การศึกษาภาษาในระหว่างของทำนองเสียงภาษาอังกฤษของนักศึกษาไทย
ที่พูดภาษาปัตตานีมาเลย์เป็นภาษาแม่: ด้านการแบ่งความ
An Interlanguage Study of English Intonation of Thai Students Speaking Pattani Malay
as Their Mother Tongue: Focusing on Tonality[1]

สุริยงค์ ลิ้มสังกาศ (Suriyong Limsangkass[2])

สาขาวิชาภาษาอังกฤษเป็นภาษานานาชาติ (EIL)

คณะบัณฑิตวิทยาลัย จุฬาลงกรณ์มหาวิทยาลัย

Abstract

This study investigates English intonation, specifically tonality, of Thai students speaking Pattani Malay as their mother tongue. The data were collected from 30 English major students, Faculty of Humanities and Social Sciences, Prince of Songkla University, Pattani Campus, divided into 2 groups: those with high degree of experience in exposing to English (High Exposure Group: HEG) and those with low degree of experience in exposing to English (Low Exposure Group: LEG).

The results reveal the influence of the stress pattern in Thai and Pattani Malay on 8 out of 11 stress patterns by students, that is, the primary stress always falls on the last syllable. The most distinctive evidence was indicated in the 'Oo'Ooo/ 'Oo,Ooo' pattern where the percentage of the deviated pattern was 27% in High Exposure Group (HEG) and 33% in Low Exposure Group (LEG). Furthermore, two rules of overgeneralization were found. In 6 stress patterns the subjects assigned stress onto the syllable preceding the last one. The most salient evidence was shown in the 'Oooo' pattern where the percentage of the deviated pattern was 53% in HEG and 86% in LEG. The second rule was in 5 stress patterns where the subjects stressed on a syllable that is not the last one. The most distinctive case was in the 'Oooo or ,Oo'Oo' pattern where 31% in HEG and 33% in LEG put the stress on the second syllable.

In conclusion, the results suggest that tonality systems of High Exposure Group and Low Exposure Group were influenced by the same factors: L1 transfer and overgeneralization in stress patterns. However, the findings also show that speech division of High Exposure Group tends to be closer to the target language.

Keywords: Interlanguage, English intonation, tonality, Thai speakers, Pattani-Malay speakers, stress pattern

บทคัดย่อ

      งานวิจัยชิ้นนี้มีวัตถุประสงค์เพื่อศึกษาภาษาในระหว่างของทำนองเสียงภาษาอังกฤษ โดยเฉพาะระบบการแบ่งความในภาษาอังกฤษ ของนักศึกษาไทยที่พูดภาษาปัตตานีมาเลย์เป็นภาษาแม่ ข้อมูลที่ใช้ในการวิเคราะห์มาจากการอ่านบทอ่านภาษาอังกฤษของนักศึกษาวิชาเอกภาษาอังกฤษ คณะมนุษยศาสตร์และสังคมศาสตร์มหาวิทยาลัยสงขลานครินทร์ วิทยาเขตปัตตานี จำนวน 30 คน โดยแบ่งเป็น กลุ่มผู้มีประสบการณ์ในการใช้ภาษาอังกฤษสูง (High Exposure Group: HEG) และกลุ่มผู้มีประสบการณ์ในการใช้ภาษาอังกฤษต่ำ (Low Exposure Group: LEG)

      ผลการวิจัยพบว่า ใน 8 จาก 11 ของรูปแบบการลงเสียงหนักเบา (Stress patterns) ระบบการแบ่งความของนักศึกษาได้รับอิทธิพลจากปัจจัยประเภทเดียวกัน นั่นคือ อิทธิพลจากภาษาแม่ (L1 transfer) ที่กำหนดให้พยางค์สุดท้ายของคำลงเสียงหนักเสมอ ซึ่งพบเห็นได้ชัดเจนที่สุดในรูปแบบการลงเสียงหนักเบา 'Oo'Ooo/ 'Oo͵Ooo' รูปแบบที่เบี่ยงเบน พบ 27% ในกลุ่มผู้มีประสบการณ์ในการใช้ภาษาอังกฤษสูงและ 33% ในกลุ่มผู้มีประสบการณ์ในการใช้ภาษาอังกฤษต่ำ นอกจากนี้ ใน 6 รูปแบบการลงเสียงหนักเบาพบกฎของการสร้างข้อสรุปเกินเหตุ (Overgeneralization) 2 ข้อ ข้อที่หนึ่ง คือ การใช้รูปแบบการลงเสียงหนัก ที่พยางค์ก่อนพยางค์สุดท้าย ข้อค้นพบที่เด่นชัดปรากฏในรูปแบบการลงเสียงหนักเบา 'Oooo' ซึ่งพบรูปแบบที่เบี่ยงเบน 53% ในกลุ่มผู้มีประสบการณ์ในการใช้ภาษาอังกฤษสูง และ 86% ในกลุ่มผู้มีประสบการณ์ในการใช้ภาษาอังกฤษต่ำ กฎข้อที่สอง คือ การลงเสียงหนักที่พยางค์ใดก็ได้ที่ไม่ใช่พยางค์สุดท้ายซึ่งพบใน 5 รูปแบบการลงเสียงหนักเบา ซึ่งเห็นได้ชัดเจนในรูปแบบการลงเสียงหนักเบา 'Oooo or ͵Oo'Oo' ที่ 31% ในกลุ่มผู้มีประสบการณ์ในการใช้ภาษาอังกฤษสูง และ 33% ในกลุ่มผู้มีประสบการณ์ในการใช้ภาษาอังกฤษต่ำลงเสียงหนักที่พยางค์ที่สอง

      งานวิจัยชิ้นนี้แสดงให้เห็นว่าระบบการแบ่งความของกลุ่มผู้มีประสบการณ์ในการใช้ภาษาอังกฤษสูงและกลุ่มผู้มีประสบการณ์ในการใช้ภาษาอังกฤษต่ำ ได้รับอิทธิพลจากปัจจัยเดียวกัน คือ อิทธิพลจากภาษาแม่ (L1 transfer) และ การสรุปเกินการ (Overgeneralization) อย่างไรก็ตาม กลุ่มผู้มีประสบการณ์ในการใช้ภาษาอังกฤษสูงมีระบบการแบ่งความที่ใกล้เคียงกับระบบการแบ่งความของเจ้าของภาษามากกว่า

คำสำคัญ: ภาษาในระหว่าง ทำนองเสียงของภาษาอังกฤษ ผู้พูดภาษาไทย ผู้พูดภาษาปัตตานีมาเลย์
              รูปแบบการลงเสียงหนักเบา

Introduction

As an instructor of Practical Phonetics course at Prince of Songkla University, Pattani campus, the researcher found that very few of the students had problem with speech production at the segmental level. This might be because of the richness in phonemes from their mother tongues since most students at Pattani campus are bilingual (Thai and Pattai Malay). Therefore, what is consider more interesting and worth studying is their production at the supra-segmental level or intonation, which is used to convey attitudes and purposes of the speaker by putting the 'tonic syllable' or the most prominent stressed syllable in different positions or using different types of pitch movement (Halliday, 1970). In other words, without this kind of notion or with the difference in terms of intonation system between English and their first language, the non-native speakers might have difficulty in communication with the native speaker. For example, with the differences in terms of tonic rules of the English and Thai, it can be claimed that misunderstanding situations can occur since, in English, the position of the tonic word can vary depending on what the speaker wants to emphasize while, in Thai, the tonic syllable is determined to fall on the last word and the last syllable of the word in the tone group (Sankhavadhana, 1988). Considering the meaning as the key of communication, the students' production in terms of intonation' is consequently essential because it could lead to confusion or misunderstanding.

Intonation refers to the system of pitch (rising and falling) and variation in pitch sequences within speech (Crystal, 1992). According to Halliday (1970), intonation is composed of three components: tonality referring to the system used to divide the flow of speech into tone groups tonicity relating to the choice of locating the tonic, the most prominent, syllable within the tone-group, and tone or tune associating with the choice of identifying the direction of pitch movements.

This study focused on tonality. This is because, according to Sankhavadhana (1988) who did a contrastive study on intonation in English and Thai, it is claimed that the Thai accentual system would influence the English pronunciation of the Thai speaker, making the tonality deviate from the original one. That is, the last syllable of the polysyllabic word in English would always be stressed. For example, in an unmarked situation, English speakers would divide the tone group as //ˌShe's a /primary /school /teacher.//,whereas Thai speakers would say //ˌShe's a prima/ry /school tea/cher.//. This example shows that Thai stress patterns influence the system of dividing the rhythmic units within a tone group by changing the position of the rhythmic unit boundary, marked by '/'. Consequently, due to the change in rhythmic unit boundary, the listener might have difficulty in organizing the given information, and finally, get confused.

Although the concept of contrastive analysis could predict some errors that could be found in the second language speaker, it could not be assumed that those errors would really exist. Therefore, in order to confirm or refute the prediction, the interlanguage notion is essential for the next step of the study since it would be used not only to validate the predicted hypothesis, but it could also show the developmental sequence of learning (Ellis, 1987 cited in Samana, 2005).

Therefore, with the need to explore the problems of Thai students speaking Pattani Malay as their mother tongue combined with the interlanguage perspective, this study aims to investigate the students' problem in tonality or the system of speech division based on two questions, which are "what are problems of Thai students who speak Pattani Malay as their mother tongue in terms of tonality?" and "what are problems of the subjects at two different interlanguage stages?"

Literature review

1. Interlanguage

Nemser (1969) defined the term interlanguage as "an Approximative System" referring to the linguistic system that the learner uses in order to reach the target language. This concept agreed with that of James (1980: 4-5) who presented the diagram of interlanguage as follows.
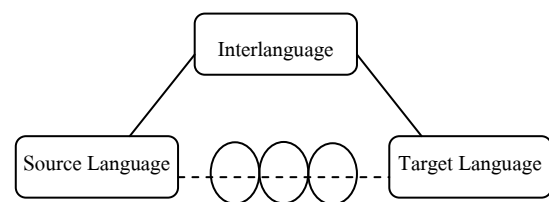
According to the diagram, the term interlanguage is used to refer to a kind of language that learners use before mastering the target language. Also, a source language is proposed in this process. It is usually found that some of errors made by learners with low proficiency or low target language exposure are caused by the influence of their first language, which is known as 'L1 transfer'. It is also claimed the second language performance of learners with high exposure in the target language is closer to the performance of native speakers. Therefore, it could be said that, the accent of Thai learners who have low exposure to English may result from the influence of the Thai intonation systems such as accentual system and tonal system (Sankhavadhana, 1988).

As interlanguage refers to the lang-uage that the learners use before mastering the target language, their mother tongue could be one of the factors that makes their language deviate from the target language. According to Selinker (1972), however, there are some other factors apart from the learners' first language that could influence their perfor-mance in the interlanguage stage as follows;

1) Language transfer refers to the phenomenon where the learner use some features from first language in their second language. For example, French native speakers might use uvular /r/ in their English pronunciation or, for the Thai English case, the tonal system might be applied (Gandour, 1979).

2) Transfer of training is the situation where the errors are influenced by what the learners have learned in the second language classroom. That is to say, when errors appear, it is not always because the learners apply their first language rules. Rather, some problematic features might come from incorrect concepts that they learned from their teachers.

3) Strategies of second language learning are used to refer to the situation where the learners try to simplify the concept. For instance, the learners use the verb 'feel' with the –ing form in the sentence "I'm feeling thirsty" because they have a concept that this verb has to end with -ing.

4) Strategy of second language communication refers to the strategy that the learners use in second language communication. For example, they might avoid using the structures they are not sure of by repeatedly using the one they understand well (Keys, 2002). This strategy is called 'Avoidance strategy'.

5) Overgeneralization of target language linguistic materials can also be found when the learners learn some rules and try to apply them to every situation. For example, when the learners were taught to use the –ed form with verbs in past tense, some errors such as 'goed' or 'runned' might appear because of this process of learning.

In conclusion, it should be noted that it is not only the learners' first language that could influence their performance, but also their experience and their characteristics. Therefore, this study aims to investigate the factors that influence the subjects' intonation which might come from their first language experiences or exposure which are central Thai, southern Thai, and Pattani Malay as well as their second language which is English. In addition, since some influences might come from some strategies of communication, literal translation and avoidance strategy, reading aloud task is used to collect all of the expected features of intonation (Keys, 2002).

2. Tonality in English

Tonality refers to the way speakers divide the speech into groups which are called 'tone groups' by using pauses as tone group boundaries. Within a tone group, the stress will play the role as the boundary of the subunits which are the 'rhythmic unit'. In other words, within the tone group, each rhythmic unit will start with the stressed syllable and end before the next stressed one as in the following example:

//ˈPeter /ˈlikes /ˈplaying /ˈtennis//.

(The symbol '//' is the marker of tone group boundary while '/' represents rhythmic unit boundary)

From the example, the sentence "Peter likes playing tennis" is a 'tone group' that is divided from a speech, marked by '//'. Within this tone group, the subunits called 'rhythmic units' will be divided into groups again by the stress, marked by '/'. In this case, there are 4 rhythmic units which are '//Peter/', 'likes/', 'playing/' and 'tennis//'.

3. Tonality in Thai

Concerning Thai speakers' speech division into tone groups, stress is also found to play the role as the rhythmic unit boundary. However, the position of the stress syllable in Thai is different from that in English. That is to say, the stress position of English is free as can be seen in the words like table [ˈteɪblə], canal [kəˈnæl], or elephant [ˈeləfənt] (Sankhavadhana, 1988), whereas in Thai, the stress will always fall on the last syllable of the words such as สาหัส [sa:ˈhat] <severe>, กะทันหัน [katʰan ˈhan] <suddenly>, or คมนาคม [kʰamana:ˈkʰom] <communication>.

4. Stress patterns in Pattani Malay

As more than 80% of the students in this study are Muslims who use Pattani Malay or Yawi as one of their mother tongues (Chotikakamthorn,

1981), it is also essential to study the intonation system of this language since, according to the interlanguage notion, the first language could also influence the student's production of the second language.

According to Chotikakamthorn (1981), the position of the stressed syllable in Pattani Malay accentual system depends on the number of the syllables in a certain word.

In monosyllabic words, the stress is on the peak of the syllable and there is only 'primary' stress, symbolized as 'ˈ' such as the word [paʔ] <four> or [ɔɲ] <coconut>.

As for disyllabic words, there are two types of stress group. First, it is the 'presyllable' (unstressed syllable) and major syllable (primary stress) stress group, which means that the first syllable is unstressed while the second is stressed as in the words like [bɯˈli] <to buy> or [kɯˈleh] <to look>. The second type of stress group is called 'minor syllable and major syllable group' referring to the words of which both syllables are stressed. The primary stress falls on the second syllable while the secondary stress, represented by 'ˌ', is given to the first one like the words [ˌpiˈtu] <door> or [ˌpaˈdi] <grain>.

In trisyllabic words, the primary stress always falls on the last syllable of the word whereas the first and the second syllables are unstressed or given the secondary stressed as shown in the table below:

Stress group	Example
Presyllable + Minor syllable+ Major syllable	[tɯˌliˈŋɔ] \<ear\>
Minor syllable + Minor syllable+ Major syllable	[ˌduˌniˈjɔ] \<world\>
Presyllable + Presyllable+ Major syllable	[sɯbɯˈlah] \<eleven\>
Minor syllable + Presyllable + Major syllable	[ˌʔarɯˈnaʔ] \<rabbit\>

It can be concluded that the stress patterns in Pattani Malay are quite similar to those in the Thai language since the primary stress would fall on the last syllable of the words. Consequently, with this agreement, it is expected that the subjects with low exposure to English would assign the stress to the last syllable of the word as the result of their first languages' influence.

Materials and methods

1. Research instruments

1.1 Language exposure questionnaire: This questionnaire is adapted from Sudasna Na Ayudhya (2002). It consists of 5 questions about the frequency in doing activities using central Thai, southern Thai, and Pattani Malay as well as 24 questions asking about the frequency in doing activities using English. After doing this task, the subjects were divided into High Exposure Group (HEG) and Low Exposure Group (LEG).

1.2 Praat: It is a freeware program developed by Paul Boersma and David Weenink of the University of Amsterdam. This program is used to record data and analyze acoustic features in terms of duration, intensity, and pitch of the utterance which are used to indicate tonality.

1.3 Reading aloud task: This task is used to examine whether the stress would be assigned to the last syllable of 58 polysyllabic words where the stress falls on the first syllable, the second syllable, the third syllable, or the fourth syllable. (See appendix)

2. Research procedure

The research procedure was divided into 2 phases: the pilot project phase and the post-pilot project phase.

In the pilot project phase, the task was designed based on the notion of Halliday's intonation system (1970) and the study of Thai and Pattani Malay's intonation system from Sankha-vadhana (1988) and Chotikakamthorn (1981). Then, it was tried out with one native speaker, one third-year university student with high English exposure and one first-year student with low English exposure.

In the post-pilot project phase, the findings from the pilot study were used to develop a new task which validated by asking three native speakers to do the task. Then, a questionnaire adapted from Sudasna Na Ayudhya (2002) was

distributed to 34 fourth-year students and 37 first-year students to select the students as the two sample groups: high exposure group and low exposure group. Afterwards, fifteen first-year students who had the lowest score of the questionnaire were selected as representatives of Low Exposure Group (LEG) while the fifteen fourth-year students who had the highest score were put in High Exposure Group (HEG). Both groups were finally asked to do the task in the language laboratory.

3. Data Analysis

After collecting the data, all of the tokens were detected and analyzed by the auditory method where the researcher listened to the sound data and put some symbols on the paper. However, in order to confirm the correctness in the researcher's hearing, an acoustic method is also applied in this study by using the Praat program. That is to say, in terms of the tone group boundary, after listening and finding pauses, the researcher used Praat program to find the pause which could be located by the thin line, without frequency.

Figure 1: The tone group boundary indicated by pause
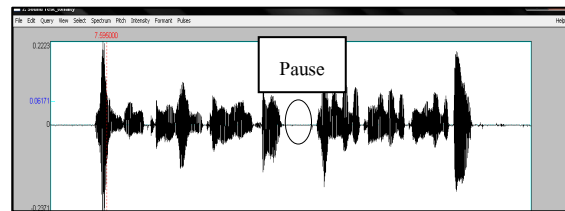
marked by the stress. After listening to the data, the researcher marked the symbol '/' in front of the stressed syllable of certain words. As for the acoustic evidence from Praat, according to Collins & Mees (2003), stress can be detected by loudness, pitch, vowel duration. These three features were indicated by 'intensity' (dB), represented by a solid line, 'pitch' (Hz) represented by dotted line, and 'length of the wave form' (Sec.) represented by amplitude, as can be illustrated u in Figure 2A and Figure 2B.

Figure 2A: The wave form, the pitch, and the intensity of the word said by the native speaker and the high exposure student
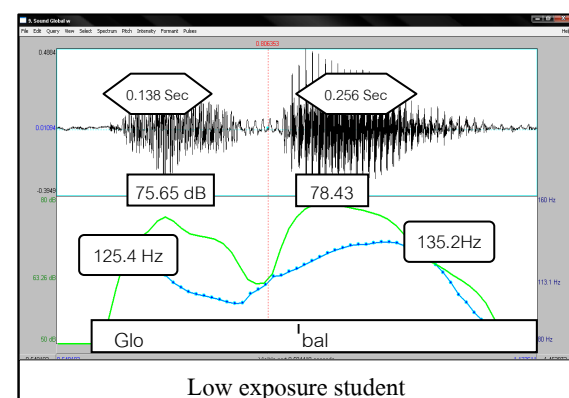
Figure 2B: The wave form, the pitch, and the intensity of the word said by the low exposure student

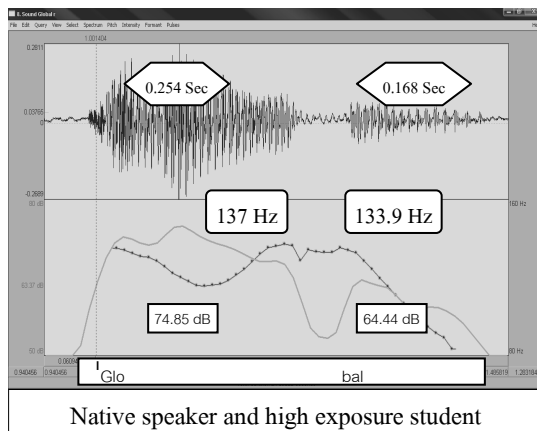
Native speaker and high exposure student

Figure 2A demonstrates the way Praat program indicates the stressed syllable of the word 'global' by the length of wave form, the pitch, and the intensity. According to the figure, since the first syllable has a higher level of pitch and intensity as well as also longer wave form, it can be claimed that the first syllable is stressed. On the other hand, figure 2B shows the opposite finding since the second syllable has a higher level of pitch as well as intensity and longer wave form. This stress pattern of Low Exposure Group might be one of the examples showing the influence of the Thai and Pattani Malay stress pattern.

Findings

1) Two syllabic words

The first category consists of 2 stress patterns which are the pattern where the stress falls on the first syllable, represented by the symbol

'Oo' and pattern 'oO' where the stress falls on the second syllable. (See Table 1)

It is found that High Exposure Group tends to make fewer errors in the pattern Oo than Low Exposure Group. In addition, the percentage of the stress on the last syllable spoken by Low Exposure Group is higher than that by High Exposure Group as expected.

Similarly, in the pattern oO, High Exposure Group also makes fewer errors than Low Exposure Group. However, the results from both groups suggest that, in this section, the percentage of the deviated patterns (58% in High Exposure Group and 70% in Low Exposure Group) is higher than the expected one (42% in High Exposure Group and 30% in Low Exposure Group).

2) Three syllabic words

The three syllabic word category includes 3 stress patterns which are the pattern where the stress falls on the first syllable, represented by the symbol 'Ooo', the pattern 'oOo' where the stress falls on the second syllable, and the pattern 'ˌOoˈO /ˈOoˌO' where the primary stress can fall on the first or the last syllable. (See Table 2)

In the pattern Ooo, the percentage of 3 actual stress patterns used by High and Low Exposure Groups tends to be equal. The percentage of the deviated patterns where the stress falls on the second syllable in High Exposure Group is higher than that of Low Exposure Group.

Table 1: The actual stress patterns in two syllabic words spoken by Native Group, High Exposure Group, and

Low Exposure Group

Expected stress patterns	Words	Actual stress patterns (%)	
		Oo	oO
NG: Oo (*N* = 84)	Also, networks, hundreds, cable, TV (2 times),	**100**	-
HEG: Oo (*N* = 420)	channels, people (3 times) , programs (4 times),	**81**	19
LEG: Oo (*N* = 420)	stories, actors (2 times), viewers, major, local, global, special, present, many, level, therefore	**67**	33
NG: oO (*N* = 12)	Events, effects, become, improve	-	**100**
HEG: oO (*N* = 60)		**58**	42
LEG: oO (*N* = 60)		**70**	30

* The symbol '*N*' represents the numbers of words in each stress pattern spoken by 3 native speakers,

15 subjects in High Exposure Group, and 15 subjects in Low Exposure Group

Table 2: The actual stress patterns in three syllabic words spoken by Native Group, High Exposure

Group, and Low Exposure Group

Expected stress patterns	Words	Actual stress patterns (%)				
		Ooo	oOo	ooO	ˌOoˈO	ˈOoˌO
NG: Ooo (*N* = 9)	actually, popular, probably	**100**	-	-	-	-
HEG: Ooo (*N* = 45)		**38**	35	27	-	-
LEG: Ooo (*N* = 45)		**38**	33	29	-	-
NG: oOo (*N* = 24)	However, exciting, producers, directors, determine, another, creative, variety	-	**100**	-	-	-
HEG: oOo (*N* = 60)		6	**76**	18	-	-
LEG: oOo (*N* = 60)		10	**60**	30	-	-
NG: ˌOoˈO / ˈOoˌO (*N* = 3)	Re-create	-	-	-	**100**	-
HEG: ˌOoˈO / ˈOoˌO (*N* = 15)		-	33	-	**54**	13
LEG: ˌOoˈO / ˈOoˌO (*N* = 15)		-	20	-	**53**	27

The symbol 'ˈ' refers to primary stress while the symbol 'ˌ' refers to secondary stress. The stress pattern before

slash '/' represents the default stress pattern whereas the stress pattern after slash '/' represents the alternative

stress pattern.

On the other hand, the percentage of stress falling on the last syllable in High Exposure Group is lower.

As for the pattern oOo where the stress falls on the second syllable, the percentage of the expected pattern groups, in both High and Low Exposure Group seems to be dominant. However, the subjects in both groups produced the deviated patterns where the stress falls on the first or the last syllable. In addition, the findings suggested that the percentage of the stress in the last syllable is higher than the stress in the first syllable.

In terms of the patterns $_{\shortmid}$Oo$^{\shortmid}$O / $^{\shortmid}$Oo$_{\shortmid}$O, it is found that the percentage of the default stress pattern, where the primary stress falls on the primary accented syllable, in both subject groups is the most frequently used patterns. However, the findings also show that the percentage of the deviated patterns, where the stress falls on the second syllable, is higher than that of the alternative patterns, where the primary stress falls on the secondary accented syllable. Moreover, the findings in the patterns Ooo and $_{\shortmid}$Oo$^{\shortmid}$O/$^{\shortmid}$Oo$_{\shortmid}$O reveal that the percent-tage of this deviated pattern in High Exposure Group is higher than the one in Low Exposure Group.

3) Four syllabic words

There are 4 stress patterns in the four syllabic word category. The first one is the pattern 'Oooo' where the stress falls on the first syllable. The second pattern is the pattern Oooo or $_{\shortmid}$Oo$^{\shortmid}$Oo where the stress falls on the first syllable

or the third one. Thirdly, it is the pattern oOoo where the stress is assigned onto the second syllable. Finally, it is the pattern $_{\shortmid}$Oo$^{\shortmid}$Oo / $^{\shortmid}$Oo$_{\shortmid}$Oo pattern where the primary stress can fall on the first or the third syllable.

3.1 Oooo pattern

According to Table 3, High Exposure Group produced more stress patterns than the Low Exposure Group. Moreover, the expected pattern where the stress falls on the first syllable was not found in Low Exposure Group. In addition, the deviated pattern 'ooOo' was as the most preferable pattern for both groups.

3.2 Oooo or $_{\shortmid}$Oo$^{\shortmid}$Oo pattern

In the case where the subjects can use more than one stress pattern, both High and Low Exposure Groups tends to use the pattern $_{\shortmid}$Oo$^{\shortmid}$Oo, where the primary stress falls on the third syllable. (See Table 4)

3.3 oOoo pattern

In this pattern, Low Exposure Group produced more deviated patterns. However, both High and Low Exposure Groups agreed to used the expected pattern where the stress falls on the second syllable as the most preferable one. The percentage of the expected stress pattern is obviously in the first rank. This might be because the words in this category are proper nouns which are America and American. (See Table 5)

Table 3: The actual stress patterns in the pattern Oooo spoken by Native Group, High Exposure Group, and Low Exposure Group

Expected stress patterns	Words	Actual stress patterns (%)			
		Oooo	OOoo	ooOo	oooO
NG: Oooo (*N*= 3)	Fascinating	**100**	-	-	-
HEG: Oooo (*N*= 15)		27	7	**53**	13
LEG: Oooo (*N*= 15)		-	7	**86**	7

Table 4: The actual stress patterns in pattern Oooo or ₁Oo¹Oo spoken by Native Group, High Exposure Group, and Low Exposure Group

Expected stress patterns	Words	Actual stress patterns (%)		
		Oooo	oOoo	₁Oo¹Oo
NG: Oooo or ₁Oo¹Oo (*N*= 3)	Television	**100**	-	-
HEG: Oooo or ₁Oo¹Oo (*N*= 15)		13	31	**56**
LEG: Oooo or ₁Oo¹Oo (*N*= 15)		20	33	**47**

Table 5: The actual stress patterns in pattern oOoo spoken by native speakers, High Exposure Group, and Low Exposure Group

Expected stress patterns	Words	Actual stress patterns (%)		
		oOoo	ooOo	oooO
NG: oOoo (*N*= 6)	America,	**100**	-	-
HEG: oOoo (*N*= 30)	Americans	**87**	-	13
LEG: oOoo (*N*= 30)		**84**	3	13

Table 6: The actual stress patterns in pattern ₁Oo¹Oo / ¹Oo₁Oo spoken by Native Group, High Exposure Group, and Low Exposure Group

Expected stress patterns	Words	Actual stress patterns (%)			
		¹Oo₁Oo	oOoo	₁Oo¹Oo	oooO
NG: ₁Oo¹Oo / ¹Oo₁Oo (*N*= 21)	Entertainment (3 times),	5	-	**95**	-
HEG: ₁Oo¹Oo/ ¹Oo₁Oo (*N*= 105)	information,	3	1	**94**	2
LEG: ₁Oo¹Oo/ ¹Oo₁Oo (*N*= 105)	infotainment (2 times), combination	4	2	**83**	11

Table 7: The actual stress patterns in pattern ₌Oo'Ooo / 'Oo₌Ooo spoken by Native Group, High Exposure Group, and Low Exposure Group

Expected stress patterns	Words	Actual stress patterns (%)		
		'Oo₌Ooo	₌Oo'Ooo	ooooO
NG: ₌Oo'Ooo/ 'Oo₌Ooo (*N*= 3)	International	-	**100**	-
HEG: ₌Oo'Ooo/ 'Oo₌Ooo (*N*= 15)		13	**60**	27
LEG: ₌Oo'Ooo/ 'Oo₌Ooo (*N*= 15)		7	**60**	33

Table 8: The actual stress patterns in pattern o₌Oo'Ooo / o'Oo₌Ooo spoken by Native Group, High Exposure Group, and Low Exposure Group

Expected stress patterns	words	Actual stress patterns (%)					
		Oooooo	o'Oo₌Ooo	ooOooo	o₌Oo'Ooo	ooooOo	oooooO
NG: o₌Oo'Ooo/o'Oo₌Ooo (*N*=6)	Responsibility, accessibility	-	33	-	**67**	-	-
HEG: o₌Oo'Ooo/ o'Oo₌Ooo (*N*=30)		3	17	-	**66**	7	7
LEG: o₌Oo'Ooo/ o'Oo₌Ooo (*N*=30)		13	23	6	**45**	10	3

      The study with the Native Group found that the native speakers used two stress patterns. One was the expected pattern or 'Default stress pattern' and the other pattern was called 'Alternative stress pattern' which can be used in realization. The main factor of this variation comes from the shift of primary and secondary stress which occur in words that have more than three syllables. In the default stress pattern, the primary stress falls on the primary accented syllable whereas, in the alternative stress pattern, the primary stress falls on the secondary accented syllable. (See Table 6)

      According to Table 6, both native and non-native groups used the default pattern most. Low Exposure Groups produced all possible stress patterns.

4) Five syllabic words: ₌Oo'Ooo / 'Oo₌Ooo pattern

      In five syllabic words category, the alternative pattern where the primary stress falls on the secondary accented syllable also occurred along with the default pattern where the primary stress falls on the primary accented syllable. As can be seen Table 7, all of the native speakers used only the default stress pattern whereas the non-native groups used both default and alternative patterns. In addition, the percentage of the patterns where the stress falls on the last syllable is distinctively high (27% in High Exposure Group

and 33% in the Low Exposure Group)

5) Six syllabic words: o₁Oo'Ooo/ o'Oo₁Ooo pattern

Similar to the case of ₁Oo'Ooo / 'Oo₁Oo pattern, in this last section, it is shown that the native speakers use both the default and the alternative stress patterns. The non-native groups seem to make more various patterns. However the default pattern (o₁Oo'Ooo) was used most by all groups of subjects. . (See Table 8)

Discussion

According to this study of the English intonation, in terms of tonality, used by students with high and low exposure to English, it could be concluded that two factors might influence the subjects' production were found as follows

1) First language transfer The findings from 8 stress patterns ('Oo','Ooo','oOo', 'Oooo','oOoo','₁Oo'Oo/'Oo₁Oo','₁Oo'Ooo/'Oo₁Ooo',and'o₁Oo'Ooo/o'Oo₁Ooo') suggested that tonality in both High and Low Exposure Groups was affected by the stress pattern of their mother tongue. The pattern 'Oo'Ooo/ 'Oo₁Ooo' as in the word 'international' might be the example of this case since the percentage of the deviated pattern where the stress falls on the last syllable is quite high (27% in High Exposure Group and 33% in Low Exposure Group).

The results also supported the concept of interlanguage stating that the intonation of High Exposure Group is closer to that of the native speaker (James, 1980). This is because the percentage in using this pattern of High Exposure Group tends to be lower than that of Low Exposure Group as shown in Figure 3.

2) Overgeneralization In terms of overgeneralization in which 6 stress patterns appeared (See Figure 4), pattern 'Oo', 'Ooo', '₁Oo'O/ 'Oo₁O', 'Oooo', 'oOoo', and 'o₁Oo'Ooo/ o'Oo₁Ooo', the results show that the non-native group tends to use the deviated pattern of the pattern 'oO' (58% in High Exposure Group and 70% in Low Exposure Group) rather than the expected one (42% in High Exposure Group and 30% in Low Exposure Group). Regarding the deviated patterns, it is found that the subjects create the default stress pattern in order to deal with the words that they are not certain to pronounce. The rule of this default stress pattern is assigning the stress onto a syllable before the last one. Another example of the deviated patterns can be seen in the pattern 'Oooo' as in the word 'fascinating' since the percentage of the deviated pattern whereas stress falls on the syllable before the last one is highly dominant (53% in High Exposure Group and 86 % in Low Exposure Group).

Figure 3: The percentage of the deviated pattern where the stress falls on the last syllable
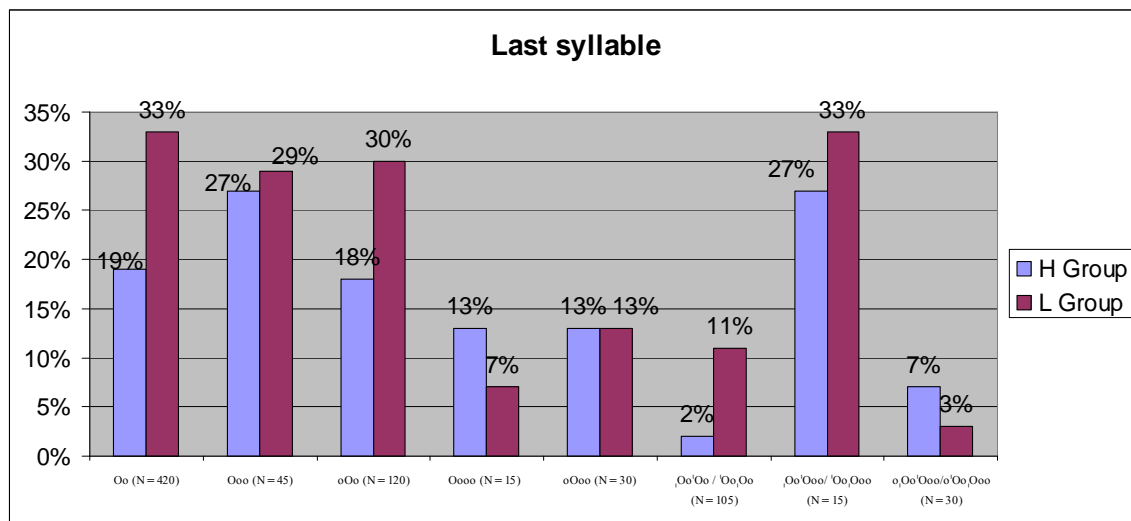
Figure 4: The percentage of the deviated pattern where the stress falls on the syllable preceding the last one
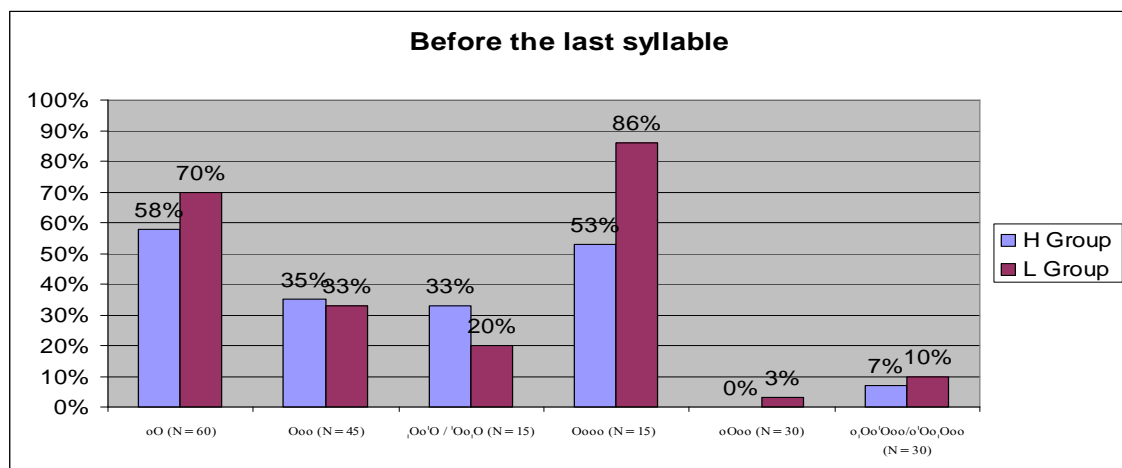
Figure 5: The percentage of the deviated pattern where the stress falls on other syllables which is not in the final or pre-final position
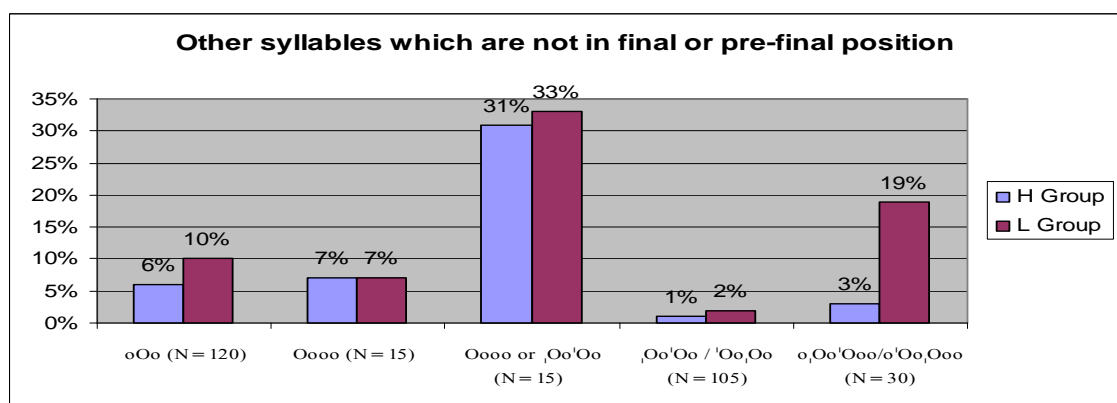
From the example, it is found that both of High and Low Exposure Groups do not seem to know the expected stress pattern of the word 'fascinating' since the percentage of this expected pattern is lower (27% in High Exposure Group and 0% in Low Exposure Group).

Another rule of overgeneralization is suggested by deviated patterns where the stress falls on the syllable that is not the last syllable or does not precede the last syllable. The rule of this case is assigning the stress onto any syllable that is not the last one. This rule might be formulated because some learner might notice that assigning the stress into the last syllable seems to be the non-native like stress pattern that is influenced by first language. According to the findings, there are 5 stress patterns showing the evidence of this overgeneralization rule as in Figure 5.

The deviated stress patterns in Figure 5 can be classified into three sub-categories based on the syllable that is stressed. First, subjects assigned the stress into the first syllable in pattern 'oOo'. Secondly, pattern 'Oooo', 'Oooo or ˌOoˈOo', and 'ˌOoˈOo/ ˈOoˌOo' show the case where the stress falls on the second syllable. Finally, pattern 'oˌOoˈOoo/ oˈOoˌOoo' reveals the case where two deviated patterns were found. That is, 3% of High Exposure group and 13% of Low Exposure group assigned the stress onto the first syllable, and 6% of LEG also assigns the stress into the third syllable.

Conclusions and suggestions

This study intended to investigate, the problems of Thai students who speak Pattani Malay as their mother tongue in the production of English intonation in terms of tonality and to compare the stress problems between High Exposure Group and Low Exposure Group.

The results revealed that 8 of 11 stress patterns revealed the influence from the first languages. That is, the stress always falls on only the last syllable (Sankhavadhana, 1988, Vairoja-navong, 1984). Furthermore, the overgeneralization phenol-menon is also another factor causing the deviated patterns (Selinkers, 1972). In addition, two rules of overgeneralization were found. First, 6 stress patterns show the case that the subjects assigned stress onto the syllable preceding the last one. The second rule is in 5 stress patterns where the subjects assigned stress into any syllable that is not the last one.

The comparison of stress problems between High Exposure Group and Low Exposure Group showed that both groups face the same problems which are L1 transfer and overgeneralization. The result, however, suggested that the stress patterns in High exposure group were closer to the target language.

In terms of the suggestion for further study, to begin with, according to the data, the performance of the High and Low Exposure Group seems to be similar in many aspects. This might be because the low exposure group's interlanguage stage is not close to the source language. Therefore, in order to explore a wider

range of developmental aspect and see more problems that the low exposure students have to deal with English intonation, the students who are not in English major might be another group to be studied.

In addition, since the scope of this study focuses only on the subjects in a specific area, a similar study should also be conducted with other groups of students such as those who speak only central Thai or northern Thai as their mother tongue in order to examine the hypothesis of the contrastive study and understand the problem of the students in those certain areas.

Finally, due to the fact that the scope of this study covers only the variation within each tone group that is deviated by the stress pattern, further research might pay attention to the relationship between tone groups. This is because, non-native speakers whose first language's accentual rule is different from English might also find difficulty in using a pause to chunk the information which could also lead to miscommunication. In addition, in order to study this topic, the interview activity or free speech may be more appropriate than reading aloud task since it can prevent errors that might come from a reading activity. For example, in the case of unfamiliar words, the subjects might use a pause to think about how to pronounce that certain word. Moreover, using free speech might allow the researcher to see the actual performance of the

subjects since they have to communicate in a real situation.

Acknowledgements

References

Blass, L. and Pike-Baky, M. 1991. **World beat: Current Reading for SL Students**. New York: McGraw-Hill, Inc.

Chotikakamthorn, M. 1981. **"A comparative study of phonology in Satun**

Malay and Pattani Malay". M.A.
Thesis.Linguistics Department,
Mahidol University. (Unpublished)

Crystal, D. 1992. **An Encyclopedic Dictionary of Language and Languages**.
Oxford, England: Blackwell.

Halliday, M.A.K. 1970. **A Course in Spoken English: Intonation**. London:
Oxford University Press.

James, C. 1980. **Contrastive Analysis**.
London: Longman.

Keys, K.J. 2002. "Interlanguage phonology: Theoretical questions and
empirical data", in **Linguagem & Ensino**, Vol. 5, No. 1

Nemser, W. 1969. "Approximative System of Foreign Language Learners", in
International Review of Applied Linguistics in Language Teaching. Vol. IX/2.

Sankhavadhana, T. 1988. **"A Contrastive Study of Intonation in English and Thai"**. M.A. Thesis, Linguistics Department, Chulalongkorn University. (Unpublished)

Selinkers, L. 1972. "Interlanguage". **International Review of Applied Linguistics in Language Teaching**. Vol. X/3.Reprinted in J.C.

Richards (ed.) 1974, **Error Analysis**. London: Longman.

Sudasna Na Ayudhya, P. 2002. "Models of Mental Lexicon in Bilinguals with High and Low Second Language Experience: An Experimental Study of Lexical Access". Ph.D.Dissertation, Linguistics Department, Chulalongkorn University. (Unpublished)

Appendix: Reading aloud task

Infotainment: A New Kind of TV Programming

There are three major networks and hundreds of local and cable TV channels in America. Americans get a lot of entertainment and information from television. Most people probably watch it for variety shows only. For some people, however, TV is a source of news, but some new programs mix entertainment and news.

This kind of the program is called 'infotainment'. It is a combination of real events and entertainment. The infotainment programs use actors to re-create news stories. This makes the news more fascinating and exciting to viewers. Actors play the part of the people who were actually in the story. The shows also use special effects.

At present, many producers determine to make this kind of program become popular in the international level; therefore, it is another responsibility for creative directors to improve global accessibility.

Adapted from: Blass, L. and Pike-Baky, M. 1991 **Worldbeat: Current Reading fo ESL Students**.

McGraw-Hill, Inc.: New York.

Types and tokens

Number of syllable	Stress Patterns	Token
Two syllables	Oo	Also, networks, hundreds, cable, TV, channels, people, programs, stories, actors, viewers, major, local, global, special, present, many, level, therefore
	oO	Events, effects, become, improve
Three syllables	Ooo	actually, popular, probably
	oOo	However, exciting, producers, directors, determine, another, creative, variety
	ˌOoˈO / ˈOoˌO	re-create
Four syllables	Oooo	fascinating
	Oooo or ˌOoˈOo	television
	oOoo	America, Americans
	ˌOoˈOo / ˈOoˌOo	entertainment , information, infotainment, combination
Five syllables	ˌOoˈOoo/ˈOoˌOoo	International
Six syllables	oˌOoˈOoo/oˈOoˌOoo	Responsibility, accessibility