



Improving English Consonants Pronunciation of Undergraduate Students in Rajamangala University of Technology Lanna Lampang

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Abstract

The purposes of the research were to: 1) study the phonetics features of English consonants as pronounced by undergraduate students in Rajamangala University of Technology Lanna Lampang, 2) improve English consonants pronunciation skill, and 3) compare the students' learning achievement by contrasting the participants' pre-test and post-test score. The target group was twenty-four accounting students. Data were analyzed by percentage, average, and t-test. The research instruments were English pronunciation test, sets of pronunciation activities, and places and manners of articulation diagram. The results of the study were the followings:

1. The phonetic features of English consonants pronunciation problem with the percentages of 100.00 were the fricatives ([v], [θ], [ð], [z], [ʃ], [ʒ]), affricates ([tʃ], and [dʒ]), stop (plosive) ([g]), lateral ([l]), and approximant ([r]). The consonants with less pronunciation problem were [f], [s], and [t] with the percentage of 80, 50, and 25 respectively.

2. After the improving process of using sets of pronunciation activities and places and manners of articulations diagrams, the participants could pronounce English consonants correctly with the average percentage of 77.56, increased by 34.13 per cent.

3. By comparing the participants' learning achievement, it was found that there was a significant difference between pre-test and post-test score with a mean significant gain score of +14.59. Participants were found to be able to pronounce English consonants correctly after participating in the activity ($t(46) = 2.013, p < .05$).

Keywords: English consonants Pronunciation, places and manners of articulation diagrams, learning achievement

I. INTRODUCTION

In the process of teaching and learning English in Thailand apart from many problems that relate to English language development, Thai students encounter with English pronunciation problem because there are barriers that hinder students to pronounce English consonants correctly. There are many factors which mostly cause problems in learning English pronunciation such as the opinion of difference phonology system between English and Thai, their native language, prior English pronunciation learning, instruction, as well as motivation (Sahatsathatsana, 2017). Pronunciation is very important factor in language studying because learners with good pronunciation are likely to be understood even if they make error in other areas, where as learners with bad pronunciation will not be understood, even if their grammar is perfect (Gilakjani, 2016). Dee-in (2006) indicated Thai students' pronunciation problems of English played a part in their ability to speak English correctly.

Consonants pronunciation is an important part in pronouncing words. To achieve this more realistic goal, focus on learning to pronounce consonant sounds rather than vowel sounds should be concerned. Consonant sounds make speech clear, crisp and intelligible, meaning they make the speech easier to understand. Consonants are easier to learn than vowels. There is usually only one way to pronounce each consonant sound. When students learn to position their teeth, tongue and lips for a consonant sound, in other words, knowing place and manner of articulations, they can insert it into any word and be fairly accurate. Most of students in Thailand do not have enough knowledge in pronouncing English consonants, as a result, they are shy to speak English in front of class. They lack confidence with their pronunciation since they do not know how to pronounce correctly. The main reason for

this problem is that no pronunciation lessons are obtained in the curriculum. In 2016, Gilakjani's study of English pronunciation instruction showed that there is no well-established systematic method of deciding what to teach, when, and how to teach English pronunciation, as a result, pronunciation is less important and teachers are not very comfortable in teaching pronunciation in the classroom.

Thai students show limited skill in English pronunciation (Khamkhien, 2010). As Youfu and Yulan (2002) mentioned learners' native languages, more or less, influence their English pronunciation. It results wrong and unclear English pronunciation and also misinterpretation of sounds so it's hard to understand and make them have no confidence in pronouncing English consonants. Moreover, it causes the words in meaning to change and unsuccessful communications. Many researchers are interested in improving English consonants pronunciation of Thai students. They try to figure out their problems, especially factors affecting Thai students' English pronunciation. According to Winaitham and Suppasetserree (2012, p.305), factors appearing to affect students' pronunciation are lacking of basic knowledge of English pronunciation, the use of Thai tones and intonation for English pronunciation, lacking of intention, infrequent use of English on a daily basis, and anxiety about making mistakes in oral communication. In 2002, Youfu and Yulan's study showed that in Thailand, pronunciation had been ignored by Thai teachers in some university, as a result, the students' performance of English pronunciation are limited. Besides, in 2017 Sahatsathatsana discovered phonetic ability is reported as the factor mostly to cause problems in phonetics learning because of differences in the sound system between English and Thai. Moreover, Kanokpermpoon, (2007) investigates

Thai and English consonantal sound: a problem or a potential for EFL learning. The research determines



areas of difficulties when Thai students try to pronounce English consonantal sounds. The result shows English sounds which do not occur in the Thai phonology tend to pose great difficulty for Thai students to utter. Sounds which exist in Thai but can occur in different environment, i.e. syllable position, are also prone to be difficult to pronounce. To tackle the problem of sounds inexistence in Thai, Thai students are likely to substitute Thai sounds for the English sounds (Kanokpermpoon, 2007, 57).

More studies have demonstrated that Thai students face problem in English consonants pronunciation. According to Chakma (2014), the study focused on difficulty in pronunciation of certain English consonant sounds by Thai students. The result reveals that individual English consonants sounds are not problematic for Thai students however, whenever the sounds occur in the beginning and end of the words the students had difficulties in pronouncing them and they substituted them with other likely sounds. From the research of Plailek (2016), it was found that three groups of English final consonant problem of the students at the high level were fricatives, lateral, and approximant. However, after the development process of using English final consonant pronunciation exercise, the students could pronounce the problematic sound correctly with the average percentage of 44.77.

Based on the above mentioned, the researcher believes that the students can pronounce English correctly and efficiently through learning and teaching process. This research focuses on English consonants only, vowels, tone and stress are not included in the study. Participants would get lots of benefits from my helping them to improve English consonants pronunciation. Accurate pronunciation is very essential skill for students since it can help them to work in the international work places. The participants in this research; Accounting students, they have studied

English for many years, but in the class they are not able to pronounce English consonants correctly. The incomprehensibility of students' presentation caused by their poor English pronunciation. There are various methods that make the students have better English consonants pronunciation. So, this is one of the ways to use for improving their pronunciation skill. The students should be trained their English consonants pronunciation skill by using sets of English consonants pronunciation skill activities, and places and manners of articulation diagram to enhance English consonants pronunciation skill. The researcher will provide students with articulatory description of English consonants which means teaching them how English consonants are produced correctly by human speech organs.

II. OBJECTIVES

- 1) To study the phonetics features of English consonants as pronounced by undergraduates students in Rajamangala University of Technology Lanna Lampang.
- 2) To improve English consonants pronunciation skill by using English consonants pronunciation test, set of pronunciation activities, and places and manners of articulation diagram.
- 3) To compare the students' learning achievement by contrasting the students' pre-test and post-test score.

III. METHODS

The current study is a development research which has objectives to develop English consonants pronunciation skill by encouraging the participants to pronounce English consonants correctly by using English consonants pronunciation test, a set of pronunciation activities, and places and manners of

articulation diagram and also compare students' learning achievement after the improving process. In order to achieve the objectives, the researcher proceeds the topics as follows:

- A. Population
- B. Research instruments
- C. Data collection
- D. Data analysis

A. Population

The target population were twenty-four first year Accounting students in researcher's Academic English class of the first semester in 2018. During the process of teaching, the researcher has observed that most students cannot pronounce English consonants and words correctly which affect their confidence and the progress of classroom management so the researcher decides to conduct research to improve their English pronunciation skill.

B. Research Instruments

The research instruments of the study include English consonants pronunciation test, a set of pronunciation activities, and places and manners of articulation diagram.

1. English consonants pronunciation test

The test is used for both pre-test and post-test. The test consists of 45 items which are selected from phonetics and phonology textbooks. (Roach, 2009 and Hewings, 2004). The selected words includes 24 English consonant sounds which are positioned in the initial, medial, and final position within words. The students are asked to pronounce words aloud.

The pre-test and post-test used in this research are evaluated for reliability by Parallel tests or Equivalence tests reliability method. The researcher measures the

reliability of the tests by administering different versions of the pre-test and post-test. Both versions of the tests contains items that probe the same English consonants sounds (Form A for pre-test and form B for post-test). The researcher randomly assigns each participant to receive Form A or B on the pre-test and then switch them on the post-test. The correlation between the two parallel forms is estimate of the reliability of the test. (The Center for the Enhancement of Teaching, (n.d.).

2. Set of pronunciation activities

There are 3 sets of English pronunciation activities which are used to practice the participants' pronunciation. Each activity consisted of 45 word lists for oral practice; 20 words were practiced for English consonants at the initial position, 5 words for English consonants at the medial position and another 20 words for English consonant at the final position. The word lists that are used in the exercises are taken from the mispronunciation that occur during the participants' pre-test.

3. Places and manners of articulation diagram

Diagram 1 and Table 1 demonstrate articulators as well as the places of articulation and manners of articulation used in producing English consonants. The participants have been taught how to pronounce English consonants correctly according to speech organs used in articulating them.

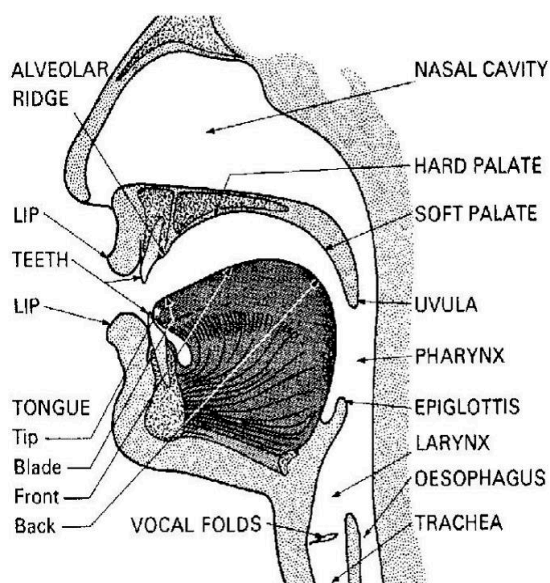


Figure 1: Speech organs of articulations

Source: www.uniowa.edu/~acadtech/Phonetics/about.html

Table 1: Places and manners of articulation

Source: www.uniowa.edu/~acadtech/Phonetics/about.html

	Bilabial	Labio - Dental	Dental	Alveolar	Post - Alveolar	Palato - Alveolar	Palatal	Velar	Glottal
Plosive	p b		t d					k g	
Affricate						tʃ dʒ			
Fricative		f v	θ ð	s z		ʃ ʒ			h
Nasal	m			n				ŋ	
Lateral				l					
Approximant or Semi- vowel	w				r		j		

C. Data collection

In order to improve the participants' English consonants pronunciation, the study is proceeded as follows:

1. Twenty-four participants take pre-test in order to classify their pronunciation abilities. Each student has to pronounce each word aloud. Each word contains of English consonants sounds in initial, or medial, or final positions. The researcher records the participants' pronunciation.

2. The improving process, the participants are taught and have practiced for two weeks on problematic consonant sounds by using set of pronunciation exercises, speech organ of articulations and places and manners of articulation diagrams. The participants learn how to articulate English consonants by using proper articulators.

3. Twenty-four participants are asked to do post-test after the improving process is done.

D. Data Analysis

The results of English consonants pronunciation pre and post-test score were analyzed by percentage, average, and t-test. The procedure are as follows;

1. Listing and analyzing English consonants sounds problem of each participant by percentage.

2. Comparing the score between pre-test and post-test after improving process by average and t-test.

IV. RESULTS

The purposes of this research were to develop English consonants pronunciation skill and compare the participants' learning achievement before and after the improving process of first year Accounting students with twenty-four participants, Faculty of Business Administration and Liberal Arts of Rajamangala University of Technology Lanna Lampang. In this study, the research instruments are a set of pronunciation exercises which were used to test the participant's pronunciation with speech organs of articulations, and place and manners of articulation diagrams to show human speech organs when

articulating sounds. This section importantly aims to present the results of the data analysis according to the objectives. The results were as follows:

Section 1 The result of phonetics features of English consonants as pronounced by participants.

Section 2 The result of comparing the students' achievement by contrasting the participants' pre and post-test score.

Section 1 The result of phonetics features of English consonants as pronounced by participants.

Each participant was asked to do pre-test in order to find out an accurate pronunciation and mispronunciation of English consonants sounds. The result was presented in the table 2.

Table 2: T-test result comparing pre-test data sets to post-test data sets

Manners of Articulation	Accurate Pronunciation		Mispronunciation	
	No. of Students	Average Percent Accuracy	No. of Students	Average Percent Error
Plosives: ([p], [b], [d], [k]*/**/*** : ([t])*/** : ([t])*** : ([g])*/**/***	24 24 18	100 100 75	 6 24	 25 100
Fricatives: ([v], [θ], [ð], [z], [ʃ], [ʒ])*/**/*** : ([h])*/**/*** : ([f], [s])*/** : ([f])*** : ([s])***	 24 24 4 12	 100 100 17 50	24 20 12	100 83 50
Affricates: ([tʃ], [dʒ])*/**/***			24	100
Nasals: ([m], [n], [ŋ])*/**/***	24	100		
Lateral: ([l])*/** : ([l])***	24	100	24	100
Approximant: ([r])*/** ([r])***	24	100	24	100

Note: * refers to the occurrence in the initial position of words.

** refers to the occurrence in the medial position of words.

*** refers to the occurrence in final position of words.

As seen from table 2, the phonetics features of English consonants pronunciation problem which participants faced with the percentages of 100.00 were the fricatives ([v], [θ], [ð], [z], [ʃ], [ʒ]), affricates ([tʃ], and

[dʒ]), and stop ([g]) when they occurred in the initial, medial and final position within words and also with the lateral ([l]), and approximant ([r]) when they occurred in the final position. Meanwhile, participants did not face difficulty with [p], [b], [d], [k], [h], ([m], [n], and [ŋ] when they occurred in the initial, medial and final position within words. There were 25 percent of participants had problems with [t] when it occurred in final position. Besides, 83 percent of participants had pronunciation problem with [f] when it occurred in final position. Moreover, 50 percent of participants also got problems with [s] when it appeared in the final position.

The followings are the results on the phonetics features of problematic English consonant pronunciation produced by participants.

For voiced velar stop [g], the participants had produced 100% mispronunciation when it occurred in all positions within word. They pronounced as voiceless velar stop [k]. For example in the word “go” was pronounced /*kə/, “Greg” was pronounced as /*krek/, and “zigzag” was pronounced as /*siksæk/.

While voiced labio-dental fricative [v] caused problem for participants in all positions within words. In the initial and medial position, they had a tendency to confuse [v] with [w] because [v] does not exist in Thai phonology system and there is no phonemic opposition between voiced and voiceless features in final position in Thai so the participants substituted [v] to voiced bilabial semivowel [w] instead, as in the words, “van” /*wæn/, river /*riwə/. In the final position, they pronounce [p] instead of [v], as in the word “receive” /*risip/.

In the case of voiceless interdental fricative [θ] and voiced interdental fricative [ð], because of the inexistence of these two sounds and voicing in Thai phonology system, all participants substituted them to Thai voiceless alveolar stop [t] and voiced alveolar stop

[d]. For example in the words, “this” /*dɪs/, “mother” /*mʌtə/, and “bath” /*bæd/.

The results also showed that the participants used voiceless palatal-alveolar fricative [ç], and voiceless palatal-alveolar affricate [tʃ] interchangeably. They pronounced the word “wash” as /*wɔtʃ/, the word “cheese” as /*ʃis/, and the word “child” as /*ʃai/. Some participants also pronounced [tʃ] and [ç] as voiceless alveolar fricative [s] as in the word “shoe” was pronounced /*su/ and the word “child” was pronounced as /*sai/. This happened because of the interference of the participants’ native language or mother’s tongue, Northern Thai dialect.

For [ʒ] and [dʒ], the participants substituted by Thai consonants which are available in Thai phonology system. They pronounced [ʒ] as aspirated voiceless palatal affricate [tʰɕ] and [dʒ] as unaspirated voiceless palatal affricate [tɕ] or voiced alveolar stop [d]. For example, in the word “measure” was pronounced as /*mɛtɕhə/, and in the word “judge” was pronounced as /*tɕʌtɕ/.

Some participants mispronounced voiceless alveolar stop [t] when it appeared at the final position of word. They pronounced as voiced alveolar stop [d], as in the word “kit” was pronounced /*kid/.

For voiceless labio-dental fricative [f], the participants substituted for voiced bilabial stop [b]. For example in the words “staff, puff and safe” were often pronounced /*stab, *pʌb, and *seb/. Some participants pronounced as voiceless bilabial stop [p], as in the word “fine” was pronounced /*pʌin/.

Moreover, the results revealed that [z] created as much difficulty for participants because there is no feature that is close to [z] in Thai phonology system. The fact is that there is no opposition between voiced and voiceless so the participants substituted [z] to voiceless alveolar fricative [s] as in the word “zoo” /*su/ and the word “zebra” /*sɪbrə/.

The participants found difficulty with voiceless alveolar fricative [s] as well when it occurred in the final position of words as well. They pronounced voiceless velar stop [k] instead, as in the word “fox” /*fɔk/

And the last phonetics features of English consonants pronunciation problem [l] and [r], all participants pronounced [l] and [r] as voiced alveolar nasal [n] when they appeared in the final position as in the word ball /*bɔn/. Some participants deleted or replaced by bilabial approximant [w]. For example in the words “fall” /*fɔ/, and “well” /*wɛw/.

Section 2 The result of comparing the students’ achievement by contrasting the participants’ pre-test and post-test score.

After improving process, the participants were asked to do post-test in order to see the differences between the pre-test and post-test score. The data was statistically treated with T-Test using the probability of 0.05 with a critical value of 2.013 and a degree of freedom was 46 as shown in table 3.

$$T = \frac{|\bar{x}_1 - \bar{x}_2|}{\sqrt{\frac{(S_1)^2}{N_1} + \frac{(S_2)^2}{N_2}}}$$

Difference between group means(Signal)
Variability of groups(Noise)

Table 3 T-test result comparing pre-test data sets to post-test data sets

Data Set	N	\bar{X}	\bar{X} gain score	S.D	p-value	t-value	T-crit(p<0.05)	DF
Pre-test	24	19.54		1.68	1.00749545	-	2.013	46
Post-test	24	34.13	+14.59	3.95	$\times 10^{-20}$	16.28654		

\bar{X} =mean, S.D = Standard Deviation, **p < .00001

The data suggest that there was a significant difference between pre-test and post-test results and the participants had significant gain score mean of

+14.59. Participants were found to have more knowledge after participating in the activity (t (46) = 2.013, p<.05). The data suggested that the improving process was effective in increasing the score of the participants and indicated that the activity can enhance and broaden the participants’ English consonants pronunciation skill from their perspectives.

V. CONCLUSION AND DISCUSSION

The results obtain from this study suggest that all participants do not have mastery on fricatives ([v], [θ], [ð], [z], [ʃ], [ʒ]), affricates ([tʃ], and [dʒ]), and stop ([g]) with the percentage of 100 when they occur in the initial, medial and final position within words. This finding supports the findings of Kanokpermpoon (2007), Tanthanis (2013) and Khaichaiyapoom (2007) in revealing that English fricatives are difficult to pronounce due to the inexistence in the Thai phonology system. Besides, the students encounter problems with the lateral ([l]), and approximant ([r]) with the percentage of 100 when they occur in the final position of words. The results also show that [f] is not a problem sound for most participants except when it occurs in final position. The error occurs with the percentage of 83.

It could then be said that participants’ major problematic sounds occur when the consonant sounds do not exist in the Thai phonology system so they substitute by other similar or the most alike Thai consonant sounds. Moreover, they lack of pronunciation rules knowledge; the position of articulators using in producing English consonants and the opposition between voiced and voiceless in English. The participants’ native language, Northern Thai dialect or Hill Tribe language, is also an important factor that affects the participants’ English pronunciation.

From the researcher’s point of view, teaching English pronunciation is a challenging task for English



classes in Thailand. At the beginning level of English classes, Thai students need to focus on the basics of English consonants pronunciation. At the intermediate and advanced level, places and manners of articulation in producing English consonants including speech organs of articulation should be introduced to English courses so they can learn the differences between English and Thai phonological and articulatory system. Meanwhile, English teachers themselves should be aware of the importance of the accuracy of English consonants pronunciation. They should guide students to pronounce appropriately in English because teachers are the authentic input and feedback that the students are brought into contact with English consonants pronunciation.

For Thai students, they should expose themselves in activities that can enhance their English consonants pronunciation by learning and practicing English pronunciation out of the class with dictionaries, English pronunciation software programs, video clips, English songs, and related websites.

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