

# **EVALUATING A SOMATICALLY- ENHANCED APPROACH (SEA) IN AN INTENSIVE THAI COURSE FOR ACADEMIC PURPOSES**

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## **Abstract**

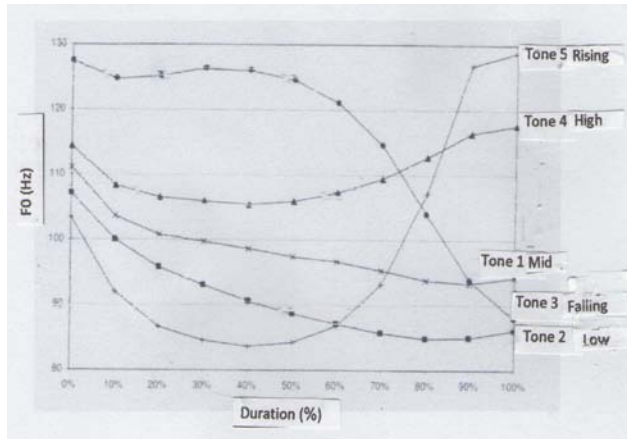
This study evaluates the effectiveness of an intensive Thai course for academic purposes program (TAP) in improving L2 students' listening and speaking skills in Thai. TAP employed communicative activities used in the Somatically-Enhanced Approach (here after SEA) such as relaxing the body, humming, clapping, movement and gestures in the teaching of Thai as a second language. Drama techniques were also used to train L2 students to detect the discourse features of Thai in academic lectures. In this paper, we report on improvements in L2 students' listening and speaking performances in Thai in 30 students in TAP (experimental group) and 27 students (control group). T-tests analysis of the paper based listening test scores revealed that after the SEA treatment, students in the experimental group improved in their listening skill significantly. Furthermore, comparison of the mean scores of the two paper based tests between the experimental and control groups showed that students who were taught with SEA outperformed the control group of students in listening performance at the end of their courses. In speaking, the average score of the students' performances in the experimental group in the post speaking tests was higher compared with that before the intervention; their Thai prosody improved; and their speech were considered by 9 native speaker judges to be more fluent. Such findings suggest that active learning strategies using in TAP can achieve long term positive impact on L2 students' listening and speaking performances in Thai.

## **1 Introduction**

In recent years, an increasing number of undergraduate students from China come to Thailand to pursue their study in Thai higher education institutions. An international student newly enrolled in a Thai university is assumed to have advanced Thai language proficiency to cope with the vigor of academic study in Thai. However, more than 15 % of students in 2+2 programs (e.g. 2 years in China and 2 years in Thailand, upon completion students would be awarded with a Thai university degree) did not complete the bachelor degree within the required 4 years due to their limited Thai language proficiency (Higher Education, 2008). Language difficulties had been traditionally dealt with by requiring NNTST students to complete existing intensive Thai courses. However, these courses tend to teach Thai language

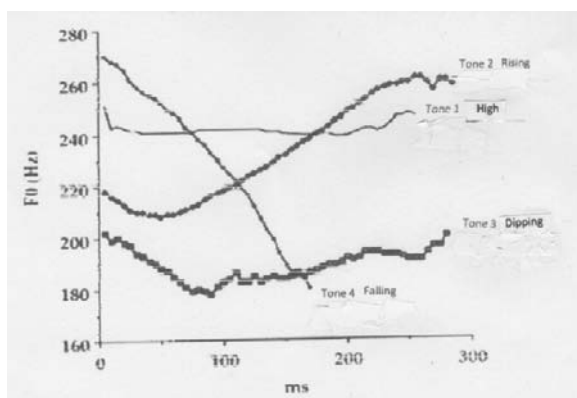
for survival skills thus not able to assist L2 students in understanding academic lectures in the Thai language.

### **1.1 Characteristics of Thai and Chinese prosody**



**Fig. 1. Tone shape diagram of the five Thai tones (Luangthongkum, 2011)**

Thai is a tonal language. A syllable is assigned a tone and each spoken syllable with a different tone has a different lexical meaning (Abramson, 1962; Smith, 1995, 2005). There are five different lexical tones as follows: (1) a mid level tone (in Figure 1 indicated as 1st tone), for example khaa1 (to be lodged in); (2) a low level tone (in Figure 1 indicated as 2nd tone), for example: khaa2 (Galanga, an aromatic root);(3) a falling tone (in Figure 1 indicated as 3rd tone), for example: khaa3 (I, slave, servant);(4) a high level tone (in Figure 1 indicated as 4th tone), for example: khaa4 (to sell); (5) a rising tone (in Figure 1 indicated as 5th tone), for example: khaa5 (leg). Luksaneeyanawin (1983) notes “Tone will be used to refer to a distinctive pitch of a syllable of which the function is to distinguish the meaning of one word from another” Therefore to communicate in Thai effectively, good pronunciation of consonants and vowels alone are not sufficient (Poomsan, 1995, Vongvipanond, 2000, Wittayasakpan, 2005 ).



**Fig. 2. Tone shape diagram of the four Mandarin Chinese tones (Howie, 1976)**

Standard Mandarin, on the other hand, has four tones: (1) Tone 1 (in Figure 2 indicated as the high tone), for example: ma1 means mother; (2) Tone 2 (in Figure 2 indicated as the rising tone), for example: ma2 means hemp;(3) Tone 3 (in Figure 2 indicated as the Dipping tone),

for example: ma3 means horse;(4) Tone 4 (in Figure 2 indicated as the falling tone), for example: ma4 means to scold.

At first glance, the tone shape diagrams of Thai and Mandarin tones suggest that the falling, high, and rising tones of Thai are very similar to the 4<sup>th</sup>, 1<sup>st</sup> and 2<sup>nd</sup> tones in Mandarin respectively. Therefore, contrastive analysis would predict that Mandarin speaking L2 learners of Thai would possibly master these tones fairly quickly. On the other hand, the mid and low tones of Thai do not exist in Mandarin tones. Therefore, it would be safe to assume that Mandarin speaking L2 learners of Thai would encounter difficulty to produce these tones.

Thai is also classified as stress-timed (Luangthongkum, 1977, Dauer, 1983). Therefore Thai rhythm can be a cause of difficulty for foreign language learners, especially syllable–time language speakers such as the Mandarin speaking L2 students in this study. Fluent Thai speech is usually fast, and not every word is stressed and clearly pronounced. Consequently, Thai tones are not actually pronounced in complete forms but rather are generally spoken in reduced forms (Teeranon, 2002). This characteristic could cause L2 learners of Thai from a Mandarin speaking background have difficulty perceiving reduced tones in listening.

Other factors of difficulties for foreign language learners in listening to English texts are unfamiliar pronunciation, speech rate, recognizing redundancies, hesitations, false starts, and pauses (Richards, 1983; Goh, 1998; Brown, 2001). Thai, like English, being a stress-timed language, similar difficulties might be encountered by L2 Thai students in this study. This study employed teaching practices based on Somatically-Enhanced Approach's principle designed by Zhang (2006) to train L2's Thai prosody in order to improve their listening and speaking performances in Thai.

This paper consists of the following sections: (1) a brief review of the theoretical underpinning of SEA; (2) the classroom procedure for TAP; (3) research methodology; and (4) results obtained on listening and speaking performances.

### ***1.2 Theoretical underpinning of the Somatically Enhanced Approach (SEA) in the Thai course for academic purposes (TAP)***

SEA is an active approach to teach and learn a foreign language. SEA (Zhang, 2006) benefitted from research findings from diverse fields such as cognitive psychology, socio-psychology, L1 acquisition, Second Language Acquisition, neurology, biology, and Verbo-Tonal system of phonetic correction (VTM) (Renard, 1975). VTM was the brainchild of the late Dr. Petar Guberina (1913-2005), a Croatian psycholinguistic and post-modern scholar, who conducted research in the 1950s into speech perception. Underlying the method is the conviction that all language use has evolved from spoken language, and that speech is a social event. Furthermore, the "meaning" of speech is transmitted not only by linguistic elements, but also by the auditory and visual information present in the rhythm, intonation, loudness, tempo, pauses, the tension, and gestures of the speaker. Most importantly, the auditory and visual information in his/her production is a reflection of how he/she perceives speech. In other words, changing a speaker's perception of speech will also change his/her production of speech. Conversely, if we correct his/her production of speech, we would also have corrected his/her perception of speech. This was the reason why we trained students both to perceive and produce the TL in this study.

L2 language students tended to arrive in our classrooms with what Trubetzkoy (1939) refers to as the "mother tongue sieve" resulting in them only able to attend to those sounds they are familiar with due to their extensive training in their mother tongue. To redirect their attention *away* from what they are already familiar with to what they should pay attention to requires extensive retraining of the whole body not just the ears. If students are not zero beginners, then the task at hand is not only to redirect their attention to elements of the TL that they should be attentive to, but also to break any bad habits they might have been introduced to through previous teaching.

In addition, the design of SEA also benefited from research finding on (1) the usefulness of prosody on infants' speech perception and production and their language development (Mandel et al., 1996, 1994); (2) the effect of training after optimum period (McCandliss et al., 2002, Neufeld, 1979, 1978, 1977); (3) how the "less is more" perspective in language learning helps learner attain superior ultimate competence (Newport, 1990); (4) how formulaic sequences in foreign language learning improves fluency of L2 learners' foreign language production (Wood, 2010, 2009); (5) how a speaker synchronizes speech with movement (Condon and Osgton, 1971); (6) therapeutic uses of movement for speech and hearing impaired children (Brüll, 2003); and (7) how learning through multi-modalities is more effective than a single modality (Derwing et al., 1998).

### ***1.3 Classroom procedure for the intensive Thai course for academic purposes (TAP)***

Activities in TAP focus on prosody such as tone, rhythm, and intonation of Thai language, not on consonant or vowel or lexical tone. There were three phases in the classroom procedure, namely (1) the sensitization phase; (2) the consolidation phase; and (3) the utilization phase.

#### ***1.3.1 The sensitization phase***

Activities in this session would give students opportunity to practice intensively their newly-learned articulatory patterns in order to develop a "feel" for them and at the same time fixing in their long-term memories acoustic models of the sound(s) being learnt (Zhang, 2006). The sensitization session in TAP classroom was carried out in the following sequence:

##### ***1.3.1.1 Step 1: Relaxation***

Lian (1980 cited in Zhang, 2006) noted that "Relaxation of the body will bring about a lowering of conscious and unconscious resistance to the learning of a FL. Speech and the production of sounds appear to be the result of the muscular behavior of the body as a whole which, with appropriate reinforcement, has given rise to a number of set patterns of muscular contractions. If these still operate when one attempts to learn the articulatory patterns of a FL, then the resulting articulatory sequences will be deformed, sometimes beyond recognition" (p.152). Zhang (2006) also suggests that relaxation can reduce the language shock experienced by many learners especially when they are required to speak in the TL as well.

The first step in the sensitization session involved asking students to relax by lying on the floor. Then, students were asked to close their eyes and visualize themselves to be 'little white

clouds’ by listening to the audio file named ‘A little white cloud’ in Chinese for five minutes. For a full description, please refer to Zhang (2006).

**1.3.1.2 Step 2: Humming**

During this procedure, students and the teacher walked around in circles and hummed along to the intonation of the sentences without vowels and consonants. Students were asked to listen to the hummed model by the teacher, then repeat by “humming along” to the intonation. This was done 5 times.

As the input and output of the language uttered mutually reinforce each other, three factors must be considered in choosing the input sentence for training. First, the structure of a sentence should be no more than 7 syllables in length so as not to overwhelm the short term memory (Zhang, 2006). Similar to Zhang’s study (2006), consonants and vowel sounds are removed so that L2 Thai language learners are forced to prioritize the tones, intonation and rhythm of Thai. During this step, the teacher must not start by modelling or reciting the target sentence. As a result of this, learners would pay attention to only prosody features without the interference of consonants and vowels. This was particularly important in this study because as intermediate L2 learners of Thai, some entrenched tonal errors in students’ perception and production of Thai needed to be explicitly addressed.

**1.3.1.3 Step 3: Clapping to the rhythm of the sentences**

In this step, the teacher clapped to the beat and the rhythm of the sentences according to the stress and discourse features of the sentence, and then asked students to follow. In teaching the sentence “คุณชื่ออะไร” [khun chû: ʔa raj] (What is your name?) in Thai, if a learner only learns this through reading then it is highly likely that he/she would always introduce a pause in between [ʔa] and [raj]. However, in prioritizing the spoken over the written language in this course, the teacher demonstrated the beat of this sentence by providing one beat for that group of words (ʔa raj) thus indicating that these words go together in normal speech. Moreover, Thai is stress-timed (Luangthongkum, 1977, Dauer, 1983), not only the teacher need to demonstrate the number of beats in the sentence “คุณชื่ออะไร” [khun chû: ʔa raj] (What is your name?), she also needed to show a rhythm of each syllable in this sentence with soft (unstressed syllables) and loud (stressed syllables) beats. Here is how the teacher demonstrated the sentence:

**Table 1.**

คุณ	ชื่อ	อะไร	
[khun]	[chû:]	[ʔa]	[raj]
1beat	1 beat	2 beats	
Loud beat	Loud beat	Soft beat	Loud beat

Clapping allows students to experience the rhythm of the sentence and observe different groupings of the words in a sentence. This also enables them to observe the key words in a sentence and realize that not all words are of equal value. Thus, clapping to the rhythm of the sentences is essential in equipping foreign language learners with the strategies of prediction and advanced planning in listening comprehension.

**1.3.1.4 Step 4: Incorporation of movement and gesture**

When a person speaks, it would appear that his/her body moves unconsciously with the prosody of the utterances. Movement and language, therefore, appear inextricably linked with one another (Zhang, 2006, Lian, 1980). Each language has its own set of typical patterns of body movement. The patterns of body movement in a language relate to how tense the muscles in one’s body are when producing that language. Therefore, in order to overcome the difference in the fundamental frequencies (F0) of tones between Thai and Mandarin; the difference between the duration of Thai and Mandarin sounds (Coster and Kratochvil, 1984); the difference between the average frequency range of Thai and Mandarin tones would require extensive retraining of L2 students’ bodies when speaking Thai.

For example, since the average frequency range of Thai tones is narrower than that of Mandarin, when producing Thai tones, the vocal ligament might be less tensed than when producing Mandarin tones. Therefore, it would be necessary for L2 students to decrease the general body tension of students through relaxing their muscles when speaking Thai.

Tone error analysis of this group of L2 students’ Thai production before the SEA treatment revealed that they made most errors with the mid tone. Therefore, it seemed necessary to correct the production and perception of mid tone in the training process.

**Table 2. A sample training sentence for the mid tone**

เย็น	วาน	แดง	ไป	ยืม	เงิน	คุณลุง		มา
[yen]	[wa:n]	[dɛ:ŋ]	[pay]	[yɯ:m]	[ŋəŋ]	[khun]	[luŋ]	[ma:]
Mid	Mid	Mid	Mid	Mid	Mid	Mid	Mid	Mid
<i>Daeng borrowed money from his uncle in yesterday evening.</i>								

In order to emphasize relaxed nature of mid tone in Thai, when training learners to produce this tone using the correct tension in the muscles, teacher used only words with mid tones in the whole sentence. This way L2 students would undergo prolonged training of relaxing the requisite muscles when speaking the mid tone.

**Table 3. A sample sentence used in training to perceive and pronounce the low tone**

บ่ายหนึ่ง		ไก่		ออกไข่
[bà:j]	[nùŋ]	[kàj]	[ʔòk]	[khàj]
Low	Low	Low	Low	Low
<i>A hen laid eggs at one o'clock in the afternoon.</i>				

To produce the low tone, the vocal cords need to be lax and suddenly tense in order to keep it level. To change from lax muscle to tense muscle very quickly, students were instructed to adopt a forward slumping of the shoulders as the production of the low tone. Then suddenly students needed to lower their hands down about 15 degree. To allow students to undergo prolonged low tone training, the teacher used only low tones in a whole sentence.

According to Wayland & Guion (2004), Sathiansukon, (2005, 2007), and Sittikesorn (2005), the mid and low tones are the most difficult to discriminate, even for native speakers of Thai.

To aid students' perception between mid and low tones, teacher also used both words with mid and low tones in the whole sentence after students knew how to produce each tone separately. Normally, the final syllable or word in a sentence is stressed thus making it louder. Therefore, to aid learners' perception of low tone, the stressed form of a word with low tone was used as the final syllable or word of a sentence to illustrate its citation characteristic and to demonstrate the difference between mid and low tones.

**Table 4. A sample sentence contrasting mid and low tones**

แดง	คืน	เงิน	ตอนบ่าย	
[dɛːŋ]	[kuːn]	[ŋɔn]	[tɔn]	[bàːj]
Mid	Mid	Mid	Mid	Low
<i>Daeng returned money in the afternoon.</i>				

It seemed to be necessary to reemphasize the perceptual differences in mid and low tones in the training process by using a tone pattern “mid-low tone pair” in a whole sentence. A word with the mid tone was placed as the first word of a sentence, followed by the word with low tone.

**Table 5. Another sample sentence contrasting mid and low tones**

แดง	บอก	ตอนบ่าย		คุณตี		คืน	ไข่
[dɛːŋ]	[bòːk]	[tɔn]	[bàːj]	[khun]	[tìː]	[kuːn]	[khàj]
Mid	Low	Mid	Low	Mid	Low	Mid	Low
<i>Daeng told Mr.Te returned an egg in the afternoon.</i>							

Producing these words side by side repeatedly was a strategy to allow students repeated opportunities to perceive the pitch differences in these tones and produce them experientially. When pronouncing the falling tone of Thai, the teacher asked L2 students to raise their hands up high, then quickly downward their hand and arm. Similar to other tones, to allow students to practice this tone repeatedly, the teacher used word only with the falling tone in the first sentence. Then, in the second sentence of the falling tone training, the teacher used a tone pattern “mid-low-falling tones” in a whole sentence.

**Table 6. A sample sentence used in training the falling tone of Thai**

แดง	บอก	ว่า	มา	ฝาก	พี่	คืน	ไข่	ไป
[dɛːŋ]	[bòːk]	[wâː]	[maː]	[fàːk]	[phîː]	[kuːn]	[khàj]	[pâː]
Mid	Low	Falling	Mid	Low	Falling	Mid	Low	Falling
<i>Daeng told he asked his elder brother to return money to his aunt.</i>								

Both the high tone of Thai and Tone 1 of Mandarin are a high level tone. That means to produce a high tone in Thai, a speaker needs to adopt a forward slumping of the shoulders, then needed to slightly tense their hand pointing upwards. In order to emphasize this relax muscle while producing the high tone, the teacher used only words with a high tone in the whole sentence. The teacher used at least 3 sentences with only high tone words in order to allow students to undergo prolonged the high tone training. For example:

**Table 7. A sample sentence used in training the high level tone of Thai**

น้ำนิด		ใช้	น้ำจ๊ะ		ล้าง	รถ
[ná]	[níʈ]	[cháj]	[ná]	[jáʔ]	[lá:ŋ]	[rót]
High	High	High	High	High	High	High
<i>Aunty Nit asked Aunty Ja to wash the car.</i>						

To produce the rising tone, the vocal cords become lax immediately after tense, and then tense up again. This is similar to Tone 3 in Mandarin. Most Chinese students can pronounce this tone properly. To allow students to practice the rising tone repetitively, the teacher used word only with the rising tone in the sentence

**Table 8. A sample sentence used in training the rising tone of Thai**

นุงนิง		ขาย	ตั๋วหนัง		
[núŋ]	[níŋ]	[khǎ:j]	[tuǎ]	[nǎŋ]	
Rising	Rising	Rising	Rising	Rising	
<i>Nung-Ning sells movie tickets.</i>					

Finally, when L2 students knew how to produce the rising tone, teacher used words with a mid tone until rising tone in the whole sentence with a pattern mid-low-falling-high-rising tones. For example,

**Table 9. A sample sentence used in training all tones of Thai**

ตอนบ่าย		แม่	ซื้อ	ตั๋ว	พอ	สี่ครึ่ง	รู้	ตั๋ว	หาย	
[tɔ:n]	[bà:j]	[mê:]	[sú:]	[tuǎ]	[phɔ:]	[sì:]	[khrúŋ]	[rú:]	[tuǎ]	[há:j]
Mid	Low	Falling	High	Rising	Mid	Low	Falling	High	Rising	Rising
<i>My mother bought a ticket in the afternoon. Then she realized that she has lost the ticket around 4.30 PM.</i>										

Throughout this step, sentence translation was not needed. Moreover, comparing the phonetic systems of Thai and Chinese and English might activate the mother-tongue sieve in the process of learning Thai. In TAP with SEA, therefore, Thai phonetic symbols or any kinds of Romanization with tone diacritics were deliberately and intentionally not used at all.

### 1.3.1.5 Step 5: Mouthing the words

In this step, the teacher instructs students by saying “Continuing with the movements, now mouth the sentences while I say them out loud”. Zhang (2006) pointed out that mouthing the words gives students the opportunity to practice the articulation of the sounds of the words. This step also should lead to a reduction in the number of articulation errors (Zhang, 2006).

### 1.3.1.6-7 Step 6-7: Adding words to the intonation patterns and repetitive exercises

The teacher then says, “Now repeat after me, and then add the word to the intonation”. Students are asked to say the sentence at the same time as they hear the teacher’s model. The teacher then instructs each individual to repeat the sentence by themselves; checking that each student could reproduce the sentence correctly.



**1.3.1.8 Step 8: Checking for meaning**

So far in the procedure, translation and writing down the sentences were not needed. However, at the end of the lesson, students could sit down and write down the meaning or whatever notes they wanted to make for themselves. At the end of each lecture, the whole class engaged in pair or group work in conversation activities using the materials covered in the lesson.

**1.3.2 The consolidation phase**

Though L2 students may improve their production and perception of Thai utterances in the sensitization phase, they still needed to practice dealing with other features of the Thai language at the discourse level, especially when it comes to the task of understanding academic lectures in Thai. The following activities were used in this phase:

(1) Listening to pauses: A transcript of a listening text containing no spaces between words, phrases, clauses, or sentences was provided to students. Students were then asked to listen to the listening text and put a single slash ( / ) at clause and sentence boundaries. This activity was to raise student awareness on the placement of pause and its role on syntactic and discourse structures of sentences.

(2) Poems: Poems contain sound and marked rhymes which tend to stick to the listeners' minds (Maley and Duff, 2005). The poem used in TAP consisted of 4 lines and was composed by the researcher. Each line had 1 or 2 sentences with 6-10 syllables. L2 students needed to put short pause at the end of a phrase or a clause when reading the poem. When finished with each line of the poem, L2 students needed to use a longer silent pause and falling intonation. By using the poem, prosodic cues for identifying sentence boundary was explicitly taught.

**Table 10. A Sample poem used in TAP**

Line 1: เย็นวานแดงไปยืมเงินคุณลุงมา [ yen wa:n (SHORT SILENT PAUSE) dɛ:ŋ pay yu:m ŋən khun luŋ ma: (LONG SILENT PAUSE)] (Daeng borrowed money from his uncle in yesterday evening.)
Line 2: แดงบอกว่าจะคืนเงินตอนบ่ายบ่าย dɛ:ŋ bò:k wá: (SHORT SILENT PAUSE) cà khu:n ŋən tɔ:n bà:j bà:j ( LONG SILENT PAUSE) (Daeng told his uncle he would return him money around the afternoon.)
Line 3: แดงคืนเงินไม่ได้เพราะไม่สบาย dɛ:ŋ khu:n ŋən mâj dâ:j (SHORT SILENT PAUSE) phró mâj sa ba:j ( LONG SILENT PAUSE) (Daeng could not return money to him because he is getting sick.)
Line 4: ลุงบอกว่าไม่เป็นไรหายแล้วค่อยมาคืน luŋ bò:k wá: (SHORT SILENT PAUSE) mâj pen raj (LONG SILENT PAUSE) hǎ:j lé:w (SHORT SILENT PAUSE) khôj ma: khu:n ( LONG SILENT PAUSE) His uncle told him it's all right. Daeng can return him money when Daeng feel better.

(3) Role-play (guided and improvisation)

In role play activities, teacher provided students with a script. Then students needed to memorize, rehearse and perform. While rehearsing, students needed to incorporate practices in

SEA in order to make performance more vivid. The teacher would walk around the classroom to help individuals.

#### ***1.4 Teaching discourse markers through drama techniques***

Discourse markers are generally assumed to signal relations among propositions or among sentences (Fraser, 1999, Knott and Sanders, 1998); they serve to link discourse structure (Schiffrin, 1987), or to indicate a return to the previous topic (Grosz & Sidner, 1986); they are indicators of topic continuation (Chaudron & Richards, 1986), and signs of the point at which there is a change from one topic to another (Hansen & Jensen, 1994).

In order to improve the quality of their speaking and listening performances, students need to know what and where discourse markers are and how to use them and therefore, they should be explicitly taught (Yoshimi, 2001, Lee and Hsieh, 2004, Hernández, 2008). In TAP discourse markers were used through poems and role-plays in order to allow students to experience them first hand. Then explicit teaching of discourse markers in listening texts was conducted in the utilization phase of drama activities.

##### ***1.4.1 Utilization phase***

Academic listening is an act of listening that requires the skills to identify the purpose and scope of a lecture, to identify relationships among units within the discourses, and to deduce meaning of words from contexts (Richards, 1983). To this end, the utilization phase was conducted every fourth and fifth hours of the five hour-class contact. The Utilization phase in TAP involved pre-listening, while-listening, and post-listening tasks.

###### **(1) Pre-listening tasks**

The pre-listening session in TAP prepared the students for the listening comprehension tasks by activating the students' vocabulary and background knowledge. Students were also provided with the purpose of the tasks and the specific information they needed to listen for. In order to integrate speaking and listening practice, interactive class such as vocabulary games, brainstorming, and discussion were also used in this session.

###### **(2) While-listening tasks**

While-listening tasks were tasks that learners were asked to do during the time they were listening to the texts. Students were asked to complete tasks involving listening to the main idea and specific information of the listening passage, summarizing, answering questions, and taking notes.

###### **(3) Post-listening tasks**

In these tasks, students were asked to listen to the texts one more time, and work in a group to compare and share their answers together. Peer feedback among a group is not only less threatening than teacher feedback; it also helps learners become more self-aware since they can notice the gap between how they and others deal with the task (Saito & Fujita, 2004, Ferris & Hedgcock, 2005).

### ***1.4.2 The use of Course Data CD***

To support students' perception in TL in their individual study outside class, TAP used CD-ROM technology in the provision of learning materials. Not only students were provided with the printed version of the text to take notes, they were also provided with data CD and audio CD. Data CD and audio CD of TAP contained a number of multimedia objects such as sound files, texts, interactive exercises such as matching and multiple choice questions and accompanying worksheets.

## ***1.5 Research method***

### ***1.5.1 Research questions and hypotheses***

1. "Does prosody training with SEA on both a sentence and discourse level improve L2 students' listening proficiency to grasp the subject matter of academic lectures?"
2. "Does the prosody training with Somatically-Enhanced Approach (SEA) on a sentence and discourse levels improve students' Thai prosody in their speaking?"

The following hypotheses guided the research study:

- 2.1. The average score of the experiment group in ALT is higher after SEA treatment when compared to the average score in ALT before the SEA treatment. The difference is statistically significant.
- 2.2. The average score of the experiment group in the Summarizing test is higher than that of the control group. The difference is statistically significant.
- 2.3. The average score of students' spontaneous speech is higher after SEA treatment for the experimental group compared to that before the treatment. The difference is statistically significant.

### ***1.5.2 Subjects of the study***

The participants in this study involved 57 non-native Thai speakers of Chinese students (here after L2 students) in the 2+2 program, the International Business, School of International Education, Guangxi University for Nationalities (GUN), People's Republic of China. 30 Students studied in Intensive Thai Course for Academic Purposes (TAP). 27 students studied in Listening and Speaking Thai course for sophomores" (TL&S II). TAP used the same core text as TL&S II but different teaching methods. Both courses were conducted for 35 hours within 2.5 months from March to May, 2012. The students in the TAP group were the experimental group. The students in TL&S II were the control group. Two listening based tests were used: the Academic Listening Test (ALT) and the Summarizing test. A spontaneous speaking test post treatment was conducted also to measure gains in speaking ability for the experimental group.

### ***1.5.3 Academic Listening Test (ALT)***

Academic Listening Test (here after ALT) was conducted twice: the pre-test before the TAP intervention and post-test after the intervention for the experimental group. The pre-test was conducted in the first week of TAP. The post-test was administered at the end of course. ALT was carried out in 40 minutes. ALT was marked out of 40 marks. Each of the audio files in ALT was played only once. In addition, L2 students were provided with blank note-taking paper to take notes as they listened to the lecture-like audio files. They could refer to their notes while they were responding to the task. L2 students were given 2 minutes to read the questions before listening to each audio file. After finish listening, L2 students were given 3 minutes to check their answers before listening to the next passage. In order to avoid any difficulties caused by low Thai language proficiency, L2 students were instructed to write their answers in Chinese. Furthermore, the questions were also printed in Chinese because printing question in Thai would encourage L2 students to guess correct answers from the Thai orthography and sounds. Therefore, any claim on L2 students' listening comprehension could be rendered unreliable.

### ***1.5.4 Summarizing test***

As academic listeners, students are supposed to process different levels of information presented in a lecture. Therefore, a Summarizing test, marked out of 20 marks, was constructed to require students to demonstrate their understanding of major ideas, specific details, and ability to making inferences (Buck, 2001). The Summarizing test was administered once, in 15 minutes, at the end of the courses to both experimental and control groups. The listening passage in the Summarizing test was five minutes in length and involved a monologue in the form of an academic lecture. The passage was recorded at normal speaking rate, with normal and appropriate intonation and was played once. L2 students were provided with a blank note-taking paper for note taking and for reference while listening to the lecture. L2 students had 10 minutes to complete the task and check their answers. L2 students needed to include the overall main idea, major ideas, and supporting details of the major ideas in their summary by writing down their responses in the answer sheet. In order to avoid any difficulties caused by low Thai language proficiency, L2 students' were instructed to write their answers in Chinese.

### ***1.5.5 The spontaneous speaking test***

The spontaneous speaking test was administered twice: a pre-test before the TAP intervention and post-test after the SEA treatment to the experimental group only. The pre-test was conducted in the first week of TAP. The post-test was administered at the end of course. Students were assigned topics by drawing lots. The topics in both pre and post tests were about students' personal information such as "your family", "your favorite activities", and "your favorite place".

An auditory analysis by human marking was used to obtain an objective mark out of a maximum of 9 from each native speaker (9 were involved). The researcher was not one of the native speaking markers. The markers did not know which data belonged to which student and which materials belonged to the pre-tests or post-test. The total numbers of sample marked were 60 (30 samples in the pre-test and 30 samples in the post-test). Each marker was

trained on how to score speaking samples using a speaking rating scale before marking. The scale for the speaking marking ranged from 1 to 9. 1 is the zero beginner level and 9 is the native speaker level. Each scale was adapted from the Chulalongkorn University's Thai Language Testing for Foreign Language Learners (CUTFL) which is based on the International English Language Testing System (IELTS).

### 1.5.6 T-test analysis

The computer software Statistical Package of Social Sciences (SPSS v 19) was used to conduct analyses collected in this study. Analysis of scores from the ALT, the Summarizing and spontaneous speaking tests were done by means of t-tests.

The paired-samples t-test was used to see whether there was a statistically significant difference in the mean scores prior to the SEA treatment and after the SEA treatment of the experimental group in the ALT and the spontaneous speaking test. The significance level was set at  $p < 0.05$  throughout the study.

The scores obtained by the experimental and control groups in the post-tests of ALT and the Summarizing test were analyzed using the independent sample t-test. It was used to compare the mean scores of these test scores from two different groups. The significance level was set at  $p < 0.05$  throughout the study.

## 1.6 Results

### 1.6.1 Academic Listening Test

**Table 11. Comparison of pre and post ALT test scores of the experimental group using paired sample t-test**

		N	Mean	SD	Sig. (2 tailed)*
Experimental group	Pre-test ( ALT)	30	13.37/35	5.44	.000
	Post-test (ALT)	30	29.60/35	4.68	

\*Significance level at  $p < 0.05$  (2-tailed)

As shown in Table 11 above, the average score of the pre-tests of the experimental group was 13.37 marks out of 35 and the standard deviation (SD) was 5.44. The overall mean score of the post-tests was 29.60, with a standard deviation of 4.68. The average score of the post-tests was statistically significantly higher than that of the pre-tests with  $p = .000$  ( $p < 0.05$ ). This means there was a statistically significant improvement after the SEA treatment for students in the experimental group. The first hypothesis was accepted.

#### 1.6.1.1 Independent sample t-test between the experimental and control groups

The independent sample T-Test determined if there was any significant difference in the average scores in the post-tests of ALT between the experimental and control groups.

**Table 12. Comparison of average post-test scores in ALT between the experimental and control groups**

	Group	N	Mean	SD	Sig. (2 tailed)
Post-test of ALT	Control	27	17.22/35	6.76	.000
	Experimental	30	29.60/35	4.68	

\*Significance level at  $p < 0.05$  (2-tailed)

Table 12 showed that there was a significant difference between the post-tests (ALT) of the control and experimental groups with average scores for the control group ( $M = 17.22$ ,  $SD = 6.76$ ) and the experimental group ( $M = 29.60$ ,  $SD = 4.68$ ) and  $p\text{-value} = 0.000 < 0.05$ . The results suggested that the experimental group outperformed the control group significantly in their listening performance. Therefore, the second hypothesis was accepted.

### 1.6.2 The summarizing test

**Table 13. Comparison of mean scores in summarizing tests between the experimental and control groups at the end of the two courses**

	Group	N	Mean	SD	Sig. (2 tailed)
Summarizing test	Control	27	8.96/20	4.78	.000
	Experimental	30	15.73/20	2.07	

\*Significance level at  $p < 0.05$  (2-tailed)

As can be seen from Table 13 above, the mean score of the Summarizing test was 15.73 out of 20 with a standard deviation (SD) of 2.07 for the experimental group while the mean score of the test was 8.96 out of 20 with a standard deviation (SD) of 4.78 for the control group. The difference in the standard deviations between two groups indicated that L2 students in the experimental group did not only score much higher but also attained a more consistent achievement. Furthermore, all students passed the test demonstrating their abilities to grasp academic lectures with a good average score at 15.73 out of 20. For students in the control group, this was not the case with everyone failing the test.

### 1.6.3 The spontaneous speaking test

First, Cronbach's alpha reliability test in SPSS was used to measure internal consistency of the 9 markers. A reliability coefficient of .70 or higher was considered "acceptable" (Traub, 1994). The alpha coefficient for 9 markers in the speaking pre-tests was .99 and .98 for the post tests.

**Table 14. Comparison of pre and post spontaneous speaking test scores of the experimental group using paired sample t-test**

		N	Mean	SD	Sig. (2 tailed)
Experimental group	Pre-tests (speaking)	30	2.86	1.20	.000*
	Post- tests (speaking)	30	4.37	.73	

\*Significance level at  $p < 0.05$  (2-tailed)

As shown in the Table 14, the average score of the pre-tests was 2.86 out of 9 marks and the standard deviation (SD) was 1.20. The overall mean of the post-tests was 4.37 out of 9 marks, and the standard deviation was .73. The average score of the post-tests was statistically significantly higher than that of the pre-tests with  $p = .000$  ( $p < 0.05$ ). The results demonstrated that L2 students in the experimental group performed significantly better in the post-tests than in the pre-tests.

### **1.7 Conclusion**

The analysis of the test scores from ALT, the Summarizing test and the Speaking test using t-test revealed that, after the SEA treatment, L2 students in the experimental group improved their listening performance to a level sufficient to grasp the subject matter of academic lectures. They also outperformed the control group in terms of listening performance. Moreover, after the SEA treatment, L2 students in the experimental group improved their speaking proficiency significantly. These findings demonstrated that SEA in TAP had positive impact and benefit on L2 students' listening proficiency thus making them more effective listeners. Furthermore, their improved performances in speaking skills were rated much more native like compared with their performance before intervention by a panel of native speakers.

The results flowing from this project should be treated with some caution. First of all, the sample of students involved was a convenience sample. Theoretically, it can be applied to the learning of any languages. It follows that in the teaching of other languages, the principle of making what the students select coincide with the needs of the target language communities still holds. SEA can also be applied to alphabetic languages such as English. For example, one of the most noticeable problems in L2 learners' English is the lack of stress in L2 learners' spoken speech (Benrabah, 1997, Hahn, 2004). SEA and drama techniques used in this study to highlight the discourse features of Thai can be modified to correct similar problems affecting L2 learners' English.

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