They speak Patani Malay as their mother tongue and they are exposed to Thai as the national language. They also learn Jawi and Rumi script at religious schools. Furthermore, they are obliged to learn to recite the Quran which is written in Arabic. Thus, it is possible that Patani Malay speakers have advantages in pronouncing different languages.

This study attempts to identify the phonological features of Patani Malay and Thai that interfere with English spoken by Patani Malay speaking elementary students and the factors that cause them in recognizing and producing English words, stress and intonation. Language contact and language interference were employed as theoretical frameworks. The instrument used for collecting the data was a two-fold test to examine the interference, namely a recognition test and the production test.

The findings reveal that the phonological features of the languages that Patani Malay speakers are exposed to have both positive and negative transfer effects in particular the Patani Malay language (PM) has a positive influence on pronunciation of simple initial consonants in English— the problematic sounds were fricative and affricate sounds. The Thai and Arabic phonology familiar to PM speakers helped in pronouncing simple final consonants— the problematic sounds were fricative, affricates, and stops. As for negative transfer, Patani Malay speaking students had difficulties in pronouncing initial and final clusters because there are limited clusters in their exposed language. Additionally, Thai is more influence on Patani Malay speakers when they pronounce in the aspects of vowels, stress and intonation.

Keywords: phonological interference, pronunciation, Patani Malay, Thai, English

บทคัดย่อ

บทความฉบับนี้มีวัตถุประสงค์เพื่อศึกษาภาวะแทรกซ้อนทางเสียงของภาษามลายูปาตานีและภาษาไทยในภาษาอังกฤษ และศึกษาปัจจัยที่ส่งผลต่อการออกเสียงภาษาอังกฤษในนักเรียนประถมศึกษาปีที่ 4 ที่พูดภาษามลายูปาตานีเป็นภาษาแม่ ผู้วิจัยใช้แนวคิดหลักการสัมผัสภาษา และหลักการแทรกแซงภาษา ในการวิเคราะห์ ผลการวิเคราะห์พบว่า มีการถ่ายโอนภาษา จากภาษามลายูปาตานี ภาษาไทย และภาษาอาหรับไปสู่ภาษาอังกฤษ 2 ลักษณะ คือการถ่ายโอนภาษาในเชิงบวกและเชิงลบ ภาษามลายูปาตานีมีการถ่ายโอนภาษาในเชิงบวกในการออกเสียงพยัญชนะต้นในภาษาอังกฤษ โดยเสียงที่มีปัญหาคือ เสียงเสียดแทรก และเสียงกึ่งเสียดแทรก ขณะที่ภาษาไทย และภาษาอาหรับมีการถ่ายโอนภาษาในเชิงบวกในการออกเสียงพยัญชนะท้าย โดยเสียงที่มีปัญหาคือ เสียงเสียดแทรก เสียงกึ่งเสียดแทรก และเสียงระเบิด และภาษามลายู- ปาตานีมีการถ่ายโอนภาษาในเชิงลบในการออกเสียงควบกล้ำทั้งส่วนต้น และท้ายคำในภาษาอังกฤษ โดยมีปัจจัยมาจากข้อจำกัดทางเสียงของภาษามลายูปาตานี และภาษาไทย นั่นคือไม่มีเสียงควบกล้ำท้ายคำ อย่างไรก็ตามผู้วิจัยพบว่านักเรียนที่สามารถออกเสียงควบกล้ำท้ายได้นั้น มีปัจจัยมาจากการถ่ายโอนภาษาจากภาษาอาหรับในภาษาอังกฤษ และพบว่าภาษาไทยมีการแทรกซ้อนมากกว่าภาษามลายูปาตานีในด้านการออกเสียงสระ เน้นเสียง และทำนองเสียงในการออกเสียงภาษาอังกฤษของนักเรียนที่พูดภาษามลายู ปาตานีเป็นภาษาแม่

คำสำคัญ : ภาวะแทรกซ้อนระดับเสียง, การออกเสียง, ภาษามลายูปาตานี, ภาษาไทย, ภาษาอังกฤษ

1. Introduction

The three southernmost provinces of Thailand, Pattani, Yala, and Naratiwas, have a unique language and culture. Eighty three percent of the million-plus population speaks Patani Malay language as the mother tongue (Premsrirat, 2010) and they are mostly Muslims. The Patani Malay dialect which is used in the Deep South of Thailand is different from the official Malay of Malaysia, Brunei Darussalam, and Indonesia. It is similar to Kelantanese, which is widely spoken in Kelantan in the north of Malaysia; neighboring the three Thai provinces. In general, Patani Malay itself is not a written language, but is sometimes written in Thai or used in informal settings or for karaoke. When writing is needed, Patani Malay speakers use Classical Malay written in the 'Jawi' script. Jawi is based on the Arabic alphabet used in writing, which is a bit different from speaking. Classical Malay is mainly used in religious books, letters, newspapers, radio programs which broadcast news and commercials, and so on. Moreover, in performing Islamic religious rituals, they usually use Classical Malay. Islamic books are read in Classical Malay and then explained in Patani Malay. It is also used as the medium in religious classes in Islamic private schools. Malay speakers in Malaysia and Indonesia now use the Roman script—known in Patani Malay as Rumi—for their daily communication, unlike in Pattani, Yala, and Naratiwas.

In the Deep South of Thailand, it is common practice for Muslim children to go to 'Tadika school' (primary religious school) at the same age as they go to general school. Here, where Patani Malay children learn to read and write in Classical Malay (Jawi script), Standard Malay (Rumi script) and even Arabic—the language of the Quran—the medium of instruction is Patani Malay and Classical Malay. Moreover, apart from in the Thai media, signs, etc., which Patani Malay children are exposed to from a young age, they also learn Thai at state schools as the Compulsory Education Act (1925) requires all children to attend Ministry of Education-approved schools, whose language of instruction is Thai. Additionally, English is one of the compulsory courses in the Thai educational system from primary level up to university. As such, Patani Malay children encounter four languages from a relatively young age. The four languages to which they are exposed are: Patani Malay, which is the children's mother tongue language; Thai, which is the national language; Classical Malay, which is the language of instruction in primary religious schools; and English, which is the foreign language children learnt at school. Furthermore, Arabic is another language that children learn from the start of school because of the obligation for all Muslims to study the Quran.

In learning a foreign language, mastering the sound system is of primarily concern in order to speak with acceptable pronunciation, since "the sense, and consequently the understanding of a word, depends upon its pronunciation, even if it is pronounced only mentally," (Handchin, 1923). For example, when someone asks you 'How old are you?' and you reply 'I'm sick' instead of 'I'm six,' the person who is asking might think that you are actually 'sick'. Therefore, clear and correct pronunciation is important.

Many studies have found that mispronunciation by non-native English speakers when they speak English is systematic rather than accidental. Briere and Chiachanpong (1980), Plailek (2012), and Atthaphonphiphat (2017) demonstrate that Thai students have difficulties pronouncing sounds with which they are unfamiliar. Fries (1948) stated in his book, "the basic problems arise not out of any essential difficulty in the features of the new language themselves but primary out of the special set created by the first language habits." In the other words, the difficulties new language learners face are caused by the interference habits from their mother tongue, not because of the new language. Interestingly, this assumption is the opposite for Patani Malay speaking children when they learn English. According to Waelateh (2016), the linguistic background of children in the three southern border provinces includes numerous sounds which cannot be found in their mother tongue and can possibly be made use of as a "precious resource" when they learn foreign languages. The fact is though their pronunciation of English is no better than other Thai learners of English.

Although Patani Malay speakers exhibit the same difficulties in English pronunciation as regular Thai speakers, the studies mentioned were conducted with speakers whose first language was Thai, not Patani Malay. Therefore, this study aims to distinguish the difficulties of pronunciation of problematic sounds by investigating the issue using Patani Malay subjects only. The objective is to identify the phonological features of Patani Malay and Thai which obstruct the English spoken by Patani Malay speaking elementary students, and to examine the factors which cause interference by analyzing the errors made by Patani Malay speaking elementary students. This study will help English teachers identify problems in their teaching or difficulties their students encounter in their learning so as to make practical use of the linguistic advantage that their linguistic background offers Patani Malay speaking students. This will help them avoid the L1 interference that Thai mother tongue speakers encounter, which severely inhibits their learning of English. This study also proposes pedagogical approaches that teachers in BE-MLE programs can use to help students master pronunciation of phonemes,

and stress and intonation patterns of English, and serve as a basis for the preparation of English teaching materials for Patani Malay students.

2. Literature Review

Several studies in the field of second language acquisition have discussed the factors that obstruct non-native English speaking learners in pronouncing English words or sentences. Researchers and linguists also pointed to linguistic factors such as language contact and first language interference.

2.1 Language Contact

In the field of sociolinguistics, 'contact' is described as:

> a situation of geographical continuity or close social proximity between languages or dialects. The result of contact situations can be seen linguistically, in the growth of loan words, patterns of phonological and grammatical change, mixed forms of language, and a general increase in bilingualism of various kinds. In a restricted sense, languages are said to be 'in contact' if they are used alternately by the same persons, i.e. bilinguals. The term contact language or contact vernacular is also sometimes used to refer to a pidgin (David Crystal, A Dictionary of Linguistics and Phonetics, 2006: 102).

Regarding language contact, many languages are connected in some ways, which effects their linguistic systems and is one of the factors enabling bilingual to better understand how the language system of those languages is structured. For this reason, it can be seen that some elements used in a language change (Weinreich, 1953).

Bilingualism or multilingualism need not to be fluent in the languages that they acknowledge or are able to speak (Thomason, 1988: 2). In addition, it can be said that religion is also a factor that enables people to know more than one language or happen to have some receive loan words from the original language in which their religious texts were written. For instance, Latin loan words are used in Christian rites. Many Buddhists in Southeast Asia, especially Thailand, Laos, Cambodia, and Myanmar know Pali. Most Muslims of course are familiar with Arabic, the language of the Quran used in recitation. Believers of those religions acknowledge loan words in scripture but other than Arabic speakers, few have competency in

those original liturgical languages as they are now dead. Arabic words, on the other hand, are used far beyond Arabic speaking countries by Muslims in all countries (Thomason, 2001:3).

Not only religions enables people to know another languages through loan words, but also non- native English speakers become familiar with English, especially through media (Thomason, 2001: 3-4).

Thomason (2001:8) confirms that language contact can occur in any languages and adds that language contact definitely initiates changes including contact-induced change influenced by social factors even though it is at least in part by language (Thomason, 2007:42).

There were many factors that influence the linguistic outcomes of language contact, especially history, economy, politic, and demography (Sankoff, 2001: 638-668). Thomason & Kaufman focused on the belief that historical events played a role in language contact as well as indirect factors (Thomason and Kaufman, 1988:14-15).

According to linguists, three basic characteristics define language contact: two or more languages (or dialects), the speakers of these languages, and a setting in which contact occurs. Basic linguistic nature of the language families in contact is also an important factor in describing the contact-induced linguistic outcomes. Thus, it can be said that Thai, Arabic, and Standard Malay (Rumi script) are in contact languages for Patani Malay speaking students, since they are exposed to these languages.

2.2 Language Interference

Dulay et al (1982) define interference as "the automatic transfer", due to the habit of L1 into L2. As same as Decharts & Ellis (Decharts & Ellis, as cited in Bhela, 1999), they define that when foreign language learners speak or write in the target language, they tend to depend on their L1 structure. If the structures are different, then particular errors will take place in L1. This exhibits an interference of L1 on L2. Lott (1983:256) defines interference as "errors in the learner's use of the foreign language that can be traced back to the mother tongue".

Beardsmore (1982) explains that many of the difficulties foreign language learns have with phonology and syntax of the target language are because of the interference of habits from L1.Those errors that occur in learning L2 can be categorized as follows:

> 1) Developmental errors: the errors that are not related to learner's first language, 2) Ambiguous errors: the errors that involve interference and developmental errors, 3) Unique errors: the errors which cannot be

categorized neither in interference nor developmental errors (Dulay, Burt, & Krashen, 1982).

Ellis (1997: 51) relates to interference as 'transfer', which he says is "the influence that the learner's L1 exerts over the acquisition of an L2". According to him, L1 transfer is governed by learners' perceptions about what is transferable as well as their stage of development in L2 learning. In learning L2, learners construct their own temporary rules with the use of their L1 linguistic background when they believe that it will help them in learning L2.

Lado (1958: 13) points that "the cause of foreign accent" is when L2 learners are not able to pronounce a phoneme in the target language because the phoneme does not exist in their L1 and they substitute some other phoneme from their L1. Thus, he calls this sound substitution made in L2 as "pro-active interference", "native language interference", or just "interference".

Ellis (1997) explains that the errors that learners make in the target language reflect differences in the learner's knowledge between L1 and L2; they happen because the learners either find the structure difficult as they are different from their L1 or do not know which are correct. The errors reflect particular mistakes in production; they occur because the learners are unable to produce what they know.

So, with regard to these issues, the researcher of this study aimed to determine the mispronunciation and substitution patterns of particular sounds made by Patani Malay speaking students and examine the factors that cause errors when they speak English.

3. Methodology

3.1 Research Subjects

The research subjects were students in fourth grade and their teacher who teaches the English subject in Yarang district, Pattani province. In selecting participating students for the study, there were five criteria:

1) Students needed to speak Patani Malay as the mother tongue,

2) Students had to be able to decode at least simple English text,

3) Students had to be in the mother tongue-based multilingual education program,

4) Students had to have the ability to perform all the tests,

5) They had to have the permission of their parents and teachers to participate in this study.

3.2 Research Environment

The research was conducted at one of four pilot schools employing Patani Malay-Thai Bilingual/Multilingual Education teaching methodology in Pattani. Two hundred and nineteen students were attending this medium sized school during this time, ranging in age from 5 to 13 years. The students are all Muslim. The school is situated in a suburban area in the Deep South of Thailand, where there has been ongoing political unrest since 2004.

The community's population is mostly Muslim. The local language and mother tongue of these students is Patani Malay. They are exposed to Thai at school and through media such as television programs, books, signs, etc,. Furthermore, they learn to read the Quran which is written in Arabic. The few Buddhists in the community use Thai as their first language, and the students are learning English as foreign language, though they have very little or no opportunity to hear or speak English outside the classroom.

3.3 Data Collection Procedures

The following procedure was used for data collection;

1) A linguistic analysis of the sound system of the target language, English, and similar descriptions of the languages of the students was undertaken with Patani Malay as the mother tongue and Thai as the second language.

2) The three sound systems were compared phoneme by phoneme to locate and describe the points of difficulty.

3) Lists of difficulties were prepared to be tested; for recognition and production. Since the difficulties differ somewhat as to recognition and production, different lists were necessary to test the student's pronunciation skills in listening and speaking.

3.1) Recognition Tests

In listing the recognition difficulties, the researcher highlighted the sounds that were difficult to distinguish for speakers of a particular native language from those that they were likely to confuse them with. Then, the researcher listed these difficulties in pairs. For example, Patani Malay speakers have trouble distinguishing /θ/ in English because of the lack of a parallel phoneme in Patani Malay. The phoneme is heard as /s/ in Patani Malay, which is transferred

as English /s/. So the difficulty was listed as English /s/ confused with English /θ/ in the listening.

3.2) Production Tests

In speaking, unlike the recognition tests, minimal pairs are not necessary for production tests. The list was prepared by comparing the phonological analysis of the target language (English) with that of the mother tongue of the students (Patani Malay). This is because when the sound system of the foreign language differs from the native language at any point, the native language system is transferred to the foreign language, creating a problem of production (Robert Lado, 1957).

4) Recognition and production tests were designed. The researcher studied the techniques of language testing presented in Lado's book, "Language Testing" (1965).

5) The tests were trialled on three students with the same background as the subjects in the pilot study. The findings of the pilot study were as follows.

5.1) Recognition Tests

It was found that the subjects could not distinguish the phonemes. It is assumed that this was because of the way the speaker pronounced the phonemes because the native speaker who modelling the language was asked to pronounce the words using a natural style, not exaggerated.

5.2) Production Test: Individual Words

It was found that there not only Patani Malay influenced the English pronunciation of Patani Malay speaking students; Thai and Arabic also influenced in their English pronunciation. Furthermore, the subjects probably got bored and exhausted doing the test because the test comprised many words.

5.3) Production Test: Reading 'The Little Red Hen' aloud

As far as stress was concerned, it was found that most of the subjects used extra pauses in words like 'diligent', quickly', 'chores', 'prepare', 'grain', 'wheat', and 'myself'. This can be explained by the fact that these words are not frequently used, so the subject possibly felt the need to pause in order to consider how to pronounce them.

As for intonation, it was found that the subjects used only falling contour and rising contour. They used rising contour in statements in which the last syllable of the sentence was a monosyllabic dead syllable. For example; 'Who will help me cut this wheat?' They used

falling contour in unfinished sentences. It was also found that the subjects usually made pauses in long sentences.

6) Use the findings from the pilot study to develop the tests.

6.1) Changes were made to the pronunciation to make it clearer and exaggerate it for the recognition tests.

6.2) The test was made simpler by grouping and classifying the test items into patterns for individual words in the production tests.

6.3) A new story was selected containing more common words without proper nouns and with shorter sentences for the reading aloud part of the production tests.

7) The tests were validated and native-like stress and intonation patterns were from two native speakers of Standard American for the reading aloud part of the production test.

8) The tests were administered.

3.4 Data Analysis

1) After collecting the data, all the tests were scored and analyzed.

1.1) Recognition Tests

The recognition tests were scored by calculating the percentage of accuracy. The test item that caused the most mistakes for the participants was deemed to be the most difficult sounds for Patani Malay native speakers to recognize.

1.2) Production Tests: Individual Words

The researcher, as examiner, concentrated on the one difficulty that the item was designed to test and disregarded all others. A refinement of this procedure was to have not only the test word with the difficult sound underlined, but to also include a symbol representing the distortion produced by the subjects. So, when the response was wrong, the mark was made beside the symbol presenting the distortion, and the response was right, the mark was made beside the letters or symbols representing the right sound.

1.3) Production Tests: Reading 'Are You My Mother?' aloud

The researcher analysed the test using the acoustic method by means of the Praat program.

The stress is detected in the form of loudness, pitch, and vowel duration. These three features can be recognized by 'intensity' (dB), represented by a solid line, 'pitch' (Hz) represented by a dotted line, and 'the length of wave form' (Sec.) represented by amplitude (Collins & Mess, 2003), as shown in Figures 1 and 2.

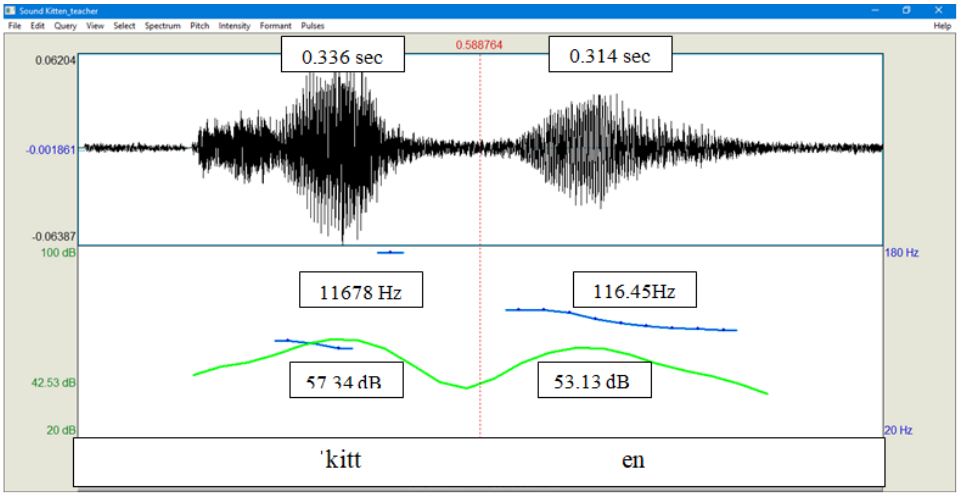

Figure 1 Wave form, the pitch, and the intensity of words spoken by the teacher

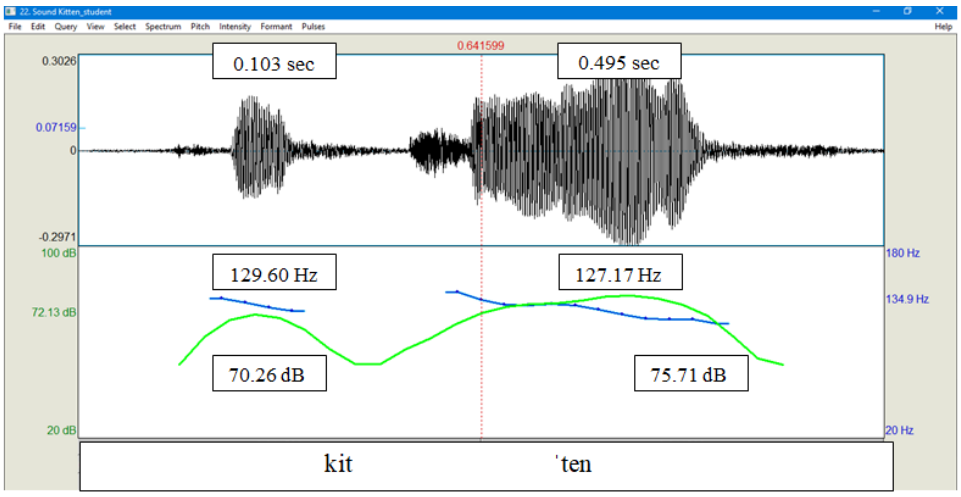

Figure 2 Wave form, the pitch, and the intensity of words spoken by the student

As for intonation, which is the pitch movement used to convey the meaning at the sentence level, after collecting data obtained from the Praat program, the researcher marked the intonation of each intonation group with a number: '1' for 'falling contour,' '2' for 'rising contour,' and '3' for 'sustained contour'. The contour could be identified by the pitch movement as can be seen in Figures 3 and 4.

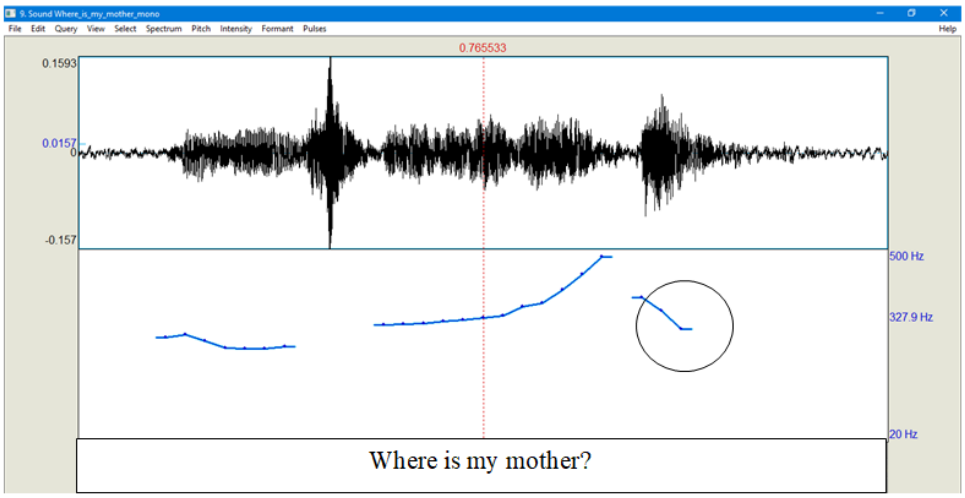

Figure 3 Pitch movement of the sentence spoken by the teacher

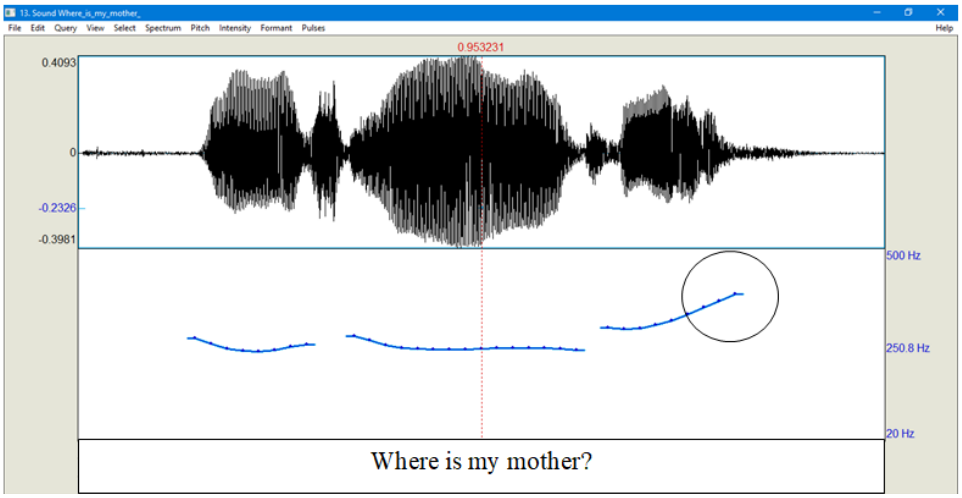

Figure 4 Pitch movement of the sentence spoken by the student

2) Experts were consulted to validate the data.

3) Sound substitutions which cause the students in pronouncing were identified by a point by point comparison of the sounds of Patani Malay, Thai, and English.

4. Findings

4.1 English Pronunciation Recognition and Production by Patani Malay Speaking Students

The following table presents the results of the Patani Malay speaking English pronunciation recognition and production. It shows that the Patani Malay speaking students could recognize more than 60% of English segmental phonemes correctly but could produce

less than 40% of them. Apart from the group comprising simple initial phonemes, their percentage accuracy of production was close to that of their recognition.

Table 1 Summary of English recognition and production

Segments	Recognition (%)	Production (%)
Simple initial consonants	83.6	80.4
Simple final consonants	67.9	35.6
Initial clusters	83.9	26.4
Final clusters	61.8	0.4
Vowels	86.2	32.6
Total	**76.7**	**35.1**

Table 1 depicts the results of the students' recognition test of English segmental phonemes, in which it was found that the students were capable of recognizing English vowels the most (86.2%). They could also recognize initial clusters and simple initial consonants as well (83.9 and 83.6% respectively). The English segmental phonemes which students could recognize the least were final clusters (61.8%).

Furthermore, the table indicates the students' production of English segmental phonemes. The segments in English that the students were able to pronounce most accurately were the simple initial consonants (80.4%), whereas they could pronounce final clusters least (0.4%).

That is to say, there is an inverse relationship between recognition and production for English segmental phonemes by Patani Malay speaking students. Most Patani Malay students could recognize the English segmental phonemes accurately but only a few of them could pronounce them correctly.

4.2 English Pronunciation Difficulties of Patani Malay Students

Patani Malay students had difficulty in producing some of the English segments, stress, and intonation. They tended to make substitutions with the closest equivalent sounds for those that they could not pronounce accurately. Some of the typical substitutions made by the Patani Malay students were as follows:

1) Simple Consonants

a. Simple Initial Consonants

The English simple initial phonemes which were difficult for the Patani Malay students to pronounce were fricatives, semi- vowel, and affricates. This is because there are no equivalents in either Patani Malay or Thai which are the languages they are regularly exposed to. The substitutions are shown in the following tables.

Table 2 Difficulties with English simple initial consonant pronunciation

English Initial Consonants	Percentage of Accuracy	Substitutions	Examples
/v/	33.3	[w]	<u>v</u>an
/θ/	31.1	[t], [t^h]	<u>th</u>umb
/ð/	0	[d]	<u>th</u>at
/r/	16.7	[ɾ]	<u>r</u>ead
/ʃ/	15.9	[c^h]	<u>sh</u>eep
/tʃ/	0	[c^h]	<u>ch</u>ef

b. Simple Final Consonants

The students had no difficulties in pronouncing the phonemes which exist in Patani Malay and Thai. Interestingly, there are four phonemes which do not occur in the final position in Patani Malay and Thai; they are /f/, /s/, /ʃ/, and /l/, but the students were able to pronounce them accurately. It can be assumed that the students also had to deal with interference from another exposed language, namely Arabic.

As for simple final phonemes, the students were not able to produce English fricatives, semi-vowels, and affricates when they occurred in final position. Thus, they substituted those sounds with other sounds that they were able produce. They also had difficulty in producing English final stops, which they replaced with unreleased voiceless stops from their L1.

Table 3 Difficulties with English simple final consonant pronunciation

English Initial Consonants	Percentage of Accuracy	Substitutions	Examples
/p/, /b/	0, 0	[p̚]	zip, web
/v/	0	[f]	wave
/ð/	0	[θ], [z]	bathe
/θ/, /t/, /d/	22.2, 0, 0	[t̚]	tooth, foot, food
/z/	0	[s]	quiz
/r/	16.7	[ɾ], omit	car
/tʃ/	0	[ʃ]	teach
/dʒ/	0	[dʒ̚]	bridge
/k/, /g/	0, 0	[k̚]	neck, dog

2) Clusters

a. Initial Clusters

The students were not able to pronounce the English initial clusters, except when a consonant or consonants cluster with /l/.

There were four common difficulties for the Patani Malay students when it comes to pronouncing English initial clusters. Firstly, they tended to replace [ɾ] for the English /r/ when it clusters with /r/. Secondly, they dropped the phoneme /j/ when it clusters with /j/. Thirdly, they assigned /ə/ in between the first and second consonants. Finally, they pronounced unaspirated voiceless stops as aspirated voiceless stops when the stops come after the phoneme /s/. Production of the English initial clusters is shown in the table below.

Table 4 Difficulties with English initial cluster pronunciation

English Initial Consonants	Percentage of Accuracy	Substitutions	Examples
C + /r/	0	[-ɾ]	pray
C + /j/	0	/j/ omitting	pure
C + /w/	46.3	/ə/ insertion	twin
/s/ + C	36.9	/ə/ insertion	snake

English Initial Consonants	Percentage of Accuracy	Substitutions	Examples
/s/ + stop ± C	0	/ə/ insertion and aspiration	stage, square

b. Final Clusters

Since there is no final cluster in either Patani Malay or Thai, it can be assumed that production of English final clusters are particularly difficult for Patani Malay students.

When producing English final clusters, the Patani Malay students tended to pronounce them as a single final consonant that they were able to produce by retaining the first segment of the cluster. In some cases, they tended to omit it and pronounce the second consonant of the cluster, as shown in the following table.

Table 5 Difficulties with English final cluster pronunciation

English Initial Consonants	Percentage of Accuracy	Substitutions	Examples
C + C ± C	5.6	1st consonant retaining	hand
/l/ + nasal/ /f/	0	2nd consonant retaining	film, wolf
/r/ + C ± C	0	2nd consonant retaining	charge
/lp/ and /lb/	0	[lp˺]	help, bulb

3) Vowels

Certain English vowel phonemes constituted a pronunciation problem for the Patani Malay students. They tended to substitute sounds that they were not able pronounce with sounds they were able to. For example, the English monophthongs /eɪ/ and /oʊ/ were pronounced as long pure vowels [e:] and [o:] respectively, while the English diphthongs /aɪ/, /aʊ/, and /ɔɪ/ were replaced with glide vowels. Furthermore, English words ending in a semi-vowel frequently had the final lengthened. This is shown in the following table:

Table 6 Difficulties with English vowel pronunciation

English Initial Consonants	Percentage of Accuracy	Substitutions	Examples
/ɪ/	0	[i], [ia:]	[fiʃ] ‘fish’, [dia:] ‘deer’
/eɪ/	0	[e:]	[tʰ ɾe:n] ‘train’
/e/	80	[æ:]	[cʰ æ:] ‘chair’
/u:/	0	[u:]	[dʒu:n] ‘June’
/ʊ/	0	[u]	[pʰuʃ] ‘push’
/oʊ/	0	[o:]	[ɾo:s] ‘rose’
/ʌ/	0	[a], [o:]	[dak˥] ‘duck’, [glo:f] ‘glove’
/ɑ:/	0	[ɔ:], [a:]	[dɔ:l] ‘doll’, [kʰa:] ‘car’
/aɪ/	0	[ai]	[nait˥] ‘night’
/aʊ/	0	[a:w]	[ʃa:wt˥] ‘shout’
/ɔɪ/	0	[ɔ:j]	[tʰ ɔ:j] ‘toy’

4) Stress

As for the four stress patterns made by the nine Patani Malay students, it was found that they tended to put stress on the last syllable of the word and in some cases, on the last two syllables. A summary of the stress substitutions made by the students is presented in Table 7.

Table 7 Difficulties with English stress patterns

English Stress Patterns	Percentage of Accuracy	Substitutions	Examples
Oo	0	oO	mother
oO	100	-	Away
o ˈO	0	oO	inside
Ooo	0	oOO	anywhere

5) Intonation

In interrogative sentences, the Patani Malay students tended to use rising contour, while falling contour was used in unfinished statements. They used both falling and rising contours in affirmative statements; falling contour was used when the sentence ended with a live syllable, and rising was used when the sentence ended with a dead syllable. As Gandour (1979) stated when the sentence ends with a dead monosyllabic word, the sentence is pronounced with rising contour.

Table 8 Difficulties with English intonation

English Intonation Contour	Percentage of Accuracy	Substitutions	Examples
Contour 1: Falling			
Wh-questions	50	Rising	Where is my mother?
Affirmative statements	66.7	Falling/Rising	I am a cow./ I am a dog.
Contour 3: Sustain			
Unfinished statements	0	Falling	I will go ....

4.3 Implications for Language Teaching

The findings of this study have a number of implications for English language teaching, as described below,

First, this study found that Patani Malay speaking students have significant difficulties in pronouncing English segments. It is important to correct the critical errors first; especially, phonemic problems that cause misunderstanding.

In teaching English recognition and production, it is important to take into account the relative order of difficulty of the problems and their nature in the arrangement of lessons. Besides, there is also the need to categorize pronunciation difficulties into groups, such as voiceless stops, voiced stops, voiceless fricatives, voiced fricatives, etc. The different features can be demonstrated with a facial diagram. This will help the students to identify and acquire the sound patterning in English.

Also, since stress and intonation are language features used to convey feelings, attitudes, and emotions that possess meaning beyond the literal, they are often overlooked by both teachers and students. This study suggests that teachers need to be more aware of

the importance of stress and intonation. During correction of segmental elements, stress and simple intonation should be presented early in the pronunciation course. This is because these factors should be the first things to be noticed by the students since no utterance can be made in English without accompanying stress and intonation.

Finally, the study recommends that the lessons should include pronunciation drill lessons. This is because if Patani Malay speakers are able to pronounce intelligible sentences, they will be able to convey both literal and non-literal meanings of conversation correctly.

5. Conclusion and Discussion

From this study, it is clear that the differences between the phonological features of Patani Malay and Thai, the languages to which Patani Malay students are exposed to daily, and the English they are learning in terms of single consonants, consonant clusters, vowels, and stress and intonation are related to the English recognition and pronunciation difficulties they experience. These differences indicate that the sound systems and structures of the Patani Malay and Thai languages have a great influence on their pronunciation of English. In other words, the pronunciation errors are most likely a reflection of the differences in the sound inventory, sequences of sounds, and the stress and intonation patterns between the languages they are regularly exposed to and the target language.

Among the segmental aspects, there seems to be a certain difference between the exposed languages and English consonants. Although there are differences between the languages in initial position of the words, those differences are not as significant as they are in the final position. This is because Patani Malay and Thai words have fewer consonants that occur in the final position than English words. Therefore, the students tended to substitute difficult target sounds with equivalent sounds in their exposed languages, or retain the first consonant of final clusters. In terms of monophthongs, as in /eɪ/ and /oʊ/, the second element of the monophthong was omitted and a simple long vowel substituted.

Many of the problems Patani Malay speaking students encounter with English pronunciation, as with Thai speaking students (Plailek, 2016, and Atthaphonphiphat, 2017) and Arabic speaking students (Hassan, 2014), is due to the lack of phonemes in their exposed languages. This study also confirms that speakers with different linguistic backgrounds have different difficulties in sound production.

However, the result of this study does not concur with Waelateh's (2016) study in that he found that Patani Malay speaking students tended to neglect the phonemes in their mother tongue, which could help them to produce English phonemes accurately. Specifically, they used Thai phonemes to substitute for English phonemes, and this can be explained by the fact that the students in his study were at a higher level of education and had had, therefore, more exposure to Thai than younger students.

Furthermore, it was noticed that many Patani Malay speaking students tended to use certain tones in pronouncing English words, for example [fú:t˥] 'food, [pʰén] 'paint', [dó:f] 'dove', [tén] 'tent'. This is caused by interference from Thai which is a tonal language.

As regards factors that can interfere in suprasegmental aspects of English for Patani Malay speakers, two types were found, consistent with Limsangkass's (2009) study; they are exposed language transfer and overgeneralization. The students tended to put stress on the last syllable of English words in the same way as they would in Patani Malay and Thai. This is because stress in neither Patani Malay nor Thai serves to distinguish meaning as it does English. Secondly, they incorrectly placed the stress on the second to last syllable of the word. Regarding intonation contour, the English intonation production spoken by Patani Malay students is influenced by Thai tones. They tended to overgeneralize the rule by using rising contour for all types of questions and they used both falling and rising contours in affirmative statements; falling contour was used when the sentence ended with a live syllable, and rising was used when the sentence ended with a dead syllable.

Apart from the influence of Patani Malay and Thai on their pronunciation of English, Patani Malay speaking students also had to deal with the influence from another language, namely Arabic. As the language of the Quran, Arabic is obligatory for all Muslims when reciting the holy text and it was observed that some of the students were able to pronounce particular phonemes which exist in neither Patani Malay nor Thai, e.g. initials /θ/ and /z/, and finals /f/, /s/, /l/, /ʃ/, and /dʒ/.

That is to say, the phonological features of the languages, which Patani Malay speaking students are exposed to, have both positive and negative transfer in different aspects. Patani Malay has a positive influence in pronouncing simple initial consonant in English, and Thai and Arabic phonology sometimes help Patani Malay in pronouncing simple final consonants. This is because the relevant features of those languages are the same. However, Patani Malay speaking students had difficulties in pronouncing initial and final clusters in English due to the

lack of consonant clusters in Patani Malay and Thai which caused great difficulty for Patani Malay speaking students in pronouncing English clusters. Furthermore, Thai further impedes Patani Malay speakers in terms of pronunciations of vowels, stress and intonation in English.

All the findings in this study have considerable implications for teachers of English to Patani Malay speaking students. Indeed, highlighting problematic issues of English pronunciation and understanding the causes of such errors can help both teachers and learners to pronounce English more accurately. This is because teachers with knowledge of sound systems know how model English sounds are produced and compare it with the equivalent sounds in the students' mother tongue as well as other language to which they are exposed. This way, teachers can prepare appropriate lesson plans and materials that make constructive use of the "precious resource" that the Patani Malay speaking students' linguistic background offers them when they learn English.

6. Recommendations

Based on the findings and conclusions of this study, the following recommendations are made:

1) Some Patani Malay speaking teachers who teach English themselves are not aware of their pronunciation. Some do not even realize that they do not pronounce English words correctly. It is always useful to examine whether teachers have significant pronunciation difficulties or not, what causes those problems and how they can solve those problems.

2) Because the findings show particular positive transfer from Arabic in terms of pronouncing segmental phonemes, there could be further research to investigate the sound system of Arabic, the language of the Quran, to determine if mastery of Arabic sounds facilitates the pronunciation of English.

References

Atthaphonphiphat, Sirirat Choophan. (2017). *The Production and Perception for English Final Consonant Sounds of Thai Students*, presented at the 8th International Conference on Language, Innovation, Culture & Education 2017 (182). Malaysia: Infobase Creation Sdn Bhd.

Benjamin, k. T' Sou. (2005). Language contact and lexical innovation, http://www.wsc.uni-erlangen.de/pdf/tsou.pdf.b1-2.

Beardsmore, H.B. (1982). *Bilingualism: Basic Principles*. Tieto, Avon.

Bhela, Baljit. (1999). Native language interference in learning a second language: Exploratory case studies of native language interference with target language usage. *International Education Journal,* 1 (1), 22-31.

Briere, Eugene J. & Chiachapong, Sinuan. (1980). An Investigation of Thai Interference in Selected American English Phonemes, *Paper and Studeies in Contrastive Linguistics*, 11, 101-117.

Crystal, David. (1995). The Cambridge Encyclopedia of English Language. Cambridge: Cambridge University Press.

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

Ellis, R. (1997). *Second Language Acquisition.* Oxford University, Oxford.

Fries, C.C. (1948). As We See It. *Language Learning* I (1), 12-16.

Handchin, Charles H. (1923). *Methods of Teaching Modern Languages*. Yonkers-on-Hudson, N,Y,: World Book Company.

Hassan, Elkhair Muhammad Idriss. (2014). Pronunciation Problems: A Case Study of English Language Students of Sudan University of Science and Technology, *English Language and Literature Studies*, 4(4), 31-44.

Lott, D. (1983). Analyzing and counteracting interference errors. *ELT Journal, 37* (3), 256- 261.

Limsangkass, Suriyong. (2009). *An Interlanguage Study of English Intonation in Thai Students Speaking Patani Malay as their Mother Tongue.* M.A. Thesis (English as International language). Chulalongkorn University.

Plailek, Teeraporn. (2016). The Development of Pronunciation Skill in English Final Consonant Sounds of Prathomsuksa 6 Students at Demonstration School, Suan Sunandha Rajabhat University, *International Journal of Management and Applied Science (IJMAS)* , 2(11), 120-123.

Premsrirat, S. (2010). *International Conference on Language, Education and the MDG, 9-11 November 2010, Bangkok, Thailand.* Retrieved March 10, 2016, from SEAMEO: http://www.seameo.org/languagemdgconference2010/doc/presentations/day1/SuwalaiPremsrirat-sn.pdf

Sankoff, Gillian. (2001). *Linguistic Outcomes of Language Contact.* Pennsylvania: University of Pennsylvania.

Thomason, Sarah G. & Terrence, Kaufman. (1988). *Language contact, creolization, and genetic linguistics*. Berkeley - Los Angeles: University of California Press.

Thomason, Sarah G. (2001). Language contact: an introduction. Edinburg & Washington DC: Edinburg University Press – Georgetown University Press.

Waelateh, Bordin. (2016). *The Comparison of Pronunciation in English with Thai, Malay and Arabic by Minority Malay Muslims in Thailand*, presented at Multidisciplinary Academic Conference, Prague, Feb 19th- 20th 2016. Prague: MAC Prague consulting Ltd.

Weinreich, Uriel. (1953). *Language in Contact*. New York : Publication of the Linguistic Circle of New York No.1.