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DEGREE OF COMPREHENSIBILITY IN THAI ACCENTED ENGLISH RATED BY NATIVE SPEAKER JUDGES

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Abstract

This study focuses on Thai accented English in one suprasegmental aspect—tonality (tone group chunking and rhythmic group division). Prior studies mostly compared the productions of learners at different proficiency levels with reference to native speakers as a norm. This study goes further by investigating the degree of difficulty in understanding Thai accented read speech by two groups of native speaker judges with different amounts of contact with Thai learners. The English read speech of two groups of Thai EFL learners representing slightly accented speakers (n = 5) and heavily accented speakers (n = 5) were randomised and presented to the judges for rating on a 5-point scale. It can be concluded that tonality production scores correlated highly with the degree of comprehensibility. The slightly accented speakers received higher rating scores as opposed to the heavily accented speakers from all judges. The experienced judges had less difficulty in understanding the read speech by both groups of speakers.

Introduction

With the goal of making the pronunciation of second language (L2) learners understood by the interlocutors, English pronunciation instruction emphasising segmental aspects in the past has been shifted towards the suprasegmentals for a few decades (Celce-Murcia & Olshtain, 2000). Pronunciation instruction focusing on the English suprasegmentals is central to communication (Gilbert, 2008) and more beneficial in helping learners improve the intelligibility and comprehensibility of their speech (Derwing & Rossiter, 2003; McNerney & Mendelsohn, 1992).

In addition, segmental errors can be resolved by contextual information whereas inappropriate intonation easily leads to misinterpretation by the listener as intended messages by the speaker (Celce-Murcia & Olshtain, 2000; Hewings, 1995; Wells, 2006). This is probably because non-native intonation patterns are considered a part of the speaker's personality rather than language competence (Kachru & Smith, 2008). Despite the importance of suprasegmentals in communication, a survey by Gut (2009) of L2 speech research based on 172 studies published between 1969 and 2008 shows that there is still a dearth of studies on such aspects as rhythm, intonation, sentence stress, etc.

The present study examined Thai accented English in one suprasegmental aspect - tonality (tone group chunking and rhythmic group division). Previous studies mostly focused on the non-native production of L2 speech in several aspects, for example, rhythm and pausing (Adams, 1979), L2 proficiency and pausing patterns (Anderson-Hsieh & Venkatagiri, 1994; Kormos & Dénes, 2004; Riazantseva, 2001; Tavakoli, 2011). Far too little attention has been paid to the correlation of the production of L2 tonality patterns and the native or non-native listeners' perception.

Prior studies mostly employed native speakers to rate the L2 speech data. Thompson (1991), for example, investigated the perception of native speaker judges with a monolingual background as compared to those with linguistic knowledge and extensive

experience with Russian speakers. The findings showed that familiarity with the L2 accent enhanced the level of understanding, and the inexperienced listeners were stricter in rating the degree of accentedness. The results of this study support Flege (1984) who suggested that judges may become less sensitive to predictable differences in pronunciation and ignore them, and that amount of exposure increased the understanding of unfamiliar speakers.

On the other hand, Gass and Varonis (1984) did not find a significant difference between the two groups of judges with varying degrees of experience. The comprehensibility ratings of Mandarin speakers of English (Kennedy & Trofimovich, 2008) also indicated that experienced and inexperienced judges did not differ in their perception of difficulty in understanding the L2 speech. These findings are rather surprising since listener experience with L2 accent should play an important role in understanding. The methodological problem of these two studies, investigating the effect of familiarity of L2 accent on comprehensibility, is the characteristics of their judges. Both studies recruited experienced native speaker teachers as the experienced judges and non-teachers as inexperienced judges. The studies did not give details about the amount of contact of the judges with the particular L2 accent being tested in their studies.

Therefore, in the present study, the judges' experience with Thai learners is the main criterion for the selecting process. Two groups of native speaker judges: judges with at least three years of experience in teaching Thai learners, and judges with one-week experience teaching Thai learners, were used to represent different types of judges. In real-life situations, L2 speakers must encounter either listeners with prior contact with their first language, and those who have not been exposed to the accent. The purpose of having two groups of judges was to investigate the potential effects of listener familiarity of a particular L2 accent.

In order to examine the tonality patterns of the Thai accented speakers as related to the comprehensibility ratings, two research questions were addressed: 1) What are the tonality patterns in the

read speech of the two groups of Thai EFL learners with different degrees of English language experience?, 2) What is the degree of comprehensibility of the two sample groups by experienced judges and less experienced judges?

Research Design

This study consisted of two parts: production study and perception study. The research design of each study will be presented separately.

1. Production study

Sample group

This study was conducted as a part of the main study with Thai EFL learners (n = 243) who were English major students at a university in Lop Buri. Thirty learners were selected as the sample group for the main study by the English Language Experience Questionnaire (See Appendix). There were three parts in the questionnaire: 1) personal information, 2) English language experience and 3) attitudes towards English pronunciation. The first part provided demographic information about the participants, and was not scored. Part three dealing with attitudes towards pronunciation aimed to provide additional information about the participants and was not counted in the scoring. Part two is the main section which was scored. This part explored the English language experience of the learners. They were asked about age of onset, years of learning, formal instruction, informal instruction, experiences in the use of English and amount of use. The scores based on the scoring criteria were ranked from the highest to the lowest. The top 15 students in the score rank were assigned to the high experience group (EFL-High) and the bottom 15 students were in the low experience group (EFL-Low). Three native speakers of British English (NS) were served as a control group and basis for intonation comparison.

To investigate the differences between slightly accented speakers (hereafter, EFL-Sli) and heavily accented speakers

(hereafter, EFL-Hea), two distinct groups of Thai learners were recruited by means of purposive sampling. The performances of all the learners reading a short passage were analysed in terms of their errors and deviance in tone group division and rhythmic units compared to the readings of three native speakers of British English who served as a control group. For a comparative purpose, an answer key for scoring the Thai learners' performance in terms of tonality was established from the data of the NS control group.

The criterion was based on Tanner and Landon (2009)'s study of which two types of errors were counted. Tannon and Landon provided an answer key for scoring from the NS data. Regarding the tone group chunking, the answer key labelled the required and optional or possible features were obtained. The two kinds of errors are: a missing feature and an incorrect feature. Thus, an error was counted for a missing boundary in a tone group or incorrect placement of pause. In this study, the same kind of answer key was constructed based on the performance of the three native speakers in the control group. In addition, the deviated data of the Thai learners were thoroughly investigated. As suggested by Tench (1996), semantic and syntactic criteria must be consulted in intonational analysis. Therefore, in this study, the researchers examined the deviations by consulting the semantic, syntactic and pragmatic criteria and securing general agreement among three native speakers of English. After completing these steps, an answer key for scoring the tonality patterns was derived. In terms of the rhythmic group division, the scoring was based entirely on the performance of the NS group. The salient syllables which determined the boundary of the rhythmic group were analysed. The NS data agreed that 60 syllables must be stressed with one optional syllable which may be stressed. The scores were deducted for incorrect placement of stress, resulting in minus scores in some EFL learners.

The production of each learner in terms of tone group division and rhythmic units was calculated. It is called *tonality score*. Each correct item received one point and scores were deducted for incorrect

items. Therefore, some learners whose production deviated greatly from those of the native speaker group got minus scores. The speech of five learners with the highest tonality scores and the bottom five with the lowest scores were selected for the judgements of comprehensibility. The process of sample selection is shown in Figure 1:

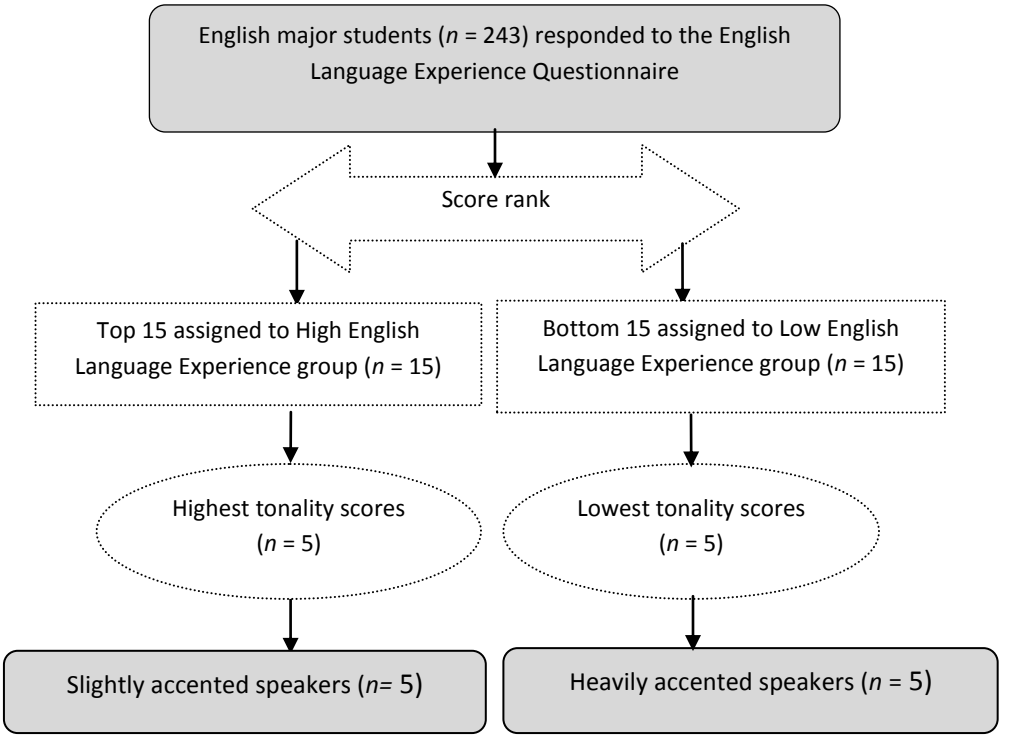

Figure 1: Sample selection procedure

The tonality scores for the slightly accented speakers (EFL-Sli) and heavily accented speakers (EFL-Hea) are shown in Table 1.

Table 1: Tonality scores (tone group scores and rhythmic group scores)

Learners	Tone group (50)	Rhythmic group (50)	Total (100)
EFL-Sli1	49	43.3	92.3
EFL-Sli2	47	33.3	80.3
EFL-Sli3	49	26.7	75.7
EFL-Sli4	48	14.2	62.2
EFL-Sli5	48	13.3	61.3
	($\bar{x}$ = 48.2, *SD* = 0.84)	**($\bar{x}$ = 26.2, *SD* = 12.8)**	**($\bar{x}$ = 73.4, *SD* = 13.0)**
EFL-Hea1	23	-5	18
EFL-Hea2	21	-7.5	13.5
EFL-Hea3	25	-13.3	11.7
EFL-Hea4	23	-15.8	7.2
EFL-Hea5	21	-17.5	3.5
	($\bar{x}$ = 22.6, *SD* = 1.7)	**($\bar{x}$ = 11.8, *SD* = 5.4)**	**($\bar{x}$ = 10.8, *SD* = 5.6)**

From Table 1, it can be seen that all EFL-Hea learners received minus scores in the rhythmic group division. This is because most of the heavily accented speakers had incorrect placement of stressed syllables in polysyllabic words following the Thai accentual system of which the last syllable was stressed, e.g. ladders, following, safety, etc., or on function words (the, on, for, in, that, etc.) The total scores of the EFL-Hea, therefore, resulted from the scores from tone group chunking deducted by those from the rhythmic group boundaries.

The EFL-Sli group was the learners whose performance contained tonality patterns close to the NS while that of the EFL-Hea highly deviated from the NS. The characteristics of the two groups of learners are shown in Table 2.

Table 2: Information of the EFL-Sli and EFL-Hea

Group	Age	Years of Study
EFL-Sli	19-21 years **($\bar{x}$ = 20.2, *SD* = 1.09)**	14-16 years **($\bar{x}$ = 15, *SD* = 0.70)**
EFL-Hea	18-22 years **($\bar{x}$ = 20.2, *SD* = 1.64)**	8-13 years **($\bar{x}$ = 10.8, *SD* = 2.16)**

Research instruments

1) English Language Experience Questionnaire

The questionnaire items comprised five main areas: age of onset, years of learning, formal instruction, informal instruction, amount of current use. It was translated into Thai for distributing to the English major students.

2) Production tasks

A passage of 97 words was carefully selected from the learners' in-house textbooks for a general education English course of the university. This seen passage was chosen because it contained target language, i.e. listing of information, relative clauses and adverbial connectives. Also, it did not have any difficult vocabulary and had appropriate length. This task is expected to investigate the tonality because it is equipped with rather long stretches of utterances.

Data collection

Individual recording sessions (20-40 minutes) were conducted in a quiet room at the university. A laptop computer and Audacity was used for recording, with a 22.5 kHz sampling rate, 16-bit resolution, and a low-noise unidirectional microphone. The learners were rendered five to ten minutes preparation time before the actual recording. They were instructed to read the passage as naturally as possible. Also, they were allowed to repeat the recording to ensure accuracy in reading and eliminate the errors of slips of the tongue. The sound files were normalised for perceived loudness and

randomised using a speech editing software, WavePad Sound Editor version 4.27 (NCH Software, 2009).

Data analysis

The performance of the Thai EFL participants was compared to that of the NS control group who established baseline for comparison. The tonality patterns were assessed by the researchers, one of whom is an expert in intonation analysis. A combination of auditory and acoustic phonetic analysis by the PRAAT Program version 5.1.15 (Boersma & Weenink, 2009) was employed.

Findings of the production study

In this study, a reading passage was used to elicit the tonality patterns of the learners. The mean values and standard deviations of the number of tone groups and the length of tone groups are presented in the following table.

Table 3: The number of tone groups and the average length of the tone groups in words in the passage reading

Group	**Number of tone groups**		**Average length (in words)**	
	$\bar{x}$	*SD*	$\bar{x}$	*SD*
NS	24	1.5	3.99	0.24
EFL-Sli	26	2.8	3.73	0.42
EFL-Hea	52	2.82	1.9	0.1

Table 3 illustrates that there was not much difference in the average number of tone groups in the passage reading between the NS and the EFL-Sli (24 and 26 tone groups, respectively).

On the other hand, the EFL-Hea assigned twice the EFL-Sli average number of tone groups. This means that the EFL-Hea read speech was fragmented into small units. The EFL-Sli had the average of 3.73 words per tone group, which is very close to the 3.99 average

number of words per tone group. The average length of the EFL-Hea group was only 1.9 words per tone group, signifying fragmented speech.

Concerning the accuracy of tone group and rhythmic group boundaries, the data reveal that the tonality patterns of the EFL-Sli contained less deviations or incorrect placement of tone group boundaries and rhythmic group divisions, as shown in Table 4.

Table 4: Percentage of correct tone group and rhythmic group boundaries of the two groups of Thai EFL learners

Group	Tone group	Rhythmic group
EFL-Sli	89.70%	73.51%
EFL-Hea	40.95%	41.99%

The figures in Table 4 indicate a high percentage of accuracy in tone group boundaries in the EFL-Sli group (89.70%), compared to that of the EFL-Hea (40.95%). Errors in the EFL-Hea group mostly indicated the poor planning of information organisation while reading. For example, the boundaries were absent after sentence adverbials, e.g., first, then, finally. Instead, the placement of tone group boundaries mostly did not occur at the boundaries of syntactic units.

Regarding the rhythmic group boundaries, it can be seen that the percentage of correct boundaries in the EFL-Sli was high (73.51%) as compared to the EFL-Hea who had low percentage of correct boundaries (41.99%). To illustrate this, the example of the read speech data of the Thai learners and an NS control is shown below. Following the transcription conventions (Halliday, 1970 and Halliday & Greaves, 2008), a double slash (//) represents tone group boundaries, a single slash (/) indicates a rhythmic group boundary of which the beginning is always on a salient syllable and a silent beat is marked by a caret (ˆ) where the syllable at the beginning of the rhythmic unit is not salient.

NS:// Putting your /trust in a /ladder // ˄ //de/pends //˄ // for the /most /part //˄ //on /following /certain /safety /rules //

The tone group chunking in the NS corresponded to meaningful syntactic units, e.g. noun phrases, prepositional phrases, with an exception of the verb 'depends' which was assigned a separate tone group for emphasis. The function words 'for' and 'on' were not stressed. The EFL-Sli's performance was very close to those of the NS with a few deviations, as in:

EFL-Sli// Putting your /trust // //in a /ladder //˄//de/pends // for the /most /part // //on /following /certain /safety /rules //

The noun phrase 'putting your trust in a ladder' was divided into two tone groups. However, the boundary fell on a syntactic unit although the NS did not assign a separate tone group for it. Also, the function words, i.e., *in*, *for*, *on*, were salient and enunciated clearly with full vowels where the NS used the weak forms. The EFL-Hea's read speech highly deviated from that of the NS as in:

EFL-Hea// Put/ting // your /trust // in a lad/der // //de/pends // //for the /most /part // //on follow/ing // ˄//cer/tain // ˄//safe/ty // //rules //

The EFL-Hea's tonality patterns indicated the assignment of short tone groups some of which contained only one word. The rhythmic group division was also different due to the word accent placed on the final syllable, i.e., putting, ladder, following, certain, safety.

The findings of the tonality patterns of both groups of Thai learners demonstrate that the EFL-Hea had difficulties in both aspects of tonality. The assignment of boundaries in the EFL-Sli was in accordance with the syntactic structures while the EFL-Hea revealed inconsistencies in dividing their speech into prosodic units.

2. Perception study

Sample group

Ten native speakers of British English (NSJ, henceforth) were judges of the Thai learners' speech data. They were divided into two groups: experienced and less experienced judges. The experienced judges were EFL teachers with extensive amount of experience to Thai learners' pronunciation (hereafter, NSJ-High). The criterion for selecting was at least three years of experience of teaching English to Thai EFL learners. The less experienced judges (hereafter, NSJ-Low) are those who had no knowledge of the Thai language and came to Thailand for the first time, except for one who had been in Thailand for a short visit for one week. All native speaker judges were raised in monolingual English speaking homes and had no hearing disorders. The details of the judges are shown in Table 5.

Table 5: Details of the NSJ-High and NSJ-Low

Group	Gender	Age	Length of residence	Experience in teaching Thai learners
NSJ-High	5 M	37-52 years **($\bar{x}$ = 46.4, *SD* = 5.85)**	3-12 years **($\bar{x}$ = 8 yrs, *SD* = 3.8**	3-12 years **($\bar{x}$ = 8 yrs, *SD* = 3.8**
NSJ-Low	2 M, 3 F	22-35 years **($\bar{x}$ = 25.4, *SD* = 5.41)**	3-4 weeks **($\bar{x}$ = 3.6 wks, *SD* = 0.54)**	1 week **($\bar{x}$ = 1 wk, *SD* = 0)**

Research instruments

The research instruments for the perception study are as follows:

1) Native Speaker Experience Questionnaire

The questionnaire adapted from Kropf (2000) was distributed to a group of native speakers of British English in order to select two groups of judges: 1) three native speakers who are experienced EFL teachers with at least three years of teaching Thai learners and 2)

three native speakers who have less than three years of experience with Thai learners.

2) Rating scale

A 5-point Likert type rating scale was used for the perception of the native speaker judges to rate the speech samples in terms of comprehensibility. The read speeches of the Thai learners with high and low tonality scores were randomised in their order of presentation. After the native speaker judges listened to each speech stimulus, they rated the speaker for the degree of comprehensibility (how easy it is to understand) on a 5-point scale on the comprehensibility rating form. The judges were instructed to listen to the sample speech until they were certain about the rating. The rating scale is shown below.

1	2	3	4	5
Very difficult to understand	Difficult to understand	Neutral	Easy to understand	Very easy to understand
❑	❑	❑	❑	❑

Data collection

The production data of passage reading was used in comprehensibility ratings. The speech data of the ten EFL learners plus one additional NS file to ensure reliability were put into a separate file. The NSJ-High and NSJ-Low proceeded at their own paces. Prior to this listening session, they were instructed to rate the speakers based on the tonality patterns. Two speech stimuli were provided as a practice for rating and to familiarise the judges with the procedures. The samples for practice were not used in this study.

Data Analysis

The statistical analyses were conducted using independent samples t-test and two-way analysis of variance (ANOVA). The alpha level for significance was set at .05. The reported effect sizes are partial eta square (η^2_p), calculated by dividing the effect sum of squares by the effect sum of squares plus the error sum of squares.

Findings of the perception study

The following table compares the judgements of native speaker judges with varying degrees of experience with Thai learners on the degree of comprehensibility for both groups of learners.

Table 6: Native speaker judgements on the degree of comprehensibility

Group	NSJ-High		NSJ-Low	
	$\bar{x}$	***SD***	$\bar{x}$	***SD***
EFL-Sli	4.08	0.86	3.68	0.94
EFL-Hea	2.60	0.70	1.96	0.78

The findings from Table 6 indicate that both groups of NS judges found the read speech of the EFL-Sli easier to comprehend as opposed to that of the EFL-Hea. The mean differences of the scores were computed by SPSS 16.0 using independent samples t-test. Although the mean scores show that the NSJ-High rated the EFL-Sli more favourably than the NSJ-Low did, the observed differences in the means was not statistically significant ($p = .125 > .05$). However, the mean differences of the EFL-Hea from both groups of judges was significant ($p = .004 < .05$).

In order to test whether the tonality of each group of learners affects comprehensibility in the judges, a similar t-test was used. According to the t-test results, the difference between the two mean scores of comprehensibility that each group of learners received from the NSJ-High and NSJ-Low was significant ($p = .000 < .05$). Also, the NSJ-Low perceived the read speech of the EFL-Sli less difficult to

understand. Therefore, it is concluded that the tonality patterns of the Thai EFL read speech data correlated with the comprehensibility ratings by native speaker judges.

Upon examination of inter-rater reliability of English judges' ratings, Pearson's Correlation Coefficient was computed. The finding reveals a moderate correlation in the judgements (r = .618), which suggests that the judges were fairly consistent in their judgements.

The comprehensibility ratings were subjected to a two-way analysis of variance (ANOVA) with the judge experience (experienced, less experienced) as a between-subjects factor and learner English language experience (high, low) as within-subjects factor. A 2x2 ANOVA revealed a significant main effect of the judges' experience (F(1, 96) = 9.80, p = .002, η^2_p = .093). The analysis also yielded a significant main effect of the learner English language experience (F(1, 96) = 92.75, p = .000, η^2_p = .491). However, there was non-significant interaction between the judge experience and the learner experience (F(1, 96) = .52, p = .472, η^2_p =.005), indicating that the main effects were not qualified by interaction between the two variables.

Discussions

This study attempts to investigate how tonality contributes to comprehensibility in native speaker judges with different experience to Thai accented English. The results on the productions of tonality patterns revealed that the read speech of the EFL-Sli contained less deviation from the NS control group, as compared to that of the EFL-Hea. The productions of the EFL-Hea learners contained shorter tone groups and stress placement on almost every word, either content or grammatical words. Their performance also revealed their lack of proficiency in dividing their speech into meaningful syntactic units.

The comparison of comprehensibility ratings in the NS judges' perceptions showed that the amount of experience played an important role in their judgements. The mean differences in the ratings of the EFL-Sli from both groups of NSJ were not statistically significant whereas the differences in the EFL-Hea were statistically

significant (p = .004 < .05). A possible explanation for this is that the performance of the slightly accented speakers was, to a large extent, conformed to that of the NS control group. Thus, the judges with little experience to Thai accented speech also perceived it easier to understand. The study showed that the differences in tonality patterns in terms of the placement of tone group boundaries and rhythmic group boundaries determined the degree of comprehensibility in both groups of NS judges.

Regarding the first research question, "What are the tonality patterns in the read speech of the two groups of Thai EFL learners?", the quantitative findings of the read speech data of the Thai learners indicated that the EFL-Sli, who had more English language experience, produced quite similar tonality patterns to those of the native speaker control group. The main problem was the placement of stress on function words. In addition, these learners had more difficulties with the rhythmic group division than the tone group chunking. This may result partly from the lack of concern for good pronunciation. All of the learners responded in the English Language Experience Questionnaire that they had taken the course English Phonetics and Phonology at their university. Thus, all learners in this study had learnt about the stress patterns in English. However, the EFL-Sli may not have had follow-up practice after the course finished.

With respect to the EFL-Hea, their read speech illustrated more severe problems in tonality patterns. Their speech contained very short tone groups which could be attributed to their limited L2 proficiency. The EFL-Hea learners obviously paused before difficult words. Their overall performance shows that they focused on the pronunciation of the words rather than how to put the words into the stream of speech in their readings. This resulted in fragmented speech which did not flow smoothly. This type of speech may cause difficulties in the perceptions of the NS judges as indicated by the low comprehensibility rating scores.

Furthermore, the incorrect rhythmic group division can be mainly a result of L1 transfer. This is clearly seen in their consistent

placement of word stress on the final syllables, which is identical to the accentual system of the Thai language. However, the correct word stress seemed to be inconsistent in their read speech. The misplacement of stress may make comprehension more difficult (Browne & Huckin, 1987).

Looking at research question two, "What is the degree of comprehensibility (the difficulty in understanding) of the two sample groups by experienced judges and inexperienced judges?", we investigated two variables: 1) the learners' English language experience and 2) the judges' experience in teaching Thai learners. The results indicated that the tonality patterns had a great impact on the native speakers' perceptions. To be specific, the Thai learners with more English language experience whose tonality patterns, to a large extent, conformed to the NS norms ($\bar{x}$ = 73.4%) , caused less difficulty in understanding in both groups of judges (NSJ-High, $\bar{x}$ = 4.08; NSJ-Low, $\bar{x}$ = 3.68). On the other hand, the learners with less experience whose tonality patterns highly deviated from the NS performance ($\bar{x}$ = 10.8 %) received lower comprehensibility scores from both groups of judges (NSJ-High, $\bar{x}$ = 2.60; NSJ-Low, $\bar{x}$ = 1.96). The judges with prolonged experience in teaching Thai learners, however, reported less difficulty in understanding compared to the inexperienced judges. The overall findings lead us to conclude that the tonality productions of the Thai learners highly correlated with the degree of comprehensibility of the native speaker judges. Furthermore, the judges' experience was the determining factor which influenced the judgements. Native speaker judges who were more familiar with Thai speakers had an advantage in understanding over those with less experience.

With regard to the scores from Part 3 attitudes towards pronunciation, out of the total score of 50, both groups of participants received the attitude score of more than 40 which is a relatively high score. It is interesting to note that two EFL-Hea learners received the highest score (50) for attitudes, but they did not perform very well. A likely explanation can be the effect of the quality

of teaching or transfer of training. However, the overall attitude scores may be inconclusive to establish the relationship between the attitudes and the intonation production scores of the learners in this study.

Pedagogical Implications

The findings of the study theoretically contributed to our understanding of the impact of accentedness towards the level of comprehensibility for the listeners. The study apparently underscored the importance of pronunciation in communication. Thus, if the ultimate goal of teaching learners to speak is for them to be understood by listeners beyond the classroom walls, pronunciation should not be taken for granted. Practically, it could be pedagogically beneficial for teachers to prioritise the aspect of tonality in their English pronunciation syllabi in order to minimise the accentedness of the learners' pronunciation.

The findings clearly support the priority of teaching suprasegmentals in the English pronunciation classroom. The tonality patterns of L2 speech conforming to the norms in English help the listeners to process the information more easily because of its smooth continuity. In helping the learners to increase the comprehensibility of their speech, they have to be made aware of the functions of tonality in English. For instance, a listening activity in which the learners have to listen to tone groups can be a good starting point to introduce the concept of how speech is divided into meaningful chunks. Then, production activities, e.g. reading a short passage, can follow to improve the L2 learners' tonality patterns. Reading aloud not only benefits the learners in practising the flows of speech, it also enhances their abilities in information organisation and speech planning.

The problems with the accentual system and rhythmic units in English in both groups of Thai learners clearly indicate the needs for special attention in systematic training in pronunciation classrooms. Learners should be introduced to the English accentuation and word

accents of English and the realisation of English word stress as early as possible to familiarise themselves with the English stress patterns which are different from those of their L1 in order to enhance the comprehensibility of their speech. Therefore, the features related to rhythmic patterns - stressed syllables, full and reduced vowels - should be highlighted in pronunciation lessons. Practice of these features should also include listening activities in which the learners identify the full vowels and reduced vowels in utterances, which is a problematic area for Thai learners. As proposed by Chela Flores (1997), the rhythmic patterns in English should be the starting point in teaching pronunciation, presenting even before intonation or the pronunciation of vowels and consonants. The findings of this study confirm that rhythmic patterns should be set as a priority, in that mistakes resulted in accentedness, which affected perceived comprehensibility. This should make the proposal to start pronunciation lessons with rhythmic patterns credible.

The results provide additional evidence to support the importance of suprasegmental features on the perceptions of native speakers. Although errors in tonality constitute just one aspect of intonation, the findings lead to pedagogical implications that English pronunciation lessons, especially the tonality aspect, should be emphasised. This will benefit L2 learners in maximising the degree of perceived comprehensibility.

Due to the fact that this study employed an experimental setting, further investigation of the tonality patterns through action research is strongly recommended. It would be interesting to investigate the effects of awareness raising and systematic training of tonality on the improvement of the learners' productions. A comparison should be made on the productions of the learners with high and low English language experience before and after receiving explicit instruction. This information will enhance our understanding on this system of English intonation. Furthermore, further work on other systems of intonation - tonicity and tune - is also needed to

establish more insights into the degree of comprehensibility of L2 accented speech as related to the perceptions of native speakers.

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APPENDIX

English Language Experience Questionnaire

Guidance Information:

This questionnaire consists of three parts: 1) personal information, 2) English language exposure, and 3) attitudes towards pronunciation. Please answer all the questions by ticking the box or writing in the space provided.

Part 1: Personal Information

1 Name .....

2 Age .....

3 Gender ❑ Female ❑ Male

4 Year of study ❑1st year ❑ 2nd year ❑ 3rd year ❑ 4th year

5 Program of study ❑ English ❑ English Education ❑ English Program

6 E-mail ..... Phone number .....

7 I was born in ❑ Thailand ❑ other countries (specify) .....

8 My native language is ❑ Thai ❑ other (please specify) .....

Part 2: English Language Experience

1 I started studying English when I was ..... years old, in grade ..... or kindergarten year .....

2 I have studied English for .....years.

3 Did you study in an English program (EP), or mini-English program (MEP) at any school in which English was a medium of instruction? ❑ Yes for .....years ❑ No

4 Have you taken or are you taking the course *English phonetics and phonology*?

❑ Yes ❑ No

5 Are you attending an extra English class? ❑ Yes ❑ No If yes, for how many hours a week?

❑ < 2 hours ❑ 2-4 hours ❑ 5-6 hours ❑ 7-8 hours ❑ > 8 hours

6 Have you taken or are you taking an intensive English course in speaking skills, English for communication or pronunciation skills?

❑ Yes ❑ No

If yes, please give the name and the duration of each course.

1) Course name……and for….hours per day

2) Course name……and for….hours per day

3) Course name……and for….hours per day

7 Have you lived or studied in an English-speaking country (e.g. United Kingdom, America, Canada, Australia, New Zealand,etc.)?

❑ Yes ❑ No (skip item 8)

If yes, which country? And for how long?

1)…… for ……weeks/months/years

2)…… for ……weeks/months/years

3)…… for ……weeks/months/years

8 When you were living or studying in the country mentioned in 7, how often did you use English for communication?

❑ Never ❑ Rarely ❑ Sometimes ❑ Often ❑ Always

9 Other than the countries mentioned in 7, have you ever travelled to a foreign country where you used English for communication?

❑ Yes ❑ No

If yes, which country? ……

And for how long? ……

10 During this term, are you studying English with a native English speaker?

❑ Yes ❑ No If yes, please state the course name(s) and the frequency of chance you speak English in class.

1) Course name ……

❑ Never ❑ Rarely ❑ Sometimes ❑ Often ❑ Always

2) Course name ……

❑ Never ❑ Rarely ❑ Sometimes ❑ Often ❑ Always

3) Course name ……

❑ Never ❑ Rarely ❑ Sometimes ❑ Often ❑ Always

4) Course name ……

❑ Never ❑ Rarely ❑ Sometimes ❑ Often ❑ Always

5) Course name ……

❑ Never ❑ Rarely ❑ Sometimes ❑ Often ❑ Always

11 How often do you speak English outside the class?

❑ Never ❑ Rarely ❑ Sometimes ❑ Often ❑ Always

12 Outside the class, do you use English in the following activities?

1) Listening to songs

❑ Never ❑ Once a month ❑ 2 or 3 times a month
❑ Once a week ❑ 2 or 3 times a week ❑ Every day
❑ Other (specify).....

2) Listening to the radio

❑ Never ❑ Once a month ❑ 2 or 3 times a month
❑ Once a week ❑ 2 or 3 times a week ❑ Every day
❑ Other (specify).....

3) Watching news

❑ Never ❑ Once a month ❑ 2 or 3 times a month
❑ Once a week ❑ 2 or 3 times a week ❑ Every day
❑ Other (specify).....

4) Watching movies

❑ Never ❑ Once a month ❑ 2 or 3 times a month
❑ Once a week ❑ 2 or 3 times a week ❑ Every day
❑ Other (specify).....

5) Watching TV programs

❑ Never ❑ Once a month ❑ 2 or 3 times a month
❑ Once a week ❑ 2 or 3 times a week ❑ Every day
❑ Other (specify).....

6) Reading magazines or newspapers

❑ Never ❑ Once a month ❑ 2 or 3 times a month
❑ Once a week ❑ 2 or 3 times a week ❑ Every day
❑ Other (specify).....

7) Reading websites

❑ Never ❑ Once a month ❑ 2 or 3 times a month
❑ Once a week ❑ 2 or 3 times a week ❑ Every day
❑ Other (specify).....

8) Writing websites or weblogs

❑ Never ❑ Once a month ❑ 2 or 3 times a month
❑ Once a week ❑ 2 or 3 times a week ❑ Every day
❑ Other (specify).....

9) Writing e-mails or text messages

❑ Never ❑ Once a month ❑ 2 or 3 times a month

❑ Once a week ❑ 2 or 3 times a week ❑ Every day

❑ Other (specify).....

10) Instant messaging

❑ Never ❑ Once a month ❑ 2 or 3 times a month

❑ Once a week ❑ 2 or 3 times a week ❑ Every day

❑ Other (specify).....

Part 3: Attitudes towards pronunciation

Please circle the number that best reflects your opinion:

5 = strongly agree
4 = agree
3 = uncertain
2 = disagree
1 = strongly disagree

1	I think correct pronunciation is very important for effective communication	5	4	3	2	1
2	If I use the right vocabulary words but incorrect pronunciation, foreigners may not understand me.	5	4	3	2	1
3	I appreciate Thai people who have a good English pronunciation, and wish I could be like them.	5	4	3	2	1
4	I usually ask the native speaker I am talking with, to correct my pronunciation.	5	4	3	2	1
5	I usually try to imitate the pronunciation of native English speakers.	5	4	3	2	1
6	I do not care what others think when I imitate the pronunciation of native English speakers.	5	4	3	2	1
7	I enjoy studying or practising English pronunciation very much.	5	4	3	2	1
8	I always look up the pronunciation of English words in a dictionary.	5	4	3	2	1
9	I listen to English news, and songs to improve my pronunciation.	5	4	3	2	1
10	I would like to take training in English pronunciation.	5	4	3	2	1

Thank you for your cooperation.