AN ANALYSIS OF PRONUNCIATION ERRORS IN ENGLISH OF SIX UTAR CHINESE STUDIES UNDERGRADUATES

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ABSTRACT

This study investigates the pronunciation errors in English made by six Chinese Studies undergraduates according to Contrastive Analysis (CA) and Error Analysis (EA) with the prediction that these pronunciation errors are neither coincidental nor randomly made. These errors reflect the interference of different sound systems on English pronunciation. Speech samples of the subjects' pronunciation were taken through words and sentences readings. Data was collected and analysed with the guidance of phonemic transcription in Cambridge English Pronouncing Dictionary. Using Contrastive Analysis, potential difficulties of English pronunciation for the six subjects were listed by comparing the sound systems of English, Mandarin Chinese and Malay. On the other hand, the pronunciation errors of subjects were diagnosed into categories based on Error Analysis. The findings help to provide a clear understanding of the common characteristics of pronunciation errors made by the subjects.

DECLARATION

I declare that the material contained in this paper is the end result of my own work and that due acknowledgement has been given in the bibliography and references to ALL sources be they printed, electronic or personal.

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LIST OF ABBREVIATIONS

ME	Malaysian English
RP	Received Pronunciation
CA	Contrastive Analysis
EA	Error Analysis
SLA	Second Language Acquisition
UTAR	Universiti Tunku Abdul Rahman

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APPROVAL FORM

This research paper attached hereto, entitled “An Analysis of Pronunciation Errors in English of Six UTAR Chinese Studies Undergraduates” prepared and submitted by Ivy Kho Chiann Yiing in partial fulfilment of the requirements for the Bachelor of Arts (Hons) English Language is hereby accepted.

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CHAPTER I – INTRODUCTION

1.1 Introduction

Malaysian English (ME) refers to all the varieties of English spoken by Malaysians. In the spoken variety of ME, there may be native language influence in the pronunciation of speakers. This is due to the distinction of vowel and consonant sounds between the native language and English (Wan, 2007). Received Pronunciation (RP), which serves as the teaching model in the classroom, provides points of reference to prevent learners from a common pronunciation core to maintain intelligibility (Roach, 2009).

Due to the complex socio-cultural and linguistic backgrounds of Malaysia, Malaysian children are usually bilingual or multilingual regardless of their ethnic groups. All the common languages used by multilingual Malaysian learners need to be considered essential in accounting for their phonological acquisition. A mixed use of two or more languages on a daily basis by multilingual learners in the Malaysian context will contribute to interference in the phonological systems of all these languages (Phoon, 2010).

The role of the native language influences in the target language has been a controversial topic. Most researchers agree that the learner's native language influences the pronunciation of the target language. It is significant to compare the structure of one's native language with the structure of the target language, which is known as Contrastive Analysis (CA) (Gao, 2005). CA believes that the similarities of the two languages will facilitate learning whereas the differences will increase the learners' difficulty to learn. Hence, the influence of native language in the learners' target language can be positive and negative.

Error Analysis (EA) is another type of linguistic study that focuses on the errors learners make (Darus & Subramaniam, 2009). EA is a useful method to help teachers predict

and understand the pronunciation difficulties faced by their students. According to Corder (1967), systematically analysing errors made by language learners makes it possible to determine areas that need reinforcement in teaching. Hence, the use of EA can aid effective learning and teaching of new language. Moreover, it is also important for the learners themselves to become aware of the differences between their native language and second language during the learning process.

Chinese students may encounter difficulties with English sounds due to the interference from their native language. It is difficult for them to produce certain English sounds which do not exist in Mandarin Chinese. For instance, some English consonants do not exist in Mandarin Chinese such as /v/, /θ/, /ð/, etc. Therefore, they may substitute these sounds with similar ones in their mother tongue as they cannot find the counterparts in Mandarin Chinese. There are vowels in both Mandarin Chinese and English, but the two kinds of vowels have many differences in phoneme and articulation. Due to the differences between English and Chinese vowels, students are not aware of the lack of long and short vowels in Mandarin Chinese which might have a negative effect on English vowels. The English vowels /ʊ/ and /u:/ are distinguished by quality and length. However, as there is no such distinction in Mandarin Chinese, English-Chinese bilingual learners might regard them as the same vowel (Zhang & Yin, 2009).

English occupies the status of a second language in the Malaysian education system in both primary and secondary schools. However, learning English as a second language is not an easy task. Although Chinese students will have the strongest influence from Mandarin Chinese, the influence of Malay should not be disregarded for Malaysian Chinese, because Malaysian Chinese who grow up in Malaysia will have substantial influence from Malay Language. The Malay Language, often called “Bahasa Malaysia” is the national and official

language in Malaysia and is widely used by all the various ethnic groups in Malaysia (Phoon, 2010).

Since the education system in Malaysia has been multilingual, it is presumed that Malaysian students will acquire shared sounds between English, Mandarin Chinese and Malay. In other words, multilingual Malaysian students who are learning English, Mandarin Chinese and Malay at the same time might have different expected patterns of phonological acquisition than monolingual students learning one of these languages. Hence, the knowledge of phonetic similarities and differences among shared and unshared sounds in English, Mandarin Chinese and Malay is essential in understanding the phonological acquisition of multilingual Malaysian students (Phoon, 2010).

1.2 Statement of the problem

It cannot be denied that interference from the native language does exist. The phonology of Chinese-influenced ME will be strongly influenced by Mandarin Chinese which is usually used in the home environment by Chinese (Phoon, 2010). Students from Chinese background tend to have difficulties with English sounds because they are deeply influenced by similar Mandarin Chinese sounds. The production of a particular English sound which does not exist in Mandarin Chinese can pose a difficulty for the Chinese students. Thus, the study focuses on the common characteristics of pronunciation errors resulting from native language (Mandarin Chinese) interference.

In the case of Malaysian learners who are multilingual, it is expected that the interference patterns of languages will be complicated due to the involvement of more than two languages. In other words, a Malaysian Chinese student who speaks English and is exposed to Mandarin Chinese and Malay at the same time will illustrate interference patterns

resulting from all three languages (Phoon, 2010). Hence, the study will also examine and discuss the influence of the Malay Language on the pronunciation of English sounds.

1.3 *Purpose of the study*

The purpose of this study is to present an analysis of pronunciation errors encountered by six Chinese Studies undergraduates in Universiti Tunku Abdul Rahman (UTAR). The study is to investigate common characteristics in pronunciation errors encountered by the six students based on the concept of CA and EA. This study is concerned only with the consonants and vowels systems of English, Mandarin Chinese and Malay. It is hoped that the findings of the present study will help English Language teachers/trainers/instructors to understand the characteristics of pronunciation errors and help to improve their students' awareness and understanding of the interference of different sound systems on English pronunciation.

1.4 Significance of the study

It is hoped that the findings of this study would offer English Language teachers better insights on effective teaching strategies in helping their students to master English pronunciation. The CA of the students' native language and the target language can greatly facilitate the Second Language Acquisition (SLA). On the other hand, an EA focuses on the errors that students make. This can provide a significant understanding into how a language is actually learned by the students. Teachers should be well aware of the fact that the majority of their students have difficulties in producing certain English sounds. The possible solutions in preventing students from making errors repeatedly should be considered. Hence, CA and EA are useful methods to identify and explain difficulties faced by the learners.

It is also hoped that the findings of the study will help the students to understand the phonological differences between their native language and target languages. Students should not completely rely on their teachers to recognise the errors for them. It is essential to make the students consciously compare the two languages by themselves (Zhang & Yin, 2009) and understand the rules of the new language during the learning process.

1.5 Research questions

Based on the problems and purposes stated in the previous sections, here are two research questions that are attempted to address in the study:

1. What are the common characteristics of pronunciation errors made by the six Chinese Studies undergraduate students?
2. Does the Malay Language influence the English pronunciation of the six Chinese Studies undergraduate students?

The research questions aim to investigate the common characteristics of pronunciation errors made by Chinese students and examine the influence of the Malay Language on English pronunciation.

1.6 Scope of the Study

Basically the study is aimed to answer the two research questions to present an analysis of pronunciation errors made by Chinese students. This study is concerned only with the consonants and vowels systems of English, Mandarin Chinese and Malay.

Although there are studies that claim that native language does influence in the suprasegmental (intonation, stress and rhythm) and segmental (assimilation, elision and linking) features of speech, they are not analysed in this study.

1.7 Definition of terms

1. Interference - Imperfections in the use of one language as a result of the influence of another language, such as a 'foreign accent' in speaking a second language (Trask, 1996).

2. Glottalisation - The production of sounds with a simultaneous glottal stop, as in an oral-glottal stop. Glottalisation of vowels and voiced consonants is usually produced with creaky voice (Trask, 1996).

3. Received Pronunciation (RP) - A name given to the accent used as a standard for describing British English pronunciation for the most of the 20th century and still in use (Roach, 2001).

4. Monophthong - A pure vowel (Trask, 1996).

5. Second Language Acquisition (SLA) - The acquisition of another language or languages
   after first language acquisition is under way or completed (Fromkin, Rodman & Hyams, 2007).

6. Target language - Any language that learners are trying to learn apart from their native language. In second-language pedagogy, the target language is regarded as second language.

CHAPTER II – LITERATURE REVIEW

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

A CA, originally developed by Charles C. Fries (1945) and expanded and clarified by Robert Lado (1957), systematically compares the similarities and differences between the native languages and the target languages systems and predicts the difficulties that learners might encounter when learning a new language. CA which has been a part of second language pedagogy (as cited in Chang, 1996), believes that the similarities of the two languages will facilitate learning whereas the differences will increase the learners' difficulty to learn (Tseng, 2008).

However, the similarities between native language and second language might not always facilitate learning. Research findings suggest that learners had difficulties in producing sounds that are similar to their first language sounds (Bohn & Flege, 1992; Trofimovich et al,, 2007). Research findings also suggest that the degree of perceived similarities and differences between native language and second language segments might determine how second language segments are produced (Baker & Trofimovich, 2005; Guion et al., 2000). In Aoyama et al.'s (2004) study of Japanese differentiation between /r/ and /1/, English /r/ was perceptually more distinct from Japanese /r/ than English /1/. It was therefore suggested that the degree of perceived differences influences learners' competence in acquiring second language phonetic segments (as cited in Tseng, 2008).

A much-quoted sentence from Charles Fries (1945) is: The most efficient materials are those that are based upon a scientific description of the language, to be learned carefully compared with a parallel description of the native language of the learner." It appeared that from Fries' insight that the best and the most efficient materials must be provided along with

a comparison of the native languages and the target languages (as cited in Chang, 1996). Hence, CA is a good starting point to investigate why second language learners make systematic phonetical errors according to their linguistic backgrounds.

Larson-Freeman & Long (1991) made a similar statement in saying that there was a strong belief that a more successful pedagogy would result when the analyses of the native language and the target languages were taken into consideration. Therefore, CA has been the major field in SLA that is concerned with drawing the implications from structural similarities and differences between languages.

Eltrug (1984) affirmed that mother tongue interference can contribute to a large number of pronunciation errors made by students. Eltrug gave the example of an Arab student who says, "I left my car in the barking." It appeared that the Arabic student had replaced the voiceless phoneme /p/ with its voiced counterpart /b/, and most probably he transferred the phonological patterns of the native language to the foreign language as well (as cited in Chang, 1996).

Wardhaugh (1970) proposed two hypotheses of CA: one is the strong version and the other is the weak. A strong hypothesis means that difficulties or errors which the native speakers will make in learning a second language can be predicted through CA. The weak hypothesis maintains that CA analyses the similarities and differences to explain the errors the second language learners make between their native language and the second languages. In other words, the strong hypothesis predicts and prognoses; the weak hypothesis explains and diagnoses.

Whitman (1970) concluded four steps for conducting a CA for syntactical elements: description, selection, comparison and prediction. Archibald (1998) applied Whitman's

notion (1970) and proposed a procedure for phonology comparison. First, a formal description of two languages was made or consulted. Second, a particular part of the languages was selected for analysis, such as segments (consonant and vowels). Third, the two systems were then compared. Areas of differences were sorted out. Finally, areas of the difficulty were predicted. This was the traditional starting point for conducting a CA. The elements that were missing from the second language would be assumed to cause difficulty (Archibald, 1998).

Later on, another part of second language pedagogy had been developed known as Error Analysis (EA). EA in terms of SLA was established in the 1960s by Stephen Pit Corder and colleagues. EA was an alternative to CA, an approach influenced by behaviorism through which applied linguists sought to use the differences between the learners' native and target languages to predict errors. EA indicated that CA was unable to predict a great majority of errors (Corder, 1967).

EA is closely related to the study of error treatment in language learning and teaching. Today, the study of errors is important in teaching methodology (Corder, 1967). According to Weireesh (1991), EA was an important aid in learning process. The making of errors was used as a device to identify and explain difficulties faced by learners. He proceeded to say that EA served as a reliable observation to design a remedial teaching method (as cited in Darus & Subramaniam, 2009). Candling (2001) considered EA as “the monitoring and analysis of learner’s language”. He associated an error to a deviation. Candling added that errors made by second language learners are potentially important for the understanding of the processes of SLA (as cited in Darus & Subramaniam, 2009).

Although CA has sometimes been criticised for its inadequacy to predict transfer errors that learners make in actual learning contexts, it is still a useful method to explain the

errors students have (Whitman & Jackson, 1972). Furthermore, Celce-Murcia & Hawkins (1985) pointed out that the real value of CA may not be its predictability of transfer errors, but rather its explanatory potential for learners' errors. Therefore, it cannot be denied that interference from the native language does exist and CA can help the teacher to explain difficulties students have with the phonology (Brown, 2000).

To sum up, CA and EA are useful theories in investigating the characteristic pronunciation errors encountered by Chinese students who learn English as second language. Ulla (1996) concluded that in order to improve language teaching, contrastive analysts viewed themselves as applied linguists in the structural tradition of linguistics, whereas error analysts regarded themselves learners of psycholinguistics (as cited in Gao, 2005).

2.2 Interference of Mandarin Chinese on English pronunciation/articulation

There are 24 consonants (b, p, d, t, g, k, v, f, θ, ð, z, s, ʒ, ʃ, m, n, ŋ, l, r, dʒ, tʃ, h, j, w) in English. There are 12 vowels in English (ʌ, ɑ:, æ, e, ə, ɜ:, ɪ, i:, ɒ, ɔ:, ʊ, u:), which have been classified by tongue height, tongue position and lip rounding. English also has eight diphthongs (aɪ, aʊ, əʊ, eɪ, ɔɪ, eə, ɪə, ʊə), which are sequences of two vowel sounds together in the same syllable.

Most researchers agree on the description of the phonological system of English (Gimson, 1989; Wells & Colson, 1971), though some follow a particular theoretical orientation. However, it is hard to determine Chinese phonemes since every Chinese morpheme has a fixed tone. As for Mandarin Chinese, there is no mutual agreement on the classification of consonants and vowels among researchers (Phoon, 2010). According to Zhang & Yin (2009), a better way to determine Mandarin Chinese phonemes is to consider morphemes with tones as minimal units to contrast meaning in Mandarin Chinese. According

to Modern Dictionary of Chinese, there are 1382 morphemes in Mandarin Chinese whereas in General Phonetics, Chinese is said to contain 1644 morphemes (as cited in Zhang & Yin, 2009).

As this study focuses only on Malaysian Chinese speakers, the languages they commonly use are Chinese, English and Malay. Chinese dialects such as Hokkien and Cantonese are occasionally used by the Chinese speakers in the home environment. As there are many different Chinese dialects being used, it is difficult to illustrate them particularly. However, Chinese dialects share a lot of phonological properties with Mandarin Chinese (Phoon, 2010). Wang (1997) found that some native Chinese speakers living in Canada had serious problems in perceiving and producing English vowels. Later, Wang (2002) through both perception and production tests discovered that native Chinese speakers often used their Mandarin Chinese vowels in place of English vowels that do not have Chinese counterparts.

Zhao (1995) presented a list of vowel and consonant errors which will likely be made by Chinese speakers from China. Zhao believes that Chinese speakers will substitute target sounds in English which are absent from Mandarin Chinese phonology with near equivalent sounds in Mandarin Chinese. Zhao also made two claims with respect to the diphthongs of English. The first is that Chinese speakers tend to reduce the distinction between long and short vowels in English, which would follow from the fact that Mandarin Chinese does not use length as a distinctive feature. She then proceeded to say that diphthongs are like long vowels, thus diphthongs which are influenced by Mandarin Chinese will be short. Teng (2002) also claimed that it is very possible for Chinese students when speaking English to have difficulty in differentiating long and short vowels as there is not usually a counterpart in Mandarin Chinese.

Fabiano-Smith & Goldstein (2010) and Goldstein et al. (2003) hypothesized that bilingual learners perceive two similar sounds in their two languages as identical and classify them into the same phonemic category (as cited in Phoon, 2010). According to Zhang & Yin (2009), a particular sound which does not exist in the native language can therefore pose a difficulty for the second language learners to produce or some times to try to substitute those sounds with similar ones in their mother tongue. These sounds include both vowels and consonants. For example, there are no vowels like /e/, /æ/, /eə/, etc. and no such consonants as /ð/, /θ/, /v/, etc.

When learners have trouble in perceiving the sounds which do not exist in their native language, they tend to find the nearest equivalents to substitute those new sounds. A typical example will be the substitution of /s/ or /z/ for the English /ð/ as in the word 'clothe', /aɪ/ or /e/ for the English /æ/ as in the word 'that'. The erroneous substitution takes place where the English /r/ and /ʃ/ are very different from the Mandarin Chinese /r/ and /sh/. This is because the place of articulation and the manner of articulation of the sounds in two languages are relatively different. It is not surprising when the words 'English', 'pronunciation' and 'rose' are uncomfortably heard when produced by Chinese speakers (Zhang & Yin, 2009).

An English sound does exist in the native language, but not as separate phonemes. This simply means the Chinese speakers do not perceive it as a distinct sound that makes difference to meaning. The sound /ɪ/ does exist in Mandarin Chinese, but whether the vowel is long or short does not make any difference in meaning. For instance, the English phonemes /ɪ/ and /i:/ differ very much in meaning as in the words 'ship' and 'sheep'. The result is that Chinese speakers are not naturally aware of the difference in English and Mandarin Chinese and may not even hear that difference (Zhang & Yin, 2009). Chang (1987) also found that

Chinese students often confused /ɪ/ with /i:/ because there is no such distinction in Mandarin Chinese.

The combination of different phonemes differs in the two languages. Mandarin Chinese morphemes are generally made up of a consonant plus a vowel with no consonants cluster and usually ending with a vowel (Zhang & Yin, 2009). According to Gao (2005), final voiced stops do not exist in Mandarin Chinese and therefore Chinese speakers will have great difficulties with words with final voiced stops. For instance, they would occasionally pronounce words 'book' and 'bed' as /bukə/ and /bedə/, by adding an extra vowel sound. In addition, they also have problems in pronouncing words 'prompt' and 'thousandths' (Zhang & Yin, 2009). Lin and Johnson (2010) reported that phonological patterns such as final consonant deletion, final consonant devoicing and syllable reduction are more evident in bilingual Mandarin-English children which might be attributed to the different linguistic systems of the bilinguals' two languages.

The position of phonemes and the way of combining them are not the same within the two languages. English consonant clusters do not occur in Mandarin Chinese as Mandarin Chinese consonants are always followed by a vowel. According to Macleish (1967), English learners have high frequency problems with consonant clusters. Since there are no consonant clusters in Mandarin Chinese, it is difficult for English learners to produce those sounds (as cited in Peter, 2001). According to Zhang (2005), Chinese speakers may insert a schwa /ə/ in consonant clusters such as /bəlek/ for the word 'black' or eliminate a consonant by pronouncing the word 'strawberry' as /trɔ:beri/. Moreover, Gao (2005) claimed that English learners also tend to eliminate final consonant clusters in grammatical endings in terms of the plural, possessive and the third person singular which do not occur in the Mandarin Chinese grammar.

2.3 Comparison of the sounds of English, Chinese and Malay

According to Sariyan, A. (2004) and Hashim & Lodge (1988), there are 19 consonants (b, p, d, t, g, k, s, h, m, n, ŋ, ɲ, ʧ, tʃ, ʔ) and 2 glides (j, w), 6 monophthongs (i, e, a, u, o, ə) and 3 diphthongs (ai, au, ua) in Malay phonology (as cited in Lodge, 2009). The Malay language has many words borrowed from English, in particular scientific and technological terms. According to Phoon (2010), the effect of Malay loanwords potentially impacted the acquisition of some English sounds.

English and Malay are compulsory languages that are taught in the Malaysian school system. Malaysian children will eventually be able to speak, write and read in these two languages after entering preschool regardless of their ethnicity. Therefore, knowledge of phonological properties of the languages used by Malaysian children will help in understanding the phonological acquisition of these languages in terms of language interference. Phonemically, English shared 18 consonants with either Mandarin Chinese or Malay, with six consonants (v, z, θ, ð, ʃ, ʒ) distinct to English. It is worth remarking that some of these consonants which are distinct to English also appear in the Malay language (Phoon, 2010).

The phonetic realization of voiced stops /b/ in English is similar to unvoiced stops /p/ in Mandarin Chinese and Malay. The /b/ sound in Malay is pre-voiced. The phonetic realization of /l/ in English and Mandarin Chinese is relatively dark [ɬ] but it is produced as clear [l] in Malay. The phonetic realizations of /r/ in English, Mandarin Chinese and Malay are respectively produced as approximant [ɹ], retroflex [ɻ] and trill [r]. As for vowels, English shares five vowels with Mandarin Chinese and Malay. These shared vowels are mostly long vowels. The number of unshared vowels which are specific to English is slightly more than the number of shared vowels in Mandarin Chinese and Malay. Those unshared

vowels are predominantly short vowels. In fact, Mandarin Chinese and Malay regard all vowels as neutral in length as there is no distinction of vowel length in either language (Phoon, 2010).

The following table (Table 1) shows the differences between English, Mandarin Chinese and Malay in terms of consonants and vowels.

Table 1

Comparison of the sounds of English, Mandarin Chinese and Malay

	English	Mandarin Chinese	Malay
Syllable-initial consonants	24 consonants b, p, d, t, g, k, v, f, θ, ð, z, s, ʒ, ʃ, h, m, n, ŋ, l, r, dʒ, tʃ (inclusive of glides) 2 glides (j, w)	24 consonants p, p^h, t, t^h, k, k^h, f, s, ʂ, ɕ, ts^h, tʂ, tʂ^h, tɕ, tɕ^h, m, n, l, r (inclusive of glides) 3 glides (j, w, ɥ)	19 consonants (inclusive of glides) b, p, d, t, g, k, s, h, m , n, ŋ, ɲ, ʧ, tʃ, ʔ 2 glides (j, w)
Syllable-final consonants	20 consonants b, p, d, t, g, k, v, f, θ, ð, z, s, ʒ, ʃ, m, n, ŋ, l, dʒ, tʃ	2 consonants n, ŋ	8 consonants ʔ, s, h, m, n, ŋ, l, r
Vowels	13 monophthongs ʌ, ɑː, æ, e, ə, ɜː, ɪ, , iː, ɒ, ɔː, ʊ, uː 8 diphthongs aɪ, aʊ, əʊ, eɪ, ɔɪ, eə, ɪə, ʊə	9 monophthongs i, u, y, o, ɤ, □, ə, ɚ, ɛ 9 diphthongs ae, ei, ow, ao, i□, iɛ, u□, uo, yɛ 4 triphthongs iao, iow, uae, uei	6 monophthongs i, e, a, u, o, ə 3 diphthongs ai, au, ua

(Adapted from Phoon, 2010)

As can been seen from Table 1, the number of consonants in English, Mandarin Chinese and Malay does not differ much. The most conspicuous differences between English, Mandarin Chinese and Malay are the number of consonants used in the first and final syllable. English has comparable number of consonants in the first and final syllable. Mandarin Chinese has 24 consonants in first syllable, but only two consonants in the final syllable. Malay has more syllable final consonants than Mandarin Chinese, but still less than English. Both Mandarin Chinese and Malay have fewer syllable final consonants than English. It is presumed that the speakers of Mandarin Chinese and Malay will find realization of consonants in final syllables difficult (Phoon, 2010).

The vowel system of Mandarin Chinese and Malay is relatively simpler than English. In fact, both languages regard all vowels as neutral in length as there is no distinction of vowel lengths phonemically in either language. Therefore, it might be expected that considerable variation will be seen in ME in terms of vowel length (Phoon, 2010).

CHAPTER III METHODOLOGY

3.1 Restate Purpose and Research Questions

The purpose of this study is to investigate the characteristics of pronunciation errors in English encountered by six Universiti Tunku Abdul Rahman (UTAR) Chinese Studies undergraduates based on CA and EA concepts.

There were two research questions that were attempted to address in the study:

1. What are the common characteristics of pronunciation errors made by the six Chinese Studies undergraduate students?
2. Does the Malay Language influence the English pronunciation of the six Chinese Studies undergraduate students?

The findings of the present study would illustrate the common characteristics of pronunciation errors as evidence of cross-linguistic differences in phonetics and phonology. In other words, the interference from different sound systems could be seen as an important factor accounting for these pronunciation errors (Gao, 2005). It was also hoped that the findings could help English Language teachers/trainers/instructors understand the characteristics of pronunciation errors and help to improve their students' awareness and understanding of the interference of Mandarin Chinese and Malay on English pronunciation.

3.2 Subjects

For the purpose of this study, the subjects comprising six Chinese studies undergraduate students from similar educational backgrounds were chosen. Three were males and three were females. There was an equal number in selection of subjects in order to keep the gender variable consistent. These students spoke the same native language, which is

crucial to maintain consistency in the process of data collection. Six of them had their primary education in Chinese National schools in which Chinese was the medium of instruction. English was taught as an additional subject within the school curriculum. Subsequently, all of them had their secondary school education in which Malay was the medium of instruction. This was important in order to examine whether there was phonological transfer from Malay language to their English pronunciation. All the subjects spoke Mandarin Chinese at home daily and rarely used English in their daily conversation.

3.3 Procedure and Instrumentation

A battery operated audio tape recorder (Sony, TCM-150) and a 60-minute blank cassette (Sony EF) were used for recording work. Nokia C5 voice recorder was kept at hand for contingency purposes.

A list of words was given. The list comprised 20 words. The words prepared in the word list were mostly common words in order to make the subjects feel more relaxed and unaware what words were being analysed. A list of 20 words was insufficient to diagnose the subjects' pronunciation errors. Thus, the subjects were also required to read another eight short sentences.

Before the recording process, the subjects were asked to familiarise themselves with the words and sentences through reading them once. The recording was conducted individually in a quiet room and took approximately five minutes for each subject. Each subject was required to read at a normal speed.

Under the guidance of phonemic transcription in Cambridge English Pronouncing Dictionary, the recording was replayed many times and the pronunciation errors were noted.

3.4 Analysis Plan

A list of 20 words and eight sentences were given to the six subjects. Those words and sentences were designed to diagnose pronunciation difficulties of the six subjects. Based on subjects' native language (Mandarin Chinese), their pronunciation errors were diagnosed into four categories: the absence of certain English sounds in Mandarin Chinese; consonant cluster confusion; omission of grammatical endings and contractions; and long and short vowels distinctions. At the same time, some words which might be the influence of Malay Language were also included to examine the errors

3.5 Assumptions

There were some predictions of pronunciation errors with consonants and vowels in English. The subjects were expected to have problems with individual sounds such as improper articulation of consonant and vowel sounds. There are sounds which do not exist in Mandarin Chinese and therefore the subjects might substitute those sounds with other sounds which are similar in their native language. In addition, they might also omit the sounds which do not exist in their native language.

The subjects might encounter problems with combining sounds into words. They might have problems in pronouncing both initial and final consonant clusters. They might also omit sounds in the final position especially in contractions and grammatical endings or insert a schwa in consonant clusters. Consonant clusters do not exist in both Mandarin Chinese and Malay and therefore they might find it difficult to insert them into words.

Besides, the subjects were also expected to show their failure in differentiating between long vowels and short vowels. They might make errors in either shortening or lengthening the vowel sounds.

Finally, the subjects might also make errors due to the influence of Malay phonology. There are certain Malay words which sound very similar to English. They share the same meanings but differ in spellings. Hence, the subjects might not be aware of the influence of Malay sounds in their English pronunciation as they assumed that those words share the same pronunciation.

CHAPTER IV – RESULTS AND ANALYSIS

4.1 Results

The use of CA was to anticipate the characteristics of pronunciation errors based on a systematic comparison between the learner's native language and the target languages (English and Malay). The analysis aimed to help the learners to have a better understanding of how these errors originate and try to avoid making these errors repeatedly. The following table presents the pronunciation errors made by the six Chinese studies undergraduates.

Table 2

Pronunciation errors analysis of six Chinese studies undergraduates

Pronunciation Errors Analysis					
Words		Transcription		Subject	Description/Cause/Origin of the Error
		Dictionary Transcription	As recorded		
1	vision	vɪʒən	vi:ʒən	1, 2, 3, 5, 6	- Lengthening of vowel /ɪ/ (Influence of Mandarin Chinese)
			vəsən	4	- Substitution of /ɪ/ with /ə/ in first syllable - Substitution of /ʒ/ with /s/ (Idiosyncrasy)
2	silk	sɪlk	si:l	1, 4	- Lengthening of vowel /ɪ/ - Omission of /k/ in consonant cluster (Influence of Mandarin Chinese)
			sɪk	2	- Omission of /l/ in final consonant cluster (Influence of Mandarin Chinese)
			sli:k	3	- Lengthening of vowel /ɪ/ - Omission of /l/ in final consonant cluster

					(Influence of Mandarin Chinese)
			si:k	5	- Lengthening of vowel /ɪ/ - Omission of /l/ in final consonant cluster (Influence of Mandarin Chinese)
			si:lk	6	- Lengthening of vowel /ɪ/ (Influence of Mandarin Chinese)
3	theory	θɪəri	ti:ɒri	1, 2, 3, 4, 5	- Substitution of /θ/ with /t/ (Influence of Mandarin Chinese) - Influence of Malay word [teori] (Influence of Malay)
			di:ɒri	6	- Substitution of /θ/ with /d/ (Influence of Mandarin Chinese) - Influence of Malay word [teori] (Influence of Malay)
4	spoon	spu:n	spʊn	3	- Shortening of vowel /u:/ (Influence of Mandarin Chinese)
			spɔ:n	4, 5	Substitution of /u:/ with /ɔ:/ (Influence of Mandarin Chinese)
5	eight	eɪt	eg	1	- Simplification of diphthong /eɪ/ with /e/ - Substitution of final stop /t/ with /g/ (Influence of Mandarin Chinese)
			eɪg	2, 6	- Substitution of final stop /t/ with /g/ (Influence of Mandarin Chinese)
			eɪk	3	- Substitution of final stop /t/ with /k/ (Influence of Mandarin Chinese)

			eʔ	4	- Simplification of diphthong /eɪ/ with /e/ (Influence of Mandarin Chinese) - Glotalisation of final stop /t/ (Influence of Mandarin Chinese or Malay)
			eɪʔ	5	- Glotalisation of final stop /t/ (Influence of Mandarin Chinese or Malay)
6	pocket	pɒkɪt	pɒkeʔ	1, 3	- Substitution of /ɪ/ with /e/, influence of Malay word [poket] (Influence of Malay) - Glotalisation of final stop /t/ (Influence of Mandarin Chinese or Malay)
			bɒgeʔ	2, 4	- Confusion between bilabial stops /p/ and /b/ in first syllable - Confusion between velar stops /k/ and /g/ in final syllable (Influence of Mandarin Chinese or Malay) - Substitution of /ɪ/ with /e/ in final syllable, influence of Malay word [poket] (Influence of Malay) - Glotalisation of final stop /t/ (Influence of Mandarin Chinese or Malay)
			bɒkə	5	- Confusion between bilabial stops /p/ and /b/ in first syllable (Influence of Mandarin Chinese or Malay) - Substitution of /ɪ/ with /ə/ in final syllable

					(Idiosyncrasy)
			bɔ:geʔ	6	- Confusion between bilabial stops /p/ and /b/ in first syllable (Influence of Mandarin Chinese or Malay) - Lengthening of vowel /ɒ/ - Confusion between velar stops /k/ and /g/ in final syllable (Influence of Mandarin Chinese or Malay) - Substitution of /ɪ/ with /e/ in final syllable, influence of Malay word [poket] (Influence of Malay) - Glotalisation of final stop /t/ (Influence of Mandarin Chinese or Malay)
7	tease	ti:z	teɪs	1, 5	- Substitution of /i:/ with /eɪ/ (Idiosyncrasy) - Confusion between final fricatives /z/ and /s/ (Influence of Mandarin Chinese or Malay)
			teɪst	3	- Substitution of /i:/ with /eɪ/ - Substitution of /z/ with consonant cluster /st/ (Idiosyncrasy)
8	sofa	səʊfə	sɔ:fa:	1, 2, 3, 4, 5, 6	- Substitution of /əʊ/ with /ɔ:/ in first syllable (Influence of Mandarin Chinese) - Substitution of /əʊ/ with /ɔ:/ in first syllable and /ə/ with /a:/ in final syllable, influence of Malay word [poket] (Influence of Malay)

9	film	fɪlm	fɜ:m	2, 4, 6	- Substitution of /ɪ/ with /ɜ:/ - Omission of /l/ in final consonant cluster (Influence of Mandarin Chinese)
			fɪləm	3	- Insertion of schwa /ə/ in final consonant cluster (Influence of Mandarin Chinese or Malay) - Influence of Malay word [filem] (Influence of Malay)
			fələm	5	- Substitution of /ɪ/ with /ə/ in first syllable (Idiosyncrasy) - Insertion of schwa /ə/ in final consonant cluster (Influence of Mandarin Chinese or Malay)
10	search	sɜ:ʧ	sɜ:ʃ	1	- Devoicing of final consonant /ʧ/ (Influence of Mandarin Chinese)
11	Phenomenon	fɪnɒmɪnən fənɒmɪnən	fenɒmenən	1, 6	- Substitution of /ɪ/ or /ə/ with /e/ in first and /ɪ/ with /e/ in third syllable, influence of Malay word [fenomena] (Influence of Malay)
			fɪnɒmɪnəm	3	- Confusion between final nasals /m/ and /n/ (Idiosyncrasy)
			fənɒmenən	5	- Substitution of /ɪ/ with /e/ in third syllable, influence of Malay word [fenomena] (Influence of Malay)
12	string	strɪŋ	strɪŋk	6	- Insertion of final stop /k/ (Idiosyncrasy)
13	birthday	bɜ:θdeɪ	bɜ:fdeɪ	1, 2, 3, 4, 5, 6	- Substitution of /θ/ with /f/ (Influence of Mandarin Chinese)

14	fill	fɪl	fi:l	2, 6	- Lengthening of vowel /ɪ/ (Influence of Mandarin Chinese)
			fi:lt	3	- Lengthening of vowel /ɪ/ - Insertion of final stop /t/ (Influence of Mandarin Chinese)
			faɪl	5	- Substitution of /ɪ/ with /aɪ/ (Idiosyncrasy)
15	ticket	TɪKɪT	tɪkeʔ	1, 3	- Substitution of /ɪ/ with /e/ in final syllable (Influence of Malay) - Glotalisation of final stop /t/ (Influence of Mandarin Chinese or Malay)
			dɪgeʔ	2, 4, 5	- Confusion between alveolar stops /t/ and /d/ - Confusion between velar stops /k/ and /g/ (Influence of Mandarin Chinese or Malay) - Substitution of /ɪ/ with /e/ in final syllable, influence of Malay word [tiket] (Influence of Malay) - Glotalisation of final stop /t/ (Influence of Mandarin Chinese or Malay)
			di:geʔ	6	- Confusion between alveolar stops /t/ and /d/ - Confusion between velar stops /k/ and /g/ (Influence of Mandarin Chinese or Malay) - Lengthening of vowel /ɪ/ (Influence of Mandarin Chinese) - Substitution of /ɪ/ with /e/ in final syllable, influence

					of Malay word [tiket] (Influence of Malay) - Glotalisation of final stop /t/ (Influence of Mandarin Chinese or Malay)
16	vase	va:z	vaɪs	1	- Substitution of /a:/ with /aɪ/ (Idiosyncrasy) - Confusion between final fricatives /z/ and /s/ (Influence of Mandarin Chinese or Malay)
			vɜ:s	4	- Substitution of /a:/ with /ɜ:/ (Idiosyncrasy) - Confusion between final fricatives /z/ and /s/ (Influence of Mandarin Chinese)
			west	5	- Confusion between fricative /v/ and approximant /w/ (Influence of Mandarin Chinese) - Substitution of /a:/ with /e/ - Substitution of /z/ with final consonant cluster /st/ (Idiosyncrasy)
17	geography	ʤɒgrəfi ʤiɒgrəfi	ʤiɒgræfi	1, 2, 3, 4, 5, 6	Substitution of /ə/ with /æ/, influence of Malay word [geografi] (Influence of Malay)
18	orders	ɔ:dəz	ɔ:də	2, 4	- Omission of third person singular marker
			□dəz	5	- Substitution of /ɔ:/ with /□/ (Idiosyncrasy)
19	slice	slaɪs	slɪ	1	- Substitution of /aɪ/ with /ɪ/ - Omission of final fricative /s/

					(Idiosyncrasy)
			slaɪ	2, 5	Omission of final fricative /s/ (Idiosyncrasy)
			slɪs	3	- Substitution of /aɪ/ with /ɪ/ (Idiosyncrasy)
			sɪ	4	- Omission of /l/ in initial consonant cluster (Influence of Mandarin Chinese) - Omission of final fricative /s/ (Idiosyncrasy)
20	sponge	sp□nʤ	spɔ:ŋk	1	- Substitution of /□/ with /ɔ:/ (Idiosyncrasy) - Substitution of /nʤ/ with /ŋk/ (Influence of Mandarin Chinese)
			spɔ:n	2, 4, 5	- Substitution of /□/ with /ɔ:/ - Omission of /ʤ/ in final consonant cluster (Influence of Mandarin Chinese)
			sp□n	3	- Omission of /ʤ/ in final consonant cluster (Influence of Mandarin Chinese)
21	cake	keɪk	kæk	1	- Substitution of /eɪ/ with /æ/, influence of Malay word [kek] (Influence of Malay)
			geʔ	3, 4	- Confusion between velar stops /k/ and /g/ (Influence of Mandarin Chinese or Malay) - Substitution of /eɪ/ with /e/, influence of Malay word [kek]

					(Influence of Malay) - Glotalisation of final stop (Influence of Mandarin Chinese or Malay)
22	glass	gla:s	gra:s	4, 5, 6	- Confusion between lateral /l/ and approximant /r/ (Idiosyncrasy)
23	freshly	freʃli	freɪzli	1	- Substitution of /e/ with /eɪ/ (Idiosyncrasy) - Substitution of /ʃ/ with /z/ (Influence of Mandarin Chinese)
			flesli	2	- Substitution of /ʃ/ with /s/
			stresi:	4	- Substitution of /f/ with consonant cluster /st/ (Idiosyncrasy) - Substitution of /ʃ/ with /s/ (Influence of Mandarin Chinese) - Omission of /l/ in last syllable (Idiosyncrasy)
24	squeezed	skwi:zd	skwɪnʧ	2	- Shortening of vowel /i:/ (Influence of Mandarin Chinese) - Substitution of /zd/ with /nʧ/ (Idiosyncrasy)
			skwi:zə	4	- Omission of past tense marker and the insertion of schwa /ə/ (Influence of Mandarin Chinese)
			skweəs	5	- Substitution of /i:/ with /eə/ (Idiosyncrasy) - Confusion between final fricatives /z/ and /s/ (Influence of Mandarin Chinese or Malay) - Omission of past tense marker

					(Influence of Mandarin Chinese)
			skwi:ʧɪ	6	- Substitution of /zd/ with /nʧ/ - Insertion of /ɪ/ in last syllable (Idiosyncrasy)
25	orange	ɒrənʤ	ɒrən	2, 3, 4, 6	- Omission of /ʤ/, influence of Malay word [oren] (Influence of Mandarin Chinese or Malay)
26	stopped	stɒpt	stɒp	1, 2, 4, 5, 6	- Omission of past tense marker (final consonant cluster) (Influence of Mandarin Chinese)
27	police	pəli:s	pɒlis	1, 4, 5, 6	- Substitution of /ə/ with /ɒ/, influence of Malay word [polis] - Shortening of vowel /i:/ (Influence of Malay)
			bɒlis	3	- Confusion between bilabial stops /p/ and /b/ (Influence of Mandarin Chinese or Malay) - Substitution of /ə/ with /ɒ/, influence of Malay word [polis] - Shortening of vowel /i:/ (Influence of Malay)
28	speeding	spi:dɪŋ	spɪdɪŋ	1, 4, 5	- Shortening of vowel /ɪ/ (Influence of Mandarin Chinese)
29	fix	fɪks	fi:	1	- Lengthening of vowel /ɪ/ - Omission of final consonant cluster (Influence of Mandarin Chinese)
			fɪt	4	Substitution of consonant cluster /ks/ with /t/ (Influence of Mandarin Chinese)

30	date	deɪt	det	1, 3, 6	- Simplification of diphthong /eɪ/ with /e/ (Influence of Mandarin Chinese)
			deɪʔ	4	- Glotalisation of final stop /t/ (Influence of Mandarin Chinese or Malay)
31	next	nekst	nest	1, 6	Omission of /k/ in final consonant cluster (Influence of Mandarin Chinese)
32	meeting	mi:tɪŋ	mi:dɪŋ	2, 3, 4, 5, 6	- Shortening of vowel /ɪ/ (Influence of Mandarin Chinese) - Confusion between alveolar stops /t/ and /d/ (Influence of Mandarin Chinese or Malay)
33	Talk	tɔ:k	tɔ:ʔ	1, 2, 4	- Glotalisation of final stop /k/ (Influence of Mandarin Chinese or Malay)
			tɒʔ	3, 5	- Shortening of vowel /ɔ:/ (Influence of Mandarin Chinese) - Glotalisation of final stop (Influence of Mandarin Chinese or Malay)
34	leisure	leʒər	lesʊə	1, 4	- Substitution of /ʒ/ with /s/ - Substitution of /ʊə/ with /ə/ (Influence of Mandarin Chinese)
			leɪsʊə	2, 3, 5, 6	- Substitution of /e/ with /eɪ/ in first syllable - Substitution of /ʒ/ with /s/ - Substitution of /ʊə/ with /ə/ in final syllable (Influence of Mandarin Chinese)
35	work	wɜ:k	wɔ:k	1, 3	- Substitution of /ɜ:/ with

					/ɔ:/ (Influence of Mandarin Chinese or Malay)
			wɜ:ʔ	2	- Glotalisation of final stop /k/ (Influence of Mandarin Chinese or Malay)
			wɔ:ʔ	4, 5, 6	- Substitution of /ɜ:/ with /ɔ:/ - Glotalisation of final stop /k/ (Influence of Mandarin Chinese or Malay)
36	coffee	kɒfi	ɒfɪs	5	- Omission of velar stop /k/ in first syllable - Insertion of final fricative /s/ (Idiosyncrasy)
37	take	teɪk	tæk	1	- Substitution of /eɪ/ with /æ/ (Influence of Mandarin Chinese)
			deɪʔ	3	- Confusion between alveolar stops /t/ and /d/ - Glotalisation of final stop /k/ (Influence of Mandarin Chinese or Malay)
			tæʔ	4	- Substitution of /eɪ/ with /æ/ (Influence of Mandarin Chinese) - Glotalisation of final stop /k/ (Influence of Mandarin Chinese or Malay)
38	coast	kəʊst	kɔ:t	5	- Substitution of /əʊ/ with /ɔ:/ (Influence of Mandarin Chinese)
39	food	fu:d	fʊd	1, 2, 3, 4, 6	Shortening of vowel /u:/ (Influence of Mandarin

					Chinese)
40	wasted	weɪstɪd	weɪst	1, 5	- Omission of past tense marker (Influence of Mandarin Chinese)
41	didn't	dɪdənt	dɪn	4	- Omission of contraction (Influence of Mandarin Chinese)
			dɪd	5	- Omission of contraction (Influence of Mandarin Chinese)
42	told	təʊld	tɒ	1, 5, 6	- Substitution of /əʊ/ with /ɒ/ - Omission of final consonant cluster (Influence of Mandarin Chinese)
			tɔ:	4	-Substitution of /əʊ/ with /ɔ:/ - Omission of final consonant cluster (Influence of Mandarin Chinese)
43	that	ðæt	dæʔ	3, 4, 6	- Substitution of /ð/ with /d/ (Influence of Mandarin Chinese) - Glotalisation of final stop /t/ (Influence of Mandarin Chinese or Malay)
44	stamp	stæmps	stæmp	1, 2, 4, 5	- Omission of plural marker (Influence of Mandarin Chinese)

***Idiosyncrasy refers to a particular way of pronouncing sounds; an unusual feature.

4.3 Data Analysis

4.3.1 Interference of Mandarin Chinese on English sounds

The common characteristics of pronunciation errors of the subjects resulting from the influence of Mandarin Chinese were diagnosed into four categories:

1. The absence of certain English sounds in Mandarin Chinese

Substitution of English sounds occurs due to the fact that some of the English sounds do not exist in the Mandarin Chinese. The voiced palatal fricative /ʒ/ does not exist in Mandarin Chinese, one of subjects replaced /ʒ/ with /s/ in 'vision' /vɪʒən/. Six out of the six subjects replaced /ʒ/ with /s/ in 'leisure' /leʒər/.

/θ/ and /ð/ were substituted with /t/ and /d/ respectively. Five out of six subjects could not pronounce the voiceless interdental fricative /θ/ in 'theory' /θɪəri/ as it does not exist in Mandarin Chinese. Thus they replaced it with the nearest sound /t/ while only one of the subjects replaced it with /d/. A significant finding about the /θ/ sound was that six out of the six subjects substituted voiceless labio-dental fricative /f/ for /θ/ which appears in the middle of the word birthday /bɜ:θeɪ/. Moreover, voiced interdental fricative /ð/ was also substituted with /d/ as in 'that' /ðæt/.

Four out of the six subjects pronounced 'orange' /ɒrənʤ/ as /ɒrən/ eliminating the final voiced palatal affricative ʤ which does not exist in Mandarin Chinese.

The error regarding /v/ was not randomly made. The voiced labio-dental fricative /v/ does not occur in most Chinese dialects. As a result, Chinese speakers could treat /v/ as a semi-vowel /w/. For example, one of the subjects pronounced 'vase' /va:z/ as [west], which /v/ is substituted with /w/.

The use of monophthong /e/ for diphthong /eɪ/ occurred due to the absence of /eɪ/ sound in Mandarin Chinese. Two out of the six subjects replaced /eɪ/ with /e/ in 'eight' /eɪt/. Similarly, three out of the six subjects replaced /eɪ/ with /e/ in 'date' /deɪt/. The subjects had trouble in perceiving the sounds which do not exist in their native language and thus they substituted those sounds with the nearest equivalents (Zhang & Yin, 2009).

2. Consonant cluster confusion

In the present study, final consonant clusters were greatly simplified to a single consonant
by the subjects. Apart from simplification of final consonant clusters, the subjects also eliminated the final consonant clusters from the words.

Examples:

- Five out of the six subjects did not pronounce the final consonant cluster correctly in 'silk' /sɪlk/. Two of them omitted the /k/ from the alveolar-velar /lk/ cluster while three of them omitted the lateral /l/ from the alveolar-velar /lk/ cluster.

- Three out of the six subjects omitted /l/ from the alveolar-bilabial /lm/ cluster in 'film' /fɪlm/.

- One out of the six subjects omitted both /k/ and /s/ from the velar-alveolar /ks/ cluster in 'fix' /fɪks/.

- Two out of the six subjects omitted /k/ from the velar-alveolar-alveolar /kst/ cluster in 'next' /nekst/.

- One out the six subjects omitted /s/ from the alveolar-alveolar /st/ cluster in 'coast' /k□ʊst/.

- Four out of six subjects omitted both /l/ and /d/ from alveolar-alveolar /ld/ cluster in 'told' /tˀʊld/.

However, there was only an error in initial consonant clusters which the subject omitted /l/ from the alveolar-alveolar /sl/ cluster in the word slice /slaɪs/.

Alternatively, the subjects inserted schwas into the consonant clusters. Two out of the six subjects inserted a schwa in consonant cluster /lm/, for example, one of them pronounced 'film' /fɪlm/ as [fɪləm] while another one pronounced as [fələm]. A schwa was also inserted in a consonant cluster by deleting the final sound. For example, one of the subjects produced 'squeezed' /skwi:zd/ as [skwi:zə] by eliminating the final stop /d/ and replacing it with a schwa.

3. Omission of grammatical endings and contractions

There were four types of grammatical endings anticipated in this study. They were grammatical endings of third person singular, plural form, past tense and contraction. All of these do not occur in Mandarin Chinese grammar. Two out of the six subjects omitted the final fricative /z/ in 'orders' /ɔ:dəz/ which represents grammatical endings of third person singular. Omission of the plural marker occurred in 'stamps' /stæmps/ where four out of the six subjects omitted the /s/ from bilabial-alveolar /sp/ cluster.

Omission of the past tense marker also could be observed. Because of the likelihood of simplification of final consonant clusters, a small number of past tense words, where the past tense morpheme was realised as a consonant cluster, were included to examine the pronunciation errors of the subjects. Four out of six subjects had difficulties with 'squeezed' /skwi:zd/ where there is a final consonant cluster. Subsequently, the omission of /t/ occurred

in ‘stopped’ /stɒpt/ where five of the six students eliminated /t/ from bilabial-alveolar cluster. Moreover, two out of the six subjects produced ‘wasted’ /weɪstɪd/ as [weɪst] where the past tense marker was omitted.

Omission of contraction occurred in ‘didn’t’ /dɪdənt/ where two out of the six subjects omitted the ending sounds as there is no such grammar rule in Mandarin Chinese. One of the two subjects produced the word as [dɪn] while another pronounced it as [dɪd].

4. Long and short vowel distinctions

Some subjects in the present study did not consistently distinguish long and short vowels. Most of the Mandarin Chinese vowels are quite identical with their English counterparts in terms of manner and position of articulation, but there are more vowel contrasts in English than in Mandarin Chinese, and some of the contrasts such as /i/ and /i:/ or /ʊ/ and /u:/ do not exist in Chinese at all. In this study, words with short vowels showed the greater tendency to be realised as long vowels.

Examples:

- Five out of the six subjects lengthened the /ɪ/ for /i:/ in ‘vision’ /vi:ʒn/.
- Five out of the six subjects lengthened the /ɪ/ for /i:/ in ‘silk’ /sɪlk/.
- One out of the six subjects lengthened the /ɒ/ for /ɔ:/ in ‘pocket’ /pɒkɪt/.
- Two out of the six subjects lengthened the /ɪ/ for /i:/ in ‘fill’ /fɪl/.
- One out of the six subjects lengthened the /ɪ/ for /i:/ in ‘ticket’ /tɪkɪt/.
- One out of the six subjects shortened the /i:/ for /ɪ/ in ‘squeezed’ /skwi:zd/.
- Five out of the six subjects shortened the /i:/ for /i/ in ‘police’ /pɒlis/.
- Three out of the six subjects lengthened the /ɪ/ for /i:/ in the first syllable in ‘speeding’ /spi:dɪŋ/.

- One out of the six subjects lengthened the /ɪ/ for /i:/ in 'fix' /fɪks/.
- Five out of the six subjects shortened /i:/ for /ɪ/ in the second syllable in 'meeting' /mi:dɪŋ/.
- Two out the six subjects shortened /ɔ:/ for /ɒ/ in 'talk' /tɔ:k/.

4.2.3 New findings

There were several anticipated pronunciation errors that could not be found in the categories of the subjects' pronunciation errors. For example, it was anticipated that the substitution of /s/ or /z/ for the voiced interdental fricative /ð/ might occur among Chinese speakers. However, in this study, the substitution of /s/ or /z/ for /ð/ was not articulated by any of the six subjects.

There were several new findings of pronunciation errors of the subjects, possibly resulting from the influence of Mandarin Chinese or Malay in this study.

1. Glottalisation of stops

Glottalisation of stops (/k/ and /t/) in final syllable was widespread in the speech production of the subjects. In the present study, the voiceless stop /t/ was glottalised more than the voiceless stop /k/. Examples:

eight	[eɪʔ]	date	[deɪʔ]
pocket	[pɒkeʔ]	talk	[tɔ:ʔ]
ticket	[dɪkeʔ]	work	[wɜ:ʔ]

2. Confusion between voiced stops (/b/, /d/ and /g/) and voiceless stops (/p/, /t/ and /k/)

Voiceless stops such as /p/, /t/ and /k/ were occasionally pronounced with minimal aspiration and sounded like voiced stops /b/, /d/ and /g/.

Examples:

- Four of the six subjects pronounced voiced stop /b/ for voiceless stop /p/ in the first syllable of the word ‘pocket’ /pɒkɪt/. In the second syllable, three out of the six subjects pronounced the voiced stop /g/ for voiceless stop /k/.

- Four out of the six subjects pronounced the voiced stop /d/ for the voiceless stop /t/ in the first syllable of the word ‘ticket’ /tɪkɪt/. In the second syllable, four out of the six subjects pronounced the voiced stop /g/ for the voiceless stop /k/.

- Two of the six subjects pronounced the voiced stop /g/ for the voiceless stop /k/ in ‘cake’ /keɪk/.

- One of the six subjects pronounced the voiced stop /b/ for the voiceless stop /p/ in the first syllable of the word 'police’ /p□li:s/.

- One of the six subjects pronounced the voiced stop /d/ for the voiceless stop /t/ in ‘take’ /teɪk/.

3. Confusion between voiced alveolar lateral /l/ and voiced alveolar approximant /r/

Three out of the six subjects replaced lateral /l/ with the approximant /r/ in ‘glass’/gla:s/. The voiced alveolar lateral /l/ and the voiced alveolar approximant /r/ are hard to describe as they share very similar sounds. Thus, it was assumed that these subjects had trouble in perceiving /l/ and /r/ sounds.

4.2.3. Influence of Malay Phonology

Clearly, the influence of the Malay language does contribute to some pronunciation errors made by the subjects. There were several examples of pronunciation errors made by the subjects due to the influence of Malay phonology.

- The word 'theory' /θɪəri/ was produced as 'teori' [ti:ɒri] in Malay by five out of the six subjects. One of them produced the word as [di:ɒri] which was different from the others.

- Substitutions of /ɪ/ with /e/ in second syllable could be found in words such as 'pocket' and 'ticket'. The word 'pocket' /pɒkɪt/ was produced as 'poket' /pɒket/ in Malay by two subjects; /bɒget/ by another two subjects and /bɔ:get/ by one subject. Similarly, the word 'ticket' /tɪkɪt/ was produced as 'tiket' /tɪket/ in Malay by two subjects; /dɪget/ by another two subjects and /di:get/ by one subject.

- The word 'sofa' /səʊfə/ was produced as 'sofa' [sɔ:fa:] in Malay by six out of the six subjects. They substituted /əʊ/ with /ɔ:/ in the first syllable while /ə/ with /a:/ in the second syllable.

- One of the subjects produced 'film' /fɪlm/ as 'filem' [fɪləm] in Malay. Similarly, another subject produced the word as [fələm] which sounds very close to 'filem' in Malay.

- One of the subjects produced 'phenomenon' /fɪnɒmɪnən/ closely to 'fenomena' [fenɒmenə] in Malay. Similarly, another subject produced the word as [fənɒmenən] which sounds very close to 'fenomena' in Malay.

- Six out of six subjects produced 'geography' /ʤiɒgrəfi/ as 'geografi' /ʤiɒgræfi/ in Malay where the schwa sound in the second syllable was replaced by /æ/ sound.

- One of the subjects produced ‘cake’ /keɪk/ as [kæk], which sounds similar with ‘kek’ [kek] in Malay, which the diphthong /eɪ/ was replaced with /e/. Similarly, another subject produced the word as [geʔ], which sounds very close to ‘kek’ in Malay.

- The final consonant cluster /nʧ/ was sampled in ‘orange’ /ɒrnʧ/, which was produced as ‘oren’ /ɒrn/ in Malay by four out of six subjects. There is likelihood that Malay pronunciation /ɒrn/, which only contains a final singleton /n/, might have influenced the production of the /nʧ/ clusters in English.

- The word police /pli:s/ was produced as ‘polis’ /pɒlis/ in Malay by four out of six subjects. One of the subjects produced it as /bɒlis/ which /p/ sound was substituted with /b/ sound, also sounds very close to ‘polis’ in Malay. The vowel /i:/ is shortened as there is no distinction in vowel length in Malay.

CHAPTER V – DISCUSSION AND CONCLUSION

5.1 Discussion

Clearly, Mandarin Chinese and Malay appeared to have some influence on English pronunciation. From the point of shared and unshared sounds of English, Mandarin Chinese and Malay, many sounds that have undergone changes in ME were unshared sounds (Phoon, 2010). In consonants, for instance /θ/, /ð/, /ʤ/, /ʒ/ and /v/ are unshared sounds specific to English. /θ/ and /ð/ were realised as stops /t/ and /d/ respectively. In addition, in the present study, the /θ/ sound which appears in the middle was realised as /f/ sound. Substitution of English sounds occurs due to the fact that some of the English sounds do not exist in the Mandarin Chinese. The substitution of /s/ for /ʒ/ sound which does not exist in Mandarin Chinese was produced as in words like vision /vɪʒən/ and leisure /leʒər/. Final voiced palatal affricative /ʤ/ was eliminated as it does not exist in Mandarin Chinese.

As for vowels, the diphthong /eɪ/ was substituted with the monophthong /e/, as /eɪ/ does not exist in Mandarin Chinese. When Chinese students had trouble in perceiving the sounds which do not exist in their native language, they tend to find the nearest equivalent to substitute those new sounds (Zhang & Yin, 2009). Diphthongs are like long vowels, thus diphthongs which are influenced by Mandarin Chinese will be short (Zhao, 1995). Hence, the simplification of diphthong tends to be produced by the Chinese students. The distinction between long vowels and short vowels do not exist in Mandarin Chinese. Thus it is common that Chinese students have difficulties in making the distinction between /ɪ/ and /i:/ or /ʊ/ and /u:/.

English consonant clusters do not exist in Mandarin Chinese as Mandarin Chinese consonants are always followed by vowels. Thus it is difficult for Chinese students to produce those sounds. The position of phonemes and the way of combining them are not the same with the two languages. In this study, final consonant clusters were simplified to a single consonant or were deleted for two of the consonants. Alternatively, the schwas were also inserted in the consonant clusters. In addition, final consonant clusters in grammatical endings as in third person singular, plural form, past tense and contraction can be extremely troublesome for Chinese students as they do not appear in Mandarin Chinese grammar. On the other hand, the occurrence of errors in initial consonant clusters was not as high as final consonant clusters.

Glottalisation of final stops is a phonological feature which is very unique to ME. According to Phoon (2010), glottalisation of final stops might only influenced by one or two of the languages. Glottalisation might be due to the influence of Malay and Chinese dialects such as Hokkien, Cantonese and as well as a variety of Mandarin Chinese used in Malaysia which contain glottal stops in final syllable. Bao (1998) suggested that the occurrence of glottalisation is influenced by the phonology of substrate languages, mainly Malay and the Chinese languages and dialects (as cited in Phoon, 2010). All final stops in Malay are realized as glottal stops and stops are generally not released in Chinese dialects such as Hokkien and Cantonese. According to Tan (1998), another possible reason for the high occurrence of glottalisation is influence from the extensive borrowing of English words into Malay (as cited in Phoon, 2010). Hence, it is not surprising that these words tend to be pronounced with glottal stops in English.

Voiceless stops such as /p/, /t/ and /k/ were occasionally pronounced with minimal aspiration and respectively sounded like voiced stops /b/, /d/ and /g/. Aspiration is used in

Mandarin Chinese to distinguish stops phonemically. However, the intensity of aspiration is less intense in /p^h, t^h, k^h/ in Mandarin Chinese as compared to English which may lead to confusion with English /b, d, g/ as a result of differences in degree of aspiration (Phoon, 2010).

The influence of the Malay language contributes to some of the most remarkable characteristics of ME. In Malaysia, there are many borrowed and adopted words and terms from English into Malay. These words are adopted from English mostly to suit Standard Malay phonetics and phonology system which is different from English in some ways, such as the sound-spelling discrepancy of English words, which is almost non-existent in Malay. It is believed that the effect of Malay loanwords potentially impacted the acquisition of some speech sounds (Phoon, 2010). Therefore, it is essential for Malaysian students to realise the differences of pronunciation between English words and Malay words.

5.2 Limitations

There are some limitations in this study. First, the number of the subjects selected could have been larger, hindering a complete and thorough generalisation to the Malaysian population. In future research, more subjects could be recruited.

Second, not all errors made by subjects resulting from native language interference were taken into investigation due to limited time. Besides, there is no direct evidence to show that some of the errors are only derived from native interference. For instance, there may be other factors influencing the development of learner errors such as learner's insufficient knowledge of phonology and phonetics, spelling, age, attitude and psychological factors.

Third, this study is limited to the study of the consonants and vowels system between the native language and the target languages. Thus in the read speech, the suprasegmental

(intonation, stress and rhythm) and segmental (assimilation, elision and linking) sections of the recording are disregarded.

Finally, it is not enough to reveal all pronunciation errors made by the subjects based on reading words and sentences only. There could be better results if the data analysis be based on natural and informal conversations. For instance, an interview of subjects' views towards pronunciation could be conducted.

5.3 Recommendations

Many issues for future research could be raised from the present thesis. According to Luo (2002), besides native language interference, the reason students made pronunciation errors in English was due to incorrect knowledge of the English phonemes (as cited in Chang, 1996). The developmental patterns of Mandarin Chinese and Malay acquired by ME speaking learners should be studied in order to observe the interaction among the three developing phonological systems (Chang, 1996).

An acoustic analysis could be done to accurately describe the differences of some ME phonological features such as the distinction between long vowels and short vowels and some consonant realizations. Besides, acoustic analysis could also provide some insights into any of the possible "reduction" or deletion processes. According to Edwards and Beckman (2008), acoustic analysis could help to reveal hidden contrasts in some ME realizations (as cited in Phoon, 2010). For instance, a contrast between /l/ and /r/ which might not be perceptible to the author in this study might be revealed under detailed acoustic analysis.

It is not easy to generalise whether these pronunciation errors are really representative of a wide range of Chinese learners of English. Therefore, further cross-sectional studies are needed to highlight these pronunciation problems among Chinese learners of English. Analysis without practice is useless and impossible to lead to the mastery of the language.

Jesperson suggested: “Practice what is right again and again” (as cited in Francis, 1946). Consequently, further researches are also encouraged to explore communicative strategies in pronunciation teaching with a focus on some of the problematic sounds and features associated with the Chinese language background when helping to develop the Chinese learners’ comprehensibility and oral fluency in English (Gao, 2005).

5.4 Conclusion

Due to the complex linguistic situation in Malaysia, Malaysian Chinese students are learning a variety of English that has already been affected by both Mandarin Chinese and Malay, as is seen, for instance, in the glottalisation of stops and simplification of final consonant clusters. However, these students are also learning Mandarin Chinese and Malay at the same time, so these ME features are reinforced for each generation. Although Mandarin Chinese and Malay are very different from English in terms of speech sound inventory and phonotactic structures, in the Malaysian context the difference is actually less because of the characteristics that have already been incorporated into ME (Phoon, 2010).

Some findings based on CA and EA have been questioned in SLA. In fact, not all the pronunciation errors listed will certainly match all the errors that will be made by the Chinese learners of English. Neither can a teacher identify all the errors that the students have made. However, CA can offer instructive information for EA whereas EA can prove the importance of CA. Under the guidance of CA, this study has illustrated the common characteristics of pronunciation errors of Chinese learners of English by analysing their native linguistic background, which illustrates how one’s native language influences one’s English pronunciation. The importance of pronunciation, which has been long ignored in the development of speaking skills, thus, is encouraged to be taken into consideration (Gao, 2005). It is hoped that the findings of the study will help English Language teachers to

understand the phonological acquisition of ME students who are learning Mandarin Chinese and Malay at the same time and thus help to improve their students' awareness and understanding of the interference of different sound systems on English pronunciation.

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APPENDICES

Appendix A: Word List

1. vision
2. silk
3. theory
4. spoon
5. eight
6. pocket
7. tease
8. sofa
9. advertisement
10. film
11. search
12. phenomenon
13. string
14. birthday
15. fill
16. camera
17. ticket

18. vase
19. geography
20. realistic

Appendix B: Sentences

1. She orders a slice of sponge cake and a glass of freshly squeezed orange juice.
2. He was stopped by the police for speeding.
3. We need to fix a date for next meeting.
4. Let’s have lunch so we can talk at leisure.
5. Do you know how to work the coffee machine?
6. You can take a boat trip along the coast.
7. The food is wasted because she didn’t come.
8. I told you yesterday that there weren’t any stamps.