ED062

Interlanguage consonant production of Thai – Loei and Lao second language learners of English

Dr. Prakorb Phon-ngam[1]

Abstract

An individual's distinctive use of language that has been developed by a learner of a second language is known as "Interlanguage." Challenges for learners in the acquisition of a second language phonological system are to perceive and produce new sounds that do not exist in their first language. This paper presents 1) the Interlanguage consonant pronunciation of Thai–Loei and Lao second language learners of English, 2) pronunciation exercises created for developing their pronunciation skills, 3) their achievements in consonant pronunciation before and after using the exercises, and 4) their satisfaction towards the appropriateness of the exercises developed. The subject used for surveying the Interlanguage consonant pronunciation of Thai–Loei and Lao second language learners of English was 40 students; 20 from Loei Rajabhat University (LRU) in Thailand and 20 from National University of Laos (NUOL) in Vientiane, Laos. The subject for the trail run was 30 students from LRU in the 2015 academic year, purposively selected from English majors who had attended the phonetic course but still had difficulties in pronouncing English consonants. The research tools comprised: 1) wordlists for investigating the Interlanguage consonant pronunciation, 2) English consonant pronunciation exercises, 3) wordlists for studying their achievement, and 4) the appropriateness and satisfaction rating form. The qualitative content analysis and description was based on the of scope of the Articulatory Phonetics, and percentage, means, standard deviation and t-test for dependent samples were used in quantitative data analysis. The study found that Thai–Loei and Lao second language learners of English had difficulties and shared high ranked common pronunciation errors in pronouncing 10 English consonants that do not exist in their first language: [r] 61.25%, [ð] 50.00%, [θ] 47.50%, [ʤ] 38.75%, [ʒ] 37.50%, [ʧ] 35.00%, [ʃ] 35.00%, [l] 33.75%, [z] 30.00 %, and [s] 27.50 %l; since their Interlanguage was interfered by their

[1]Faculty of Humanities and Social Sciences, Loei Rajabhat University, Thailand

L_1 phonological features. Common phonological processes that made the errors were substitution, deletion and non- release of the final sounds. The percentage shown in each type of consonants was: Approximant (61.25%), Affricates (36.88%), Lateral, (33.75%) and Fricatives (32.19%). The pronunciation exercises developed for improving their pronunciation skills was the English pronunciation exercise book called "Trips to Lao People's Democratic Republic and Thailand: English Consonant Pronunciation." The exercise book was divided into 5 units: 1) [ʤ, ʒ], 2) [s, z], 3) [ʧ, ʃ], 4) [θ, ð] and 5) [r, l]. Each unit provided meaningful words, sentences, and short constructions with the target consonant sounds arranged in Thai- Lao tourism situations for pronunciation practice. Overall, each unit met the E_1/ E_2 preset 80/80 criterion of efficiency. The students' achievement score on English consonant pronunciation after using the exercises was higher than that before using them with a statistical significance at the .01 level. The students' satisfaction towards the appropriateness of the exercises developed was at the highest level, ($\bar{X}$=4.57, SD = 0.70).

Keywords: Interlanguage, Consonant Production, Thai-Loei and Lao Second Language Learners of English

1. Introduction

Loei is a province in Northern Thailand; it borders Sainyaboli and Vientiane Province of Lao PDR (Laos). Loei native language is Thai - Loei which is phonologically different from the Central Thai but very similar to Lao language spoken in Laos. Both Thai- Loei and Lao belong to the Tai language family which also includes Thai, Shan and other dialects spoken by other related ethnic groups in Thailand, Myanmar, Laos, Northern Vietnam and Southern China. Students in Thailand and Laos study English as a foreign language. Phonological system of Thai – Loei and Lao are very similar. Urairat Thongphiw (1989) carried out a comparative study of Lao in Roi-Et and Lao in Vientiane; and Siwaporn Hasonnary (2000) compared phonological systems of Lao spoken by native speakers in Luang Prabang, Lao Dan Sai in Loei Province and Lao Khrang in Thachin river basin. Both researchers found that all dialects in the

studies had the same phonological systems. There were 20 consonant phonemes: /b, p, p^h, d, t, t^h, c, k, k^h, ʔ, f, s, h, m, n, ɲ, ŋ, l, w, j /. All 20 phonemes could occur in the word- initial position, but only 9 phonemes could appear in the word – final position. Those phonemes were: /p, t, k, ʔ, m, n, ŋ, w, j/. As for consonant cluster, Erickson, Blain (2001) mentioned about the origin of labialized consonant in Lao which could be concluded that Spoken Lao had only the labialized consonants that were similar to the syllable-initial clusters [k^hw-].

Mother tongue has a great influence on learning a second language. For those who start learning English as a second or a foreign language (L_2), interference of their mother tongue (L_1) could make any errors at any time, such as they may make their pronunciation different from what the native speakers do. In learning second language, we believe that errors made by L_2 learners are very common. Such errors are caused by the different system between L_1 and L_2. Selinker (1972) and Tarone (1979: 80-83) called such different language forms used by L_2 learners an “Interlanguage.” The Interlanguage is an utterance produced by L_2 learners which are different from those produced by native speakers. It is an individual’s distinctive use of language that has been developed by a learner of an L_2. The Interlanguage can be fossilized or ceased developing in any of its development stage. Fossilization may occur when learners have adequate learning support, or they could not overcome their goal of learning L_2.

Talking about errors in using English as an L_2 by Thai learners, particularly in speaking, Supaalux Vongsiribhisan (2005:2-3) found that English had more than 14 phonemes in word- syllable position that were different from Thai’s. Those phonemes were: /b, d, ɡ, f, θ, s, ʃ, v, ð, z, ʒ, tʃ, dʒ, l/. Thai learners of English needed to practice seriously in order to be able to pronounce them correctly. Also, Chusak Sarapol (1990: 60-74) studied the problems of English consonant pronunciation of Mathayomsuksa 3 students at Kamalasai School in Karasin Province. He found many errors as follows: 1) the /k/ in the word- syllable spelling with “c”, 2) /f/ in the words spelled with “gh” and “ph”, 3. /z/ spelled with “x”,

"se.", "s", 4) the /θ, ʃ, ʒ and dʒ/ in all positions of the word, 5) /-v/, /-ʒ / and /n/ at word-final position, 6) /r/ and /l/ in word – medial and word- final positions, 7) /ʔ/ in the words spelling with the letter "h", 8) /ŋ/ as in the word "singer", 9) /j/ in "opinion" and "onion", 10) /t/ that followed "- ed", and 11) the initial clusters /pr-/, /θr-/ and the final clusters such as /-ks/, /-kst/, /-rtʃ/, /-rt/, /-lm/, /-kt/, /-nt/, /-rd/, /-re/, /-ns/ and /-rʃ/. These errors occurred because these sound clusters did not exist in their mother tongue. Beside, Thirapit Thapornpard (1995) studied the English pronunciation problems of Mathayomsuksa 3 students in Thai- Khmer speaking communities in Surin. He found that the students had a high level of difficulty in pronouncing the fricative /dʒ/ in every position of the word. In addition, Phommachan, K. (2006) studied English pronunciation problems of Lao National University students. The results showed that students had difficulties pronouncing all consonants that did not exist in Lao spoken language, those sounds were /θ, ð, z, ʃ, tʃ, ʒ, dʒ, r/. Lastly, Phinthip Thuaicharoen (2001: 8) discussed problems of pronunciation of Thai second language learners of English which could be concluded that Thai learners of English had difficulties in producing /v, s, z, r, sh, ch / and clusters / sp-, tr-, -ts, -ls /. Since such sounds did not exist in Thai, or they occur in different word- position in their L_1.

In second language learning, it is important for the learners to have a good grasp of the language and to be able to distinguish the distinctive features of the linguistic elements between those of the mother tongue and the L_2's in order to use such knowledge in practicing language skills. Practice can help L_2 learners become proficient in using the correct language as well as what the native speakers do. Contrastive analysis of the L_1 and L_2 can help learners know how both languages are similar or different. Generally speaking, knowing differences of the two languages can help teachers provide proper teaching and learning materials and activities for classroom as well. It is known that second language learning is a change of state of knowing a single language to become bilingual. However, to use a second language as well as native speakers is difficult, as James (1980: 22) stated that it was difficult

to use a second language well because of the cultural background and knowledge of the first language has embedded for a long time. When the learner finds out that the second language has some characteristics that are different from their mother tongue, learners often use what exist in their mother tongue instead of using what really exist in L_2 which may be hard for them to perceive or produce. Therefore, it might be hard to use the second language as well as native speakers. Anyway, knowing how mother tongue and second language different can help L_2 learner achieve goal of studying the second language faster.

For the development of learning materials for learning skill, Chaiyong Promvong (2520: 123) states that creators, in the process of creating and testing media effectiveness, should adapt their methods and procedures to suit the level of learners' competence. This study adapted Chaiyong's approach in developing the learning materials for developing pronunciation skills of the Thai- Loei and Lao second language learners of English.

Theoretically, and practically, Thai–Loei and Lao languages have the same phonological system of consonants. For this reason, the native speakers of both languages share the common difficulties in producing English consonants, as mentioned above. They produced those English sounds which do not exist in their mother tongue as what they are familiar with in their first language. To help them improve the consonant pronunciation skills, the author as an instructor of English Phonetics in Loei Rajabaht University (LRU) was interested to study the real problem of English consonant pronunciation of Thai students in Loei Rajabhat University, and Lao students in National University of Laos (NUOL) who speak a dialect with a similar consonant system in order to get real facts and information about their errors to provide proper teaching and learning materials to suit their problems which can help improve their pronunciation skill faster.

2. Objectives of the Study

The objectives of this study were to:

1) analyze the Interlanguage

consonant pronunciation of Thai–Loei and Lao second language learners of English,

2) create pronunciation exercises for developing their pronunciation skills,

3) compare their achievement in consonant pronunciation before and after using the exercises,

4) study their satisfaction towards the appropriateness of the exercises developed.

The author hypothesized that after using the pronunciation exercises to develop their English consonant pronunciation skills, the students would have a higher achievement in consonant pronunciation than what they had got before the development. However, this paper mainly focuses on details of errors in pronouncing consonants of Thai-Loei and Lao learners of English.

3. Theoretical Frameworks

The theoretical frameworks used in this study based on the Interlanguage concept in second language acquisition in which the mother tongue has a great influence on learning the second language. In learning L_2, interferences of the L_1 could make any errors at any time. In addition, the study also used the method of contrastive analysis to analyze phonetic features of each English consonant produced by Thai- Loei and Lao speakers in term of voicing, points of articulation and manners of articulation. The study mainly focused on the controlled speech of the research subject.

4. Research Methodology

This quasi - experimental research followed a single group, pre- and post – test research design. The study was primarily carried out in 2008, and it was expanded and revised in 2015. Details of the methodology were as follows:

4.1 The subject used for surveying the Interlanguage consonant pronunciation of Thai – Loei and Lao second language learners of English was 40 students; 20 from at Loei Rajabhat University (LRU) in Thailand and 20 from National University of Laos (NUOL) in Vientiane, Laos. The subject for the trail run was 30 students from LRU in the 2015 academic year, purposively selected from English majors who had attended the phonetic course but still had difficulties in pronouncing English consonants.

4.2 There were 4 pieces of research tools, details of each tool were as follows:

1) Wordlists for investigating the Interlanguage consonant pronunciation covered 27 sounds from 24 English consonant phonemes: 1) Stops / p, b, t, d, k, ɡ /, 2) Fricatives /f, v, θ, ð, s, z, ʃ, ʒ, h/, 3) Affricates /tʃ, dʒ/, 4) Nasals /m, n, ŋ/, 5) Lateral /l/ and 6) Approximants /w, r, j/. The phonetic allophones [p^h, t^h, k^h] were included to the phonemes /p, t, k/. Each sound included 6 isolated words in which it appears as an onset (initial consonant including cluster) of the first syllable, an onset of the second syllable and a coda (final consonant) 2) English consonant pronunciation exercises included 5 units covering 10 problematic sounds for Thai–Loei and Lao second language learners of English. Those sounds were [ʤ, ʒ], [s, z], [ʧ, ʃ], [θ, ð] and [r, l]. The quality of the exercises developed was determined by the appropriateness mean and the E_1/ E_2 efficiency. The appropriateness of each unit was to be reviewed by 5 experts using the form with 5 point rating scales as; 5, 4, 3, 2, 1 each of which represented the highest satisfaction, high satisfaction, moderate satisfaction, low satisfaction and the lowest satisfaction, respectively. Finally, the quantitative data from the satisfaction survey with such five- point rating scale (Boonchom Srisa-art. 2000: 100) was interpreted as follows:

Mean Interpretation

4.51 – 5.00 highest appropriateness/ satisfaction
3.51 – 4.50 high appropriateness / satisfaction
2.51 – 3.50 moderate appropriateness/ satisfaction
1.51 – 2.50 low appropriateness / satisfaction
1.00 – 1.50 lowest appropriateness/ satisfaction

From such processes mentioned above, the appropriateness level of the exercises was high. ($\bar{X}$=4.44, SD = 0.56), Moreover, the process found that the quality of each unit met the E_1/ E_2 preset 80/80 criterion of efficiency.

3) Wordlists for studying their achievement were used as the pre-and post– test to study student's achievement in pronouncing English consonants. Both tests covering 10 problematic sounds [ʤ,ʒ], [s, z], [ʧ, ʃ], (4) [θ, ð] and [r, l]. Each sound included 6 isolated words in which

it appears as an onset of the first syllable, an onset of the second syllable and a coda.

4) The satisfaction survey form with 5 point rating scales. The rating scale representation and interpretation criteria followed the method used for the tool in number 2 as mentioned above.

Data collection was 1) to primarily schedule with a pronunciation survey in which a set of wordlists for studying the Interlanguage consonant pronunciation was given to all 40 sample students who were classified as 20 Thai students at LRU and 20 Lao students at NUOL. Each student then read the words aloud, and the researcher listened, taped and noted down individual phonetic features of their pronunciation of each consonant. It took about 15 minutes each, and the researcher had research peers, the native speakers of English and research assistants to help listen, tape, analyze students' pronunciation. 2) To have the subject for the trail run who were 30 students at LRU do the pre-test, 3) to have them develop their consonant pronunciation skill by using the exercises created, 4) to have them do the post – test, and 5) to have them answer the satisfaction questionnaire.

The qualitative content analysis and description was based on the scope of the Articulatory Phonetics including voicing, points of articulation and manners of articulation. For the quantitative data analysis, percentage, means, standard deviation and t-test for dependent samples were used.

5. Findings

Results of the study including the survey of consonant pronunciation of Thai–Loei and Lao second language learners of English, the learning material created to help them improve their consonant pronunciation skill, the achievement of the development and their satisfaction can be shown as follows:

5.1 The Interlanguage consonant pronunciation of Thai–Loei and Lao second language learners of English

The study found percentage of learner's errors in the Interlanguage consonant pronunciation of Thai–Loei and Lao second language learners of English as shown in table 1.

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Table 1 Percentage of errors in the Interlanguage consonant pronunciation of Thai–Loei and Lao second language learners of English

No	Percentage of Errors											
	Stops		Fricatives		Affricates		Nasals		Lateral		Approximants	
1.	[p]	14.50	[f]	12.50	[ʧ]	35.00	[m]	0.00	[l]	33.75	[w]	0.00
2.	[p^h]	14.50	[v]	17.50	[ʤ]	38.75	[n]	0.00			[r]	61.25
3.	[t]	16.75	[θ]	47.50			[ŋ]	7.50			[j]	0.00
4.	[t^h]	15.50	[ð]	50.00								
5.	[k]	15.00	[s]	27.50								
6.	[k^h]	15.00	[z]	30.00								
7.	[b]	7.50	[ʃ]	35.00								
8.	[d]	7.50	[ʒ]	37.50								
9.	[g]	12.50	[h]	0.00								

According to the Table 2 above, three groups of consonants could be grouped together, as follows:

1) There were 5 consonants that the L_2 learners could produce in any word-syllable position without any difficulty which were the consonants that exist in their first language. Those consonants were: [m], [n], [h], [w] and [j].

2) There were 12 consonants that most of them have been existed in their first language, but the learners still had difficulty producing them since such sounds never occur in certain position as those in the L_2. Those consonants were [p], [p^h], [b], [t], [t^h], [d], [k], [k^h], [ɡ], [f], [v] and [ŋ].

3) There were 10 consonants that most of them did not exist in their first language, and the learners had difficulty pronouncing them in any word– syllable position the sounds occur. Those consonants shown according to the error percentage were as follows:

(1) [r] 61.25 %
(2) [ð] 50.00 %
(3) [θ] 47.50 %
(4) [ʤ] 38.75 %
(5) [ʒ] 37.50 %
(6) [ʧ] 35.00 %
(7) [ʃ] 35.00 %
(8) [l] 33.75 %
(9) [z] 30.00 %
(10) [s] 27.50 %

Illustration of their errors in producing each consonant which did not exist in Thai- Loei and Lao language are shown in the table 2.

Table 2 Phonetic features of the Interlanguage consonant pronunciation of Thai- Loei and Lao learners of English

Consonant sounds Manners / Points of Articulation	Phonetic features of the Interlanguage consonant pronunciation of Thai-Loei and Lao learners of English		
	Onset 1	Onset 2	Coda
1) [r] Voiced alveolar approximant	[l-] Voiced lateral	[-l-] Voiced lateral [-ø-] Zero	[-ø] Zero

Table 2 (Cont.) Phonetic features of the Interlanguage consonant pronunciation of Thai- Loei and Lao learners of English

Consonant sounds Manners / Points of Articulation	Phonetic features of the Interlanguage consonant pronunciation of Thai- Loei and Lao learners of English		
	Onset 1	Onset 2	Coda
2) [ð] Voiced dental fricative	[d -] Voiced alveolar stop	[-d-] Voiced alveolar stop	[-t˺] Voiceless alveolar unreleased stop [-s] Voiceless alveolar fricative
3) [θ] Voiceless dental fricative	[t-] Voiceless alveolar stop [s-] Voiceless alveolar fricative	[-t-] Voiceless alveolar stop [-s-] Voiceless alveolar fricative	[-t˺] Voiceless alveolar unreleased stop [-s] Voiceless alveolar fricative
4) [ʤ] Voiced palatal affricate	[j-] Voiced dorso velar	[-j-] Voiced dorso velar [-c-] Voiceless alveolar unaspirated stop	[-t˺] Voiceless alveolar unreleased stop
5) [ʒ] Voiced post-alveolar fricative	[cʰ-] Voiceless alveolar stop	[-cʰ-] Voiceless alveolar stop [-s-] Voiceless alveolar fricative	[-t˺] Voiceless alveolar unreleased stop [-cʰ] Voiceless alveolar stop
6) [ʧ] Voiceless palatal affricate	[cʰ-] Voiceless alveolar stop [s-] Voiceless alveolar fricative	[-cʰ-] Voiceless alveolar stop [-s-] Voiceless alveolar fricative	[-t˺] Voiceless Alveolar unreleased stop [-s] Voiceless alveolar fricative

Table 2 (Cont.) Phonetic features of the Interlanguage consonant pronunciation of Thai- Loei and Lao learners of English

Consonant sounds Manners / Points of Articulation	Phonetic features of the Interlanguage consonant pronunciation of Thai- Loei and Lao learners of English		
	Onset 1	Onset 2	Coda
7) [ʃ] Voiceless post-alveolar fricative	[c^h-] Voiceless alveolar stop [s-] Voiceless alveolar fricative	[-c^h-] Voiceless alveolar stop [-s-] Voiceless alveolar fricative	[-t˺] Voiceless Alveolar unreleased stop [-s] Voiceless alveolar fricative
8) [l] Voiced alveolar lateral	-	[-ø-] Zero	[-n] Voiced alveolar nasal [-ø] Zero [-w] Voiced labio-velar
9) [z] Voiced alveolar fricative	[s-] Voiceless alveolar fricative [c^h-] Voiceless alveolar stop	[-c^h-] Voiceless alveolar stop [-s-] Voiceless alveolar fricative	[-t˺] Voiceless alveolar unreleased stop [-s] Voiceless alveolar fricative
10) [s] Voiceless alveolar fricative	[c^h-] Voiceless alveolar stop	[-c^h-] Voiceless alveolar stop	[-t˺] Voiceless alveolar unreleased Stop

Table 2 shows errors occurred by interference of L_1. Common phonological processes of the changed were substitution, deletion and non-release of the final sounds.

Percentage of learners' errors in producing each consonant, and examples of words used in the test are as follows:

1) Voiced apico-alveolar approximant [r], errors occurred by the processes of substitution and deletion. (61.25 %)

(1) In word- initial position, it was mispronounced as [l-]:'rice', 'read,''rat,' ready.'

(2) In cluster and word–medial position, it was mispronounced as [Cl-], [-l-], [-ø-]: fry', 'pray,' 'arrive,' 'corruption.'

(3) In word – final position, it was mispronounced as [-ø]: 'war,' 'chair,' 'deer.'

The sound [r] was mostly deleted when it occurred as second member of clusters, and sometime it was pronounced as [Cl-].

2) Voiced apico-dental fricative, [ð], errors occurred by the processes of substitution and non-release of the final sound. (50 %)

(1) In word- initial position, it was mispronounced as [d-]:'this,' 'that,' 'than.'

(2) In word–medial position, it was mispronounced as [-t-], [-s-] and [-d-]: 'father,' 'mother,' 'brother', 'weather' 'other.'

(3) In word–final position, it was mispronounced as [-t˺] and [-s]: 'clothe,' 'breathe,' 'bathe,' 'smooth.'

3) Voiceless apico-dental fricative, [θ], errors occurred by the processes of substitution and non-release of the final sound. (47.5 %)

(1) In word- initial position, it was mispronounced as [t-] and [s-]: 'think,' 'thank,' 'theme.'

(2) In word– medial position, it was mispronounced as [-t-] and [-s-]: 'Gothic,' ethanol.'

(3) In word–final position, it was mispronounced as [-t˺] and [-s]: 'month,' 'breath,' 'mouth,' 'cloth.'

4) Voiced palato-alveolar affricate, [ʤ], errors occurred by the processes of substitution and non-release of the final sound. (38.75 %)

(1) In word- initial position, it was mispronounced as [j-] and [c-]: ‘Jam,’ ‘John.’

(2) In word – medial position, it was mispronounced as [-j-] and [-c-]: ‘engine,’ ‘soldier.’

(3) In word – final position, it was mispronounced as [-t˺]: ‘stage,’ ‘knowledge.’

5) Voiced palato-alveolar fricative, [ʒ], errors occurred by the processes of substitution and non-release of the final sound. (37.5%)

(1) In word- initial position, it was mispronounced as [cʰ-]: ‘genre,’ ‘beige.’

(2) In word – medial position, it was mispronounced as [-cʰ-] and [-s-]: ‘casual,’ ‘decision.’

(3) In word – final position, it was mispronounced as [-cʰ] and [-t˺]: ‘garage,’ ‘massage.’

6) Voiceless palato-alveolar affricate, [ʧ], errors occurred by the processes of substitution and non-release of the final sound. (35 %)

(1) In word- initial position, it was mispronounced as [cʰ-] and [s-]: ‘chicken,’ ‘champion,’ ‘cheap.’

(2) In word–medial position, it was mispronounced as [-cʰ-] and [-s-]: ‘question,’ ‘merchant,’ ‘departure.’

(3) In word–final position, it was mispronounced as [-t˺] and [-s]: ‘March,’ ‘rich,’ ‘watch,’ ‘church.’

7) Voiceless palato-alveolar fricative, [ʃ], errors occurred by the processes of substitution and non-release of the final sound. (35%)

(1) In word- initial position, it was mispronounced as [cʰ-] and [s-]:‘she,’ ‘short,’ ‘shadow,’ ‘share.’

(2) In word–medial position, it was mispronounced as [-cʰ-] and [-s-]: ‘fashion,’ ‘ocean,’ ‘Asian,’ ‘racial.’

(3) In word – final position, it was mispronounced as [-t˺] and [-s]: ‘cash,’ ‘fish,’ ‘fresh,’ ‘brush.’

8) Voiced apico-alveolar lateral, [l], errors occurred by the processes of substitution, deletion and non-release of the final sound. (33.75 %)

(1) In word- initial position, no problem was found.

(2) In the cluster and word–

medial position, it was mispronounced as [-ø-]: ‘clever,’ ‘bleed, ‘play,’ ‘talk.’

(3) In word–final position, it was mispronounced as [-n], [-w] and [-ø]: ‘football,’ ‘handful,’ ‘skill,’ ‘drill,’ ‘pool.’

The sound [l] was mostly deleted when it occurred as second member of clusters while in the final position, it was substituted by [-w] which was considered marked.

9) Voiced apico-alveolar fricative [z], errors occurred by the processes of substitution and non-release of the final sound. (30 %)

(1) In word-initial position, it was mispronounced as [s-] and [cʰ-]: ‘zoo,’ ‘zinc,’ ‘zebra.’

(2) In word – medial position, it was mispronounced as [-cʰ-] and [-s-]: ‘busy,’ ‘wizard,’ ‘advisor.’

(3) In word–final position, it was mispronounced as [-t˺] and [-s]: ‘jazz,’ ‘rose,’ ‘close,’ ‘quiz,’ ‘because.’

10) Voiceless apico-alveolar fricative, [s], errors occurred by the processes of substitution and non-release of the final sound. (27.5 %)

(1) In word- initial position, it was mispronounced as [cʰ-]: ‘sea,’ ‘saw.’

(2) In word–medial position, it was mispronounced as [-cʰ-]: ‘decision,’ ‘consumption.’

(3) In word–final position, it was mispronounced as [-t˺]: ‘face,’ ‘dose,’ ‘practice.’

5.2 Exercises developed to improve Interlanguage consonant pronunciation skills of Thai- Loei and Lao second language learners of English

The pronunciation exercises developed for improving the consonant pronunciation skills of Thai-Loei and Lao second language learners of English was the English pronunciation exercise book called .“Trips to Lao People’s Democratic Republic and Thailand: English Consonant Pronunciation.” The exercise book was divided into 5 units. The E_1/E_2 Efficiency preset criteria of each unit was 80/80; its details were as follows:

1) The [ʤ, ʒ], its E_1/E_2 Efficiency was 79.63/79.63 which was equivalent to the preset criteria.

2) The [s, z], its E_1/E_2 Efficiency was

82.00/82.20 which was equivalent to the preset criteria.

3) The [ʧ, ʃ], its E_1/E_2 Efficiency was 79.63/80.00 which was equivalent to the preset criteria.

4) The [θ, ð], its E_1/E_2 Efficiency was 80/80 which was equivalent to the preset criteria.

5) The [r, l], its E_1/E_2 Efficiency was 79.63/79.93 which was equivalent to the preset criteria.

Each unit provided meaningful words, sentences, and short constructions with the target consonant sounds arranged Thai-Lao tourism situations for pronunciation practice**.**

5.3 Achievement in consonant pronunciation of Thai- Loei and Lao second language learners of English before and after using the exercises developed

The achievement in consonant pronunciation of Thai- Loei and Lao second language learners of English before and after using the exercises is shown in table 3.

Table 3: Comparison of learners' achievement in English consonant pronunciation

Unit	Pre-test		Post- test		t
	$\bar{x}$	SD	$\bar{x}$	SD	
1. [dʒ, ʒ]	4.1667	.37905	8.4333	.44978	54.325**
2. [s, z]	4.9667	.66868	8.6833	.53310	55.931**
3. [tʃ,ʃ]	4.5667	.50401	8.5667	.46855	52.764**
4. [θ, ð]	3.8000	.80516	8.4500	.46144	42.177**
5. [r, l]	3.1667	.379905	8.2667	.36515	155.373**

**Statistically significant at the level of 0.01

Table 3 shows that learners' skills after the treatment were getting better, as the figures show the students' achievements mean score on English consonant pronunciation after using the exercises was higher than that before using them with a statistical significance at the 0.01 level.

5.4 Learners' satisfaction towards the appropriateness of the exercises developed

Learners' satisfaction towards the appropriateness of the exercises developed is shown in table 4.

Table 4: Learners' satisfaction towards the appropriateness of the exercises developed

No	Items	$\bar{X}$	SD	Level of satisfaction
1	Appropriateness of the target sounds regarded as the top ten problem sounds for Thai and Laos native speakers	4.73	0.52	highest
2	Appropriateness of the contents in reading passages for pronunciation practices	4.53	0.57	highest
3	Clearness of pronunciation explanation for each sound	4.43	0.77	high
4	Appropriateness of pictures and captions used in the pronunciation explanation	4.37	0.76	high
5	Correctness of pronunciation problem explanation for each sound	4.63	0.67	highest
6	Appropriateness of words used for practices the problem sound occurred in the level of word context	4.53	1.26	highest
7	Appropriateness of words used as example to differentiate sounds in the minimal pair section	4.67	0.61	highest
8	Appropriateness of words used for practices the problem sound in the level of word in sentences	4.53	0.63	highest
9	Appropriateness of the pronunciation test in each unit	4.60	0.62	highest
10	Overall appropriateness of the pronunciation exercise book	4.67	0.61	Highest
	Average	4.57	0.70	highest

The table 4 shows that the overall students' satisfaction towards the appropriateness of the exercises developed was at the highest level, ($\bar{X}$ = 4.57, SD = 0.70). Appropriateness of the target sounds regarded as the top ten problem sounds for Thai and Laos native speakers had the highest mean score which was at the highest level, ($\bar{X}$ = 4.73, SD = 0.52), while the appropriateness of pictures and captions used in the pronunciation explanation had the lowest mean score but in the high level, ($\bar{X}$= 4.37, SD = 0.76).

6. Discussion

This study had been carried out for many years since the research sites, research subjects and people involved were in two countries, Thailand and Laos. The researcher had to arrange, plan, and rearrange the plans and research schedules many times to meet the situation changed. However the researcher had gained lot of useful data for the research and for everyday usage in the classroom when the all the work had been completed.

The study found that Thai–Loei and Lao second language learners of English had difficulties producing 10 English consonants: [r], [ð], [θ], [ʤ], [ʒ], [ʧ], [ʃ], [l], [z], and [s]. They pronounced these 10 common problematic sounds with the interference of their native language phonological features in every position of the word that these sounds occur. This phenomenon could occur because most of such sounds did not exist in their native language; only [l] in the group exists in Thai – Loei and Lao. However, [-l-] never occur as the cluster member or in the final positions in their L_1 This is similar to Supaalux Vongsiribhisan (2005), Chusak Sarapol (1990) and especially to Phinthip Thuaicharoen (2001:8) in which she had discussed that Thai second language learners of English had difficulties in producing /v, s, z, r, sh, ch/ and clusters / sp-, tr-, -ts, -ls / since such sounds did not exist in Thai or they occur in different word- position in the L_1. The sound [r] and [l] were mostly deleted when they occurred as a second member of cluster; this is plausible, according to the influence of L_1. Consonant clusters are considered a marked feature in Thai–Loei and Lao language, since there were no consonant

clusters with [Cr-], [Cl-] nor [-rC], [-lC] in spoken Lao, as Erickson, Blain. (2001) mentioned about the origin of labialized consonant in Lao which can be concluded that Spoken Lao had only the labialized consonants that similar to the syllable-initial clusters [kʰw-]. Learning L_2, even though they could perceive the sounds, they found it hard to produce them. Hence, in both in casual and controlled speech, they simply delete the sounds as what they did in their native language.

According to the principle of speech production, it would be considered marked for the final [-l] to be substituted by the labio-velar [-w], since their phonetic features are different. Both sounds do not share any articulation. However, native speakers of Thai-Loei and Lao commonly use [-w] to substitute [-l]. It might be occurred from reason that the final [- w] exist in their L_1, so they might simplify the final [-l] by substitute it with [-w], as James (1980: 22) mentions about to use a second language as well as native speakers is difficult because of the cultural background and knowledge of the first language has embedded for a long time. When the learners find out that the second language has some characteristics that are different from their mother tongue, they often use what exist in their mother tongue instead of using what really exist in L_2 which may hard for them to perceive or produce.

7. Conclusions and Suggestions

This paper presents the Interlanguage consonant pronunciation of Thai–Loei and Lao second language learners of English, The study found that Thai–Loei and Lao second language learners of English shared common difficulties producing English consonant which did not exist in their L_1; those consonants were: [ɾ], [ð], [θ], [ʤ], [ʒ], [ʧ], [ʃ], [l], [z] and [s]. Their Interlanguage was interfered by their L_1 phonological features. Common phonological processes of the change were substitution, deletion and non- release of the final sounds. The researcher had brought those consonants with pronunciation difficulties of Thai–Loei and Lao second language learners of English to create materials for improving their pronunciation skills which were an exercise book. The book created was called “Trips to Lao People’s Democratic

Republic and Thailand: English Consonant Pronunciation." It was divided into 5 units: (1) [ʤ, ʒ], (2) [s, z], (3) [ʧ, ʃ], (4) [θ, ð] and (5) [r, l]. Each unit provided meaningful words, sentences, and short constructions with the target consonant sounds arranged in Thai- Lao tourism situations for pronunciation practice. Overall, each unit met the E_1/ E_2 preset 80/80 criterion of efficiency. The students' learning achievement score on English consonant pronunciation after using the exercises was higher than that before using them with a statistical significance at the .01 level. The students' satisfaction towards the appropriateness of the exercises developed was at the highest level, ($\bar{X}$ = 4.57, SD = 0.70).

As for the current free-flowing workforce in ASEAN, the study suggested that it would be interesting to study transnational English consonant pronunciation difficulties among those native speakers from different countries of Mekong Sub-regions to develop the proper learning media for them.

8. Acknowledgement

My appreciation and special thanks go to all the great peers at NUOL and LRU.

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