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The Investigation into Pronunciation Problems Faced by Teacher-Trainees: a Case Study at the National Institute of Education (NIE) in Cambodia

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A B S T R A C T

This study investigates pronunciation challenges among English major -students at the National Institute of Education, focusing on segmental and supra-segmental pronunciation issues, contributing factors, and potential remediation strategies. The study employed a qualitative approach utilizing research apparatuses adjusted from previous studies. Additionally, ten teacher trainees with at least six years of English language learning background consented to participate in this study, while four lecturers were also incorporated. The findings were identified primarily with labiodental, dental, velar, alveolar, and palatal consonants, and with the monophthong sounds /i:/ and /ɒ/, and diphthongs /eɪ/ and /ɪə/. Factors influencing pronunciation proficiency include inadequate qualified teachers, insufficiently structured language programs, first language interference, and limited access to learning resources, alongside motivational and environmental factors, age, and beliefs. Recommendations for improvement emphasize integrating technology and social media for accessing pronunciation tutorials, extending instructional hours, and encouraging regular English-speaking practices.

INTRODUCTION

The English language was integrated into Cambodia's high school curriculum in the form of a foreign language in 1989 (Tweed & Som, 2015). Since then English has mushroomed across the nation to meet demands and compete with the global job market, particularly in the last several years (Keuk, 2015). This has led many of both private and public institutions to employ English to modernize educational programs. Despite its increasing momentum, however, the language proficiency of many Cambodians ranks 97 out of 112 according to the data obtained from EF English Proficiency Index 2021. One of the challenges causing the majority of Cambodian students to obtain such a lower status is pronunciation (Moore & Bounchan, 2010).

Multiple studies raised the issues of pronunciation among Cambodian learners. Siddhipaññadhivaṁso (2017), who investigated the pronunciation problems faced by twenty Cambodian students studying in Thailand, found that students had problems with the final consonant sounds of /ʧ/, /ʃ/, /v/ and /f/, word stress, sentence stress, and intonation. Sim and Hum (2021) reported that the contrasting features between Khmer and English phonetic systems caused problems for many Cambodians to mispronounce some words. The findings also encountered that L1 interference and the impact of the learning environment were the main barriers to students' pronunciation. Keuk (2008) interviewed a group of students and discovered that whereas one group of students tended to pronounce the ending sound /s/ with words that do not end up with /s/, the others tended to drop the sound /s/ when words are presented with the ending sound /s/.

A study by Lim (2016) on Cambodian English teachers revealed that many teachers acknowledged their limited capacity to teach pronunciation compared to those of native English teachers. This claim implies that pronunciation is a challenge not only for students but also for teachers. Nguyen (2010) reported that Cambodian learners had difficulty pronouncing the ending sounds of /s/ and /-ɪd/ since the Khmer language does not have this kind of language rule. The problems of these sounds, therefore, hindered the learning processes of many Cambodian students. Apart from these, he also found that Cambodian learners had trouble pronouncing the sounds /ð/, /θ/, /ʃ/, /z/, and /v/ because these kinds of sounds do not exist in the Khmer language system. Heng (2017) outlined factors affecting the speaking skills of Cambodian students, and one of those factors was pronunciation.

Of course, it is unquestionable that many Cambodian learners face problems with pronunciation as English is not their first language. Nonetheless, this is not the case because other factors do contribute to the problems as well. In this regard, there must be something to do with the underdeveloped educational system of Cambodia. As mentioned by Hayden and Martin (2011), the contributing factors affecting Cambodia's education were the quality and quantity of teaching services, such as too large class sizes, poorly qualified teachers, and corruption to name a few.

Albeit abundant literature about pronunciation problems encountered by Cambodian learners, the studies failed to report the problems of vowel sounds

and suggest strategies to improve pronunciation. Moreover, as the studies were investigated only in the specific context and with a small group of the population, it might be inappropriate to generalize about the problems of pronunciation of the whole of Cambodia. Hence, the current study looks further into these problems of a group of students promising to come up with more concise findings.

The issues of pronunciation seem to be taken for granted. Educators and learners forget how vital pronunciation is when it comes to speaking. Many students of English studying at one of the public institutes in Phnom Penh, Cambodia, were found to have produced mistakes in pronunciation. It was likely that the committed mistakes occurred in both segmental and supra-segmental features. In spite of the fact that they passed the entrance exam to be teacher trainees (students of pre-service teachers), their English pronunciation to a certain degree was at an intermediate level. Therefore, to dive into the exact problems of pronunciation faced by those teacher trainees, the researchers were pretty much enthusiastic about conducting the study.

THEORETICAL REVIEW

2.1. The consonant sounds of English

When it comes to discussion about the sound of language and its characteristics, we simply focus on ***Phonetics.*** The question is how speech sounds are made. Ladefoged and Johnson (2014) explained that the lungs are where sounds come from. The sounds are pushed out by passing through the windpipe called the trachea, larynx, and pharynx before heading to the oral cavity and nasal route. It is the oral cavity, which comprises lips, tongue, teeth, and so on, that plays significant roles in creating about twenty-five movements to form sounds of a language.

In the larynx, there are organs called vocal folds (see Figures 2.1 and 2.2) which classify the sounds of language into voiced and voiceless sounds. The voiced sounds are made when the vocal folds constrict, thus creating vibration. The air passing through these vocal folds is restricted. To make the experiment, place any of your fingers on Adam's apple, the projected organ in the throat, and say /*vvvvv*/. You will be notified that the trachea and your fingers vibrate. The voiceless sounds are made when air passes through the vocal fold unrestricted. The air then passes though freely. Again, when you place your fingers on Adam's apple and say /*fffff*/, you will feel that there is no vibration.

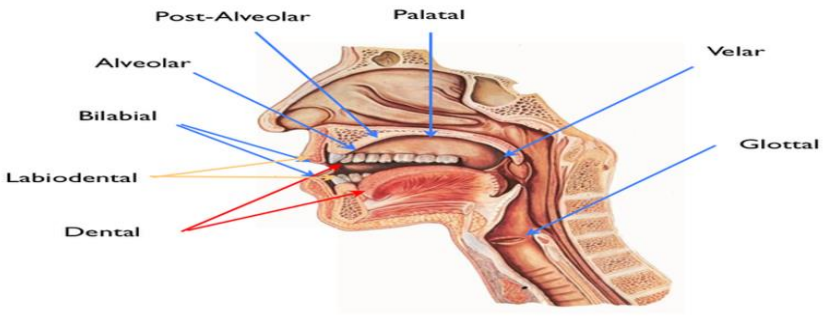

Figure 2.1 *Anatomy of oronasolarynx*

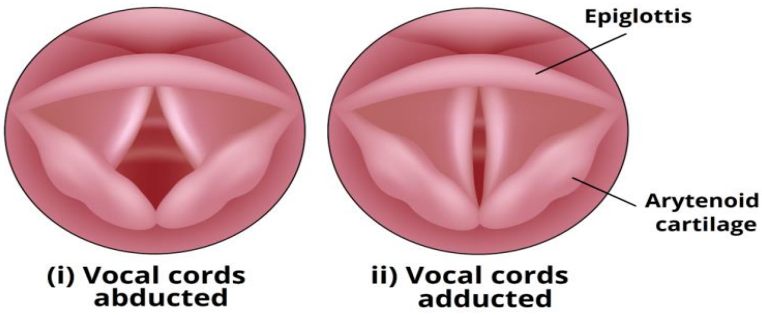

Figure 2.2 *The physical features of vocal folds*

2.2. Places of sound articulation

Before understanding how sounds are made, it is important to learn about the anatomy of human oral organs first. If we crack apart our head just right in the middle, we will see clearly the physical features of the associated organs that constitute the process of making sounds. The articulation between these organs forms multiple types of sounds. When we look at Figure 2.1, we see that the front part of the oral cavity comprises lips, teeth, the tip of the tongue, and a ridge. The middle part consists of the trunk of the tongue and hard palate. The rear part contains a soft palate, uvula, and the root of the tongue. Remember that all of these organs play vital roles in classifying sounds

Bilabial sounds are formed when both lips come together, producing voiced sounds such as /b/ and /m/, found in words like "bat" and "mat," and the voiced bilabial /w/ in "way," "wet," and "will." The voiceless bilabial sound /p/ occurs in words such as "pat." Moving to labiodentals, which involve the interaction of the upper teeth with the lower lip, we find the voiced sound /v/ in "vet" and the voiceless /f/ in "fat," stemming from the Latin word "labium" meaning lips. Dental, or interdentals, require placing the tongue tip between the upper and lower teeth, with voiceless sounds like /θ/ in "thin" and "bath," and voiced sounds /ð/ as in "the" and "there." Alveolar sounds are produced by the articulation between the tongue and the alveolar ridge, including voiced sounds /d/, /z/, /n/, /l/, and /r/, with voiceless counterparts /t/ in "teach" and /s/ in "sit." Palatal sounds occur when the tongue touches the hard palate, with voiced sounds /ʒ/ in "treasure," /ʤ/ in "joke," and /j/ in "you," alongside voiceless sounds /ʃ/ in "shout" and /ʧ/ in "child." Velar sounds, created by the back of the tongue against the soft palate, include voiced /g/ in "go" and /ŋ/ in "sing," with a voiceless /k/ in "kid." Lastly, glottal sounds use the glottis without active use of the tongue or mouth, represented by [h] in "have" and "house." This classification demonstrates the nuanced ways in which human anatomy facilitates the vast array of sounds in language.

2.3. Characteristics of articulations

In phonetics, the diversity in sound production arises from variations in the articulatory process and its gestures, despite some sounds being formed at the same articulation site. Stops, for instance, are characterized by a brief obstruction of airflow by the articulators, followed by its unimpeded release. This category bifurcates into oral and nasal stops. Oral stops, such as /p/, /b/, /t/, /d/, /k/, and /g/, involve airflow through the oral cavity, exemplified in words like "pie," "bye," "type," "die," "king," and "gap." Conversely, nasal stops like /m/,

/n/, and /ŋ/ occur within the nasal cavity, as demonstrated by the word "my." Fricatives are produced when airflow is partially blocked by the articulators, allowing a small amount of air to pass through, thereby creating friction. This category includes sounds like /f/, /v/, /θ/, /ð/, /s/, /z/, /ʃ/, /h/, and /ʒ/, noticeable in words such as "five" and "vary," where a puff of air escapes through narrow spaces. Approximants are articulated without the articulators fully touching, enabling air to flow through the opening without generating friction. This group comprises /l/, /r/, /w/, and /j/, with /l/ and /r/ also referred to as Liquids due to air passing around both sides of the tongue, and /w/ and /j/ termed Glides. Affricates, represented by /ʧ/ and /ʤ/, are produced through a combination of stopping the airflow briefly and then releasing it with a slight friction, illustrated in the pronunciation of "cheap" and "judge." Each of these articulatory processes contributes to the rich tapestry of sounds in human speech, demonstrating the intricate mechanisms of phonetic articulation.

Place of articulation

Manner of articulation	bilabial	labio-dental	dental	alveolar	palate-alveolar	palatal	velar	glottal
nasal (stop)	m			n			ŋ	
stop	p b			t d			k g	ʔ
fricative		f v	θ ð	s z	ʃ ʒ			h
(Central) approximant	(w)			r		j	w	
lateral (approximant)				l				

Figure 2.3 *Phonetic chart of English*

2.4. Issues related to consonant sounds

A number of studies were conducted to find specific pronunciation problems related to consonant sounds. A study by Shak, Lee, and Stephen (2016) on twelve university students indicated that students had problems pronouncing fricatives /v/, /θ/, /ð/, /z/, plosives /t/, /d/, /g/, affricates /dʒ/, and silent consonant /w/. Begum and Hoque (2016) conducted their research on thirty-five university students by employing a method, and the results revealed similar problems to Shak et al. (2016). The problems were that/ was pronounced as /f/, /f/ and /v/was pronounced as /pʰ/ and /bʰ/, /ʧ/ and /ʤ/ were pronounced as /s/ and /z/, /d/ was pronounced as /dʰ/, and /θ/ was pronounced as /t/. More importantly, the study by Akram and Qureshi (2012) on one hundred teachers from four colleges of Vehari in Pakistan aged between twenty-seven to fifty-two

showed that as the sound of /p/, /k/, and /t/ were technically aspirated sounds, the Pakistani learners did not seem to pronounce them this way. They were more likely to pronounce them without aspiration. Moreover, whereas the sounds/v/ and /w/ are different in how they are articulated, the Pakistani learners just neutralized these two sounds. In addition, some final consonants are not aspirated when vocalizing, yet the Pakistani learners aspirated them. Another issue was the /r/ sound. When this sound appears at the end of the word, we do not pronounce it unless it is accompanied by vowels, but the Pakistani students appeared to pronounce it. Some words were also mispronounced such as Cricket /cricket/ as /kirkət/, and Film /film/ as /filəm/. Habibi (2016) found two fundamental problems among Indonesian learners he investigated. First, the sound of the consonant being pronounced was replaced by other similar consonant sounds. For example, /v/ was replaced by /f/, /ð/ was replaced by /d/ and /θ/, /θ/ was replaced by /t/ and /s/, /ʧ/ was replaced by /c/, /ʒ/ was replaced by /ʃ/, /ʃ/ was replaced by /s/ and /z/ was replaced by /s/. Second, students erased some certain consonant sounds when the sounds came in clusters. The study by Wei and Zhou (2002) in Thailand also found problems with consonant clusters similar to Habibi (2016). The /s/ sound presented at the end of every word, for example, cats, cows, and dogs…etc, was generally not pronounced among Thai learners. A study in Sudan by Hassan and Hassan (2007) demonstrated that students had some consonant sound problems, such as /z/ and /ð/, /s/ and /θ/, /b/ and /p/, /ʃ/ and /tʃ/.

Keshavarz and Khamis Abubakar (2017) investigated sixty university students and found that they had problems pronouncing the sounds /f/, /v/, /θ/ and /ð/. Similarly, Sahatsathatsana (2017) also found problems of /θ/, /ð/ and /dʒ/ sounds among the twelve undergraduates at Kalasin University. As reported by Hago, and Khan (2015), Saudi EFL learners, by and large, substituted the sound /p/ by /p/ in all word positions, /ŋ/ sometimes by /n-k/ and sometimes by /n-g/, /ʒ/ by /dʒ/, /v/ by /f/ and the confusion of /ł/ with /l/. Bardakci (2015) investigated pre-service teachers, and the results demonstrated that the most common mispronounced sound was /ə/ followed by /θ/, /ŋ/ and /æ/. Lin (2014) investigated the pronunciation problems of ESL students from five various countries. The findings discovered that Vietnamese speakers had problems with final consonants. Japanese speakers added some vowels to words ending with consonants. Arabic learners inserted a vowel sound in the consonant clusters. The Spanish learners had difficulties with the sounds of the letters *D, TH, V, and B*. Chinese learners found it difficult to pronounce the sounds of /θ/, /ð/, /r/, /ʃ/ and /v/.

2.5. Issues related to vowel sounds

Apart from consonant sounds, vowel sounds are another problem for both ESL and EFL learners. Shak et al. (2016) and Begum and Hoque (2016) who carried out a similar study on the pronunciation problems of vowel sounds found problems of short vowels (/ɪ/, /e/, /æ/, /ɒ/, /ʊ/, /ə/), long vowels (/iː/, /ɑː/, /ɔː/, /uː/) , and diphthong (/eɪ/, /aɪ/, /əʊ/). The problem was that some long vowels turned to short ones: /iː/ ~ /i/, /uː/ ~ /u/, /ɔː/ ~ /ɔ/, /ɜ/~ /ʌ/, /ɑː/ ~ /ɑ/ and vice versa. Akram and Qureshi (2012) discovered that there was a

switch between vowels by Pakistani learners. For example, /ɒ/ and /ɔ:/ sounds were replaced by /ɑ:/ as in the words *hot* /hɒt/ as /hɑ:t/, *caught* /kɔ:t/ as /kɑ:t/, *saw* /sɔ:/ as /sɑ:/. The study by Habibi (2016) also indicated that students tended to replace pronunciation of vowel sounds, such as /ɪ/ with /ɛ/ and /i/, /i:/ with /e/ and /ɛ/, /ɛ/ with /ə/, /ʊ/ with /u:/, /ʌ/ with /a/, /ɜ:/ with /ɒ:/, /ɒ/ with /ɔ:/, /ɔ:/ with /ɒ/, and /ə/ with /u:/, /ɔ/, /ɛ/, /ʌ/, /ɑ/ and /ɒ/. Keshavarz and Khamis Abubakar (2017) also found the pronunciation problems of vowels among the native speakers of Hausa. Those certain problems were the vowel sounds /ʌ/, /ɔ:/ and /ɜ:/. The study by Tsojon and Aji (2014) discovered pronunciation problems with some vowel sounds presented in some words. For example, doctor /dɒktə/ was pronounced as /dɒktəu/, territory /terɪtrɪ/ was pronounced as /terɪt∂urɪ/, elite /ɪu:t/ was pronounced as /eɪaɪt/, tomb /tu:m/ was pronounced as /təumb/, plumber /plʌmə/ was pronounced as /plɒmba/, listen /lɪsn/ was pronounced as /lɪstɪn/, burn /bʒ:n/ was pronounced as /bɒn/, sachet /sæʃeɪ/ was pronounced as /sæʃet/, pastor /pa:stə/ was pronounced as /pa:stəu/, precious /preʃəs/ was pronounced as /preʃɒs/, and favor/ƒeɪvə/ was pronounced as /ƒeɪvɔ:/.

2.6. Factors affecting pronunciations of English as a second language

Many factors contribute to pronunciation problems. Begum and Hoque (2016) reported that social factors, inefficient teachers, and modern technology insufficiency were the main causes of pronunciation problems. Other related issues were economic factors, lack of motivation, less opportunity to be exposed to target language, and L1 interference. However, Chan and Li (2010), Tsojon and Aji (2014), Al-Zayed (2017), Hago and Khan (2015), Hassan and Hassan (2007), and Liang (2015) revealed that factors affecting English pronunciation of Jordanian students were interference of L1, lack of knowledge of phonology and phonetics of English, students' age, attitude, inconsistency of English sounds, and differences in two language systems. Sahatsathatsana (2017) who executed a study on twelve undergraduates at Kalasin University in Thailand also found a few factors similar to the aforementioned studies. Those factors were differentiation between the Thai and English languages, lack of phonetic ability, interference of the mother tongue, background knowledge of pronunciation, ineffective instruction of the teachers, and motivation. Ehrlich and Avery (2013) raised four main factors that were known to have serious effects on the process of language pronunciation namely biological, socio-cultural, personality, and linguistic factors. Therefore, the study aims to answer the following questions:

1. What problems of English pronunciation do teacher-trainees at NIE encounter?
2. What are the lecturers' perceptions of factors contributing to pronunciation problems?
3. What are the lecturers' perceptions to improve students' pronunciation?

METHODOLOGY

3.1. Research Design and Participant

The study employed a qualitative method using a case study. This method enabled the researcher to obtain the exact amount of raw information and perspectives from the participants directly, especially with a topic like this

(Creswell, 2012). As the participants are allowed to narrate their problems and views, the researcher has a chance to figure out their problems and find solutions to tackle those problems more easily than the quantitative method where the problems or items are constructed from the point of view of the researcher. The conducting site of the study was at an institute located in Phnom Penh city, Cambodia. This institute is a national teacher training center providing multiple training courses to newly recruited teachers and offering master and doctoral programs to students across the nation. The training program, which ranges from soft science to hard science, was divided into two main shifts: morning shift and afternoon shift. There was no switch between the two shifts.

Approximately fifteen students were invited to participate in the reading-aloud test. A few of them rejected the invitation, thereby leaving only ten students who volunteered to join the test. Before starting the test, students were asked to provide basic information. Table 4.1 presents personal information obtained from student participants (*n=10*). Both male and female students shared an equal number. Their age group varied from 20 to 30 years old with 70% of them aged between 26 and 30 years old and 30% of them aged between 20 and 25 years old. Ninety percent of them had been learning English for roughly 6 to 10 years while 10% spent more than 11 years studying English. Regarding the number of hours spent on studying English, more than half of them spent 1 to 2 hours whereas the rest spent around 3 to 4 hours per day. Furthermore, a majority of students self-rated their English proficiency at the intermediate level while 30% and 20% of them self-rated their proficiency at upper-intermediate and advanced levels respectively.

Variable		***n***	***%***
Gender			
Male		5	50
Female		5	50
	Total	10	100
Age			
20-25		3	30
26-30		7	70
	Total	10	100
Number of years spent on studying English			
1-5		0	0
6-10		9	90
11-15		1	10
	Total	10	100
Number of hours spent on studying English			
1-2		6	60
3-4		4	40
5-6		0	0
	Total	10	100
Self-rating of English proficiency			
Beginner		0	0

Elementary		0	0
Intermediate		5	50
Upper-intermediate		3	30
Advanced		2	20
	Total	10	100

3.2. Instrument

The research instrument of the Reading Aloud Test was adapted from Habibi (2016), and the instrument of the interview was adapted from Begum and Hoque (2016). It is significant to adapt the instrument from the previous studies because it is more reliable as it was tested already. The instrument for student participants was divided into four main sections. The first section asked students to fill out their basic information. The second section tested students on consonant problems. The third section tested students on vowel problems. And, the fourth section tested students on supra-segmental features of English. The instrument for lecturers was a face-to-face discussion between the investigators and the lecturer participants about factors the students faced and recommendations to improve pronunciation. The interview was conducted in English via online (Zoom) and face-to-face.

3.3. Data Collection and Analysis

The collection of data underwent two stages. First, the chosen students' participants were asked to read loudly the prepared pronunciation test containing a list of words. The investigators then used a recording device to record their pronunciation. Second, the lecturer respondents were invited to the interview. The semi-structured questions were prepared and used in the process of the interview to find the factors affecting pronunciation and to look for suggestions to strengthen pronunciation. However, prior to collecting the data, a letter was sent to the Academic Department of the institute asking for permission to conduct the research. When approved, the researchers started selecting the class and informed the respondents of the process of the study as well as the date of the execution. In case the respondents turned down the request, they could leave the study process at any time. They were not forced to join the study.

Since the study utilized a qualitative method, content-based analysis was employed to analyze the data. The problems of student respondents' pronunciation were identified, and the frequency table and diagram were constructed to display the problems. Besides, as the interview was carried out through verbal interviews, the respondents' speech was transcribed.

RESULTS DISCUSSION

4.1. Result from the test of consonant sounds

As mentioned, the reading-aloud test was employed to investigate the actual problematic sounds of consonants. In the test, some consonant sounds were placed in three positions – initial, middle, and final – whereas others were placed in only one position either at the first, the middle or the final. In so doing, it allowed the investigators to identify every aspect of pronunciation.

4.1.1. Labiodental

This section reports the exact problems of labiodental sounds faced by the group of students. The data shown in Table 4.2 indicates that students had problems

pronouncing both /v/ and /f/ sound. When /v/ sound situates at the beginning of the word, students had no problems pronouncing it (100% correct), yet when it comes in the middle and at the end, students tended to pronounce /v/ as /w/.

Slightly different from /v/, students had problems pronouncing /f/ when it is located at the beginning and at the end, but a majority of them (90%) pronounced the sound /f/ more accurately when it stays in the middle. Take a look at the word *fence* and *proof*, around half of students switched /f/ sound to /v/, /s/ and /w/.

Sound	Lexicon	Correct Pronunciation	Students' Pronunciation	Right	%	Wrong	%
/v/	view	/vjuː/	/vjuː/	10	100 %	0	00%
	conversation	/kɒnvərˈseɪʃən/	/kɒnwərˈseɪʃən/	3	30%	7	70%
	have	/hav/, /hæv/	/hæw/	5	50%	5	50%
/f/	fence	/fens/	/fen/, /wen/	5	50%	5	50%
	coffee	/ˈkɒf.i/	/ˈkɒf/	9	90%	1	10%
	proof	/pruːf/	/pruːv/, /pruːs/	6	60%	4	40%

Table 4.2 *Problems with labiodental sounds*

4.1.2. Dental

Table 4.3 reveals that 80% to 90% of students could not pronounce the sound /ð/ and /θ/ correctly. There was a switch between the two sounds when they spoke. /ð/ was replaced by the sounds /θ/, /d/ and /t/ whereas /θ/ was replaced by the sounds /s/ and /ʃ/. For example, the word *the* was pronounced as /θə/ and /də/ rather than /ðə/ and the word *through* was pronounced as /sruː/ rather than /θruː/.

Sound	Lexicon	Correct Pronunciation	Students' Pronunciation	Right	%	Wrong	%
/ð/	the	/ðə/, /ðɪ/, /ðiː/	/θə/, /də/	2	20%	8	80%
	with	/wɪð/	/wɪθ/, /wɪt/	1	10%	9	90%
/θ/	through	/θruː/	/sruː/	1	10%	9	90%
	method	/ˈmɛθəd/	/ˈmɛsəd/, /ˈmɛʃəd/	2	20%	8	80%

4.1.3. Alveolar

There were several mistakes' students encountered when pronouncing alveolar sounds. Table 4.4 demonstrates that students had no problems with the sounds /d/, /n/, /l/ and /r/ although some of them could not say all the words perfectly correct. In fact, the problems occurred with the accompanying sounds. Those sounds were the sound /dʒ/ in which around 30% to 40% of students

pronounced it as /k/, and /t/ was pronounced as /d/ or /dʒ/ when it sits in the final. Other problems were that students dropped the final sounds when they spoke, such as the sound /d/ in the word *lend* and the sound /t/ in the word *night, bent, right* and *next.* So, we can see that the sound /t/ was usually omitted or substituted with another sound when it positions at the end.

The problem also happened with the sound /z/ in which 20% of students substituted it with /ʃ/. For the sound /s/, when it positions at the beginning or at the end, students had no problems pronouncing it, yet when it is located in the middle, there was a substitution. For example, the sound /s/ in the word *lesson* was replaced by /ʃ/.

Sound	Lexicon	Correct Pronunciation	Students' Pronunciation	Right	%	Wrong	%
/d/	damage	/ˈdæm.ɪdʒ/	/ˈdæm.ɪk/	7	70%	3	30%
	bandit	/ˈbæn.dɪt/	/ˈbæn.dɪd/, /ˈbæn.dɪdʒ/	6	60%	4	40%
	card	/kɑːd/	/kɑːd/	10	100 %	0	00%
/z/	proposal	/prəˈpoʊz(ə)l/	/prəˈpoʊʃ (ə)l/	8	80%	2	20%
/n/	night	/naɪt/	/naɪ/	4	40%	6	60%
	benefit	/ˈben.ɪ.fɪt/	/ˈben.ɪ.fɪd/	6	60%	4	40%
	bent	/bent/	/ben/	8	80%	2	20%
	lend	/lend/	/len/	6	60%	4	40%
/l/	collar	/ˈkɒl.ər/	/ˈkɒl.ər/	10	100 %	0	00%
	call	/kɔːl/	/kɔːl/	10	100 %	0	00%
/r/	right	/raɪt/	/raɪ/	5	50%	5	50%
	carry	/ˈkær.i/	/ˈkær.i/	10	100 %	0	00%
/t/	next	/nɛkst/	/nɛk/	8	80%	2	20%
	street	/striːt/	/striːd/	5	50%	5	50%
/s/	lesson	/ˈles.ən/	/ˈleʃ.ən/	8	80%	2	20%
	books	/bʊks/	/bʊks/	10	100 %	0	00%

Table 4.4 *Problems of alveolar sounds*

4.1.4. Palatal

As reported in table 4.5, many students had challenges pronouncing almost all of palatal sounds, except /ʧ/. The most problematic sound was the initial sound /dʒ/ in the word *joke* and the middle sound /dʒ/ in the word *major* where 80% and 70% of students respectively failed to say these words correctly. They replaced /dʒ/ with /j/ and sometimes with /d/ as in the word *judge*.

Aside from /dʒ/ sound, 60% of students made mistakes with the sound /ʒ/ and /ʃ/. /ʒ/ was pronounced as /s/ as in the word *conclusion*. /ʃ/ was pronounced as /s/ as in the word *shout, brush* and *contribution*.

Sound	Lexicon	Correct Pronunciation	Students' Pronunciation	Right	%	Wrong	%
/ʒ/	conclusion	/kənˈkluːʒ(ə)n̩/	/kənˈkluːsən̩/	4	40%	6	60%
/dʒ/	joke	/dʒəʊk/	/dʒəʊ/, /jəʊ/	2	20%	8	80%
	major	/ˈmeɪ.dʒər/	/ˈmeɪ.jər/	3	30%	7	70%
	judge	/dʒʌdʒ/	/dʒʌd/	6	60%	4	40%
/ʃ/	shout	/ʃaʊt/	/saʊ/, /saʊt/	4	40%	6	60%
	contribution	/kɒntrɪˈbjuːʃən/	/kɒntrɪˈbjuːsən/	4	40%	6	60%
	brush	/brʌʃ/	/brʌs/	6	60%	4	40%
/ʧ/	switching	/swɪtʃɪŋ/	/swɪtʃɪŋ/	10	100 %	0	00%

Table 4.5 *Problems of palatal sounds*

4.1.5. Velar

Table 4.6 summarizes problematic velar sounds students encountered during the test. No mistakes were found with the initial sound /g/, but when it is located in the middle, 90% of students mispronounced it. They tended to pronounce /g/ as /k/ and /j/, and at times they even omitted /g/. The same number of students also had a problem with the sound /k/. They usually dropped this sound when they spoke. For example, in the word *task* as you can see in the table below, the sound /k/ was dropped.

Sound	Lexicon	Correct Pronunciation	Students' Pronunciation	Right	%	Wrong	%
/g/	goal	/gəʊl/	/gəʊl/	10	100 %	0	00%
	linguistics	/lɪŋˈgwɪstɪks/	-/lɪŋˈwɪstɪks/ -/lɪŋˈkwɪstɪks/ -/lɪŋˈjɪstɪks/	1	10%	9	90%
/k/	task	/tɑːsk/	/tɑːs/	1	10%	9	90%

Table 4.6 *Problems of velar sounds*

4.1.6. Bilabial

Bilabial consists of four sounds: /b/, /p/, /m/, and /w/. In this study only /w/ was selected for investigation. Other sounds – /b/, /p/, /m/ – were not investigated because according to the review of literature, they were not of challenge for most students. Table 4.7 illustrates that a majority of students pronounced the sound /w/ correctly. Only 10% of them made a mistake by adding /s/ sound to the word.

Sound	Lexicon	Correct Pronunciation	Students' Pronunciation	Right	%	Wrong	%
/w/	way	/weɪ/	/weis/	9	90%	1	10%

Table 4.7 *Problems of a bilabial sound*

4.2. Result from the test of vowel sounds

Apart from consonants, the investigators tested the vowel sounds of those selected student participants. A set of words containing various vowels was prepared for students to read. The vowel was classified into monophthong and diphthong. A monophthong is a single sound, and a diphthong is a combination of two vowels.

4.2.1. Monophthong

To examine students' pronunciation ability of monophthong, the investigators chose a list of words that contain a single vowel (see Table 4.8). A check mark was placed on the words that were correctly pronounced by students, and only certain mispronounced vowels were displayed.

Of those monophthongs, /iː/ and /ɒ/ were the most challenging sounds for students. While 30% of them pronounced monophthongs correctly, 70% of them could not. They shifted the monophthongs from /iː/ to /i/ as in the word *these* and from /ɒ/ to /əʊ/ as in the word *knowledge*. The very least mispronounced monophthongs were /ɔː/ in the word *according* and /i/ in the word *thesis* which accounted for only 10%. The rest was fine.

Mono_	Lexicon	Correct Pronunciation	Students' Pron_	Right	%	Wrong	%
i	thesis	/ˈtɛsis/	/iː/	9	90%	1	10%
iː	these	/ðiːz/	/i/	3	30%	7	70%
ɛ	general	/ˈdʒɛnrə̩l/	✓	10	100 %	0	00%
ʊ	look	/lʊk/	✓	10	100 %	0	00%
ʌ	multiple	/ˈmʌltɪpl̩/	✓	10	100 %	0	00%
ɜː	heard	/hɜː(r)d/	✓	10	100 %	0	00%
ɒ	knowledge	/ˈnɒlɪdʒ/	/əʊ/	3	30%	7	70%
ɔː	according	/əˈkɔː(r)dɪŋ/	/aʊ/	9	90%	1	10%
ɔ	promote	/prɔˈməʊt/	✓	10	100 %	0	00%

Table 4.8 *Summary of problematic monophthong*

4.2.2. Diphthongs

A significant number of students had no problems with diphthongs. Almost all of them pronounced the double vowel sounds correctly. Table 4.9 shows that 100% of students pronounced the sounds of diphthongs / aɪ/, /aʊ/, and /əʊ/ very perfectly correct. Very few students made mistakes with the sounds of diphthongs /eɪ/ and /ɪə/ in which 20% of them pronounced /eɪ/ as

Diph_	Lexicon	Correct Pronunciation	Students' Pron_	Right	%	Wrong	%
aɪ	identify	/aɪˈdɛntɪfaɪ/	✓	10	100 %	0	00%
	classified	/ˈklasɪfaɪd/	✓	10	100 %	0	00%
aʊ	output	/ˈaʊtpʊt/	✓	10	100 %	0	00%
	download	/ˌdaʊnˈləʊd/	✓	10	100 %	0	00%
eɪ	aim	/eɪm/	/ɛ/, /i/	8	80%	2	20%
	case	/keɪs/	✓	10	100 %	0	00%
ɪə	obvious	/ˈɒbvɪəs/	/i:/	9	90%	1	10%
əʊ	own	/əʊn/	✓	10	100 %	0	00%
	known	/nəʊn/, /ˈnoʊn/	✓	10	100 %	0	00%

/ɛ/ and /i/, and 10% pronounced /ɪə/ as /i:/.

Table 4.9 *Problems of diphthongs*

4.3. Issues of supra-segmental features

The investigation into supra-segmental features was to explore issues of sounds beyond segmental levels. The chosen areas of supra-segmental features for testing were problems pertaining to the pronunciation of "ed", silent letter, word stress, and vowel length.

4.3.1 Problem of pronunciation "ed"

The pronunciation of the "ed" ending varies depending on the final consonant it follows in the word. When the final consonant of the root word is *t* and *d,* "ed" is pronounced as /id/. When the final consonant of the root word is a voiced sound, the "ed" is pronounced as /d/ and as /t/ when the final consonant of the root word is voiceless.

Table 4.10 reveals that a significant number of students had no problems pronouncing the "ed" ending with words ending with the final consonants *t* and *d* but faced challenges with words ending with final voiced and voiceless sounds. Most of them dropped the sounds/t/ and /d/ and pronounced the words in based form. Two students pronounced "ed" ending in the opposite way. S1 is

pronounced *called* as /kɔːlt/ rather than /kɔːld/, and S1 pronounced *helped* as /helpd/ instead of /helpt/.

Code	Past Tense Verbs			
	wanted /ˈwɒn.tɪd/	needed /ˈniː.dɪd/	helped /help/	called /kɔːld/
S1	✓	✓	✓	/kɔːlt/
S2	✓	✓	/help/	/kɔːl/
S3	✓	✓	/help/	/kɔːl/
S4	✓	✓	✓	✓
S5	✓	✓	/help/	/kɔːl/
S6	✓	/ˈniː.d/	/help/	/kɔːl/
S7	✓	✓	/help/	/kɔːl/
S8	✓	✓	/help/	✓
S9	✓	✓	/help/	/kɔːl/
S10	✓	✓	/help/	✓

Table 4.10 *Problems of "ed" ending pronunciation*

4.3.2. Problem of pronunciation "silent letter"

Silent letters are one of the challenges for non-native learners. As can be seen from Table 4.11, a majority of students had difficulties with silent letters but not with all words. Of the three words, students faced more trouble with the silent sound /b/ in the word *debt* than /b/ in the word *numb* and /p/ in the word *psychology*. The problem was that students were more likely to pronounce the silent letter *B* and drop the letter *T*.

Code	Lexicon		
	debt /det/	numb /nʌm/	psychology /saɪˈkɒl.ə.dʒi/
S1	/debt/	✓	✓
S2	/deb/	✓	✓
S3	/deb/	✓	✓
S4	✓	✓	✓
S5	/deb/	✓	✓
S6	✓	✓	/ʃaɪˈʃɒl.ə.dʒi/
S7	/deb/	✓	✓
S8	✓	✓	✓
S9	/dib/	✓	✓
S10	/debt/	✓	✓

Table 4.11 *Problems of Silent Letter*

4.3.3. Problem of pronunciation "word stress"

Stress is important in English. Without stress, we would find it hard to understand what is being said. In the study, three words – permission, distraction, and graduation – were selected for the pronunciation test of stress. The finding summarized in Table 4.12 reveals that none of the students had difficulty with word stress. They all could stress the words correctly.

Code	Lexicon		
	permission /pəˈmɪʃ(ə)n/	distraction /dɪˈstrakʃ(ə)n/	graduation /ˌgrædʒ.uˈeɪ.ʃən/
S1	✓	✓	✓
S2	✓	✓	✓
S3	✓	✓	✓
S4	✓	✓	✓
S5	✓	✓	✓
S6	✓	✓	✓
S7	✓	✓	✓
S8	✓	✓	✓
S9	✓	✓	✓
S10	✓	✓	✓

Table 4.12 *Problems of Word Stress*

4.3.4. Problem of pronunciation "Vowel length"

A set of homophones were chosen for the investigation of vowel length. The mission was to explore whether students could dissect between the shorter and longer vowels. The presented data in Table 4.13 gives the information obtained from the survey of ten selected student participants. It revealed that all students (100%) pronounced the words with shorter vowels perfectly correctly, yet a significant number of them could not pronounce the words with longer vowels correctly. They were more likely to pronounce the longer vowels as the shorter vowels. Those who pronounced the word with longer vowels correctly accounted for only 10% of the words *heard*.

Shorter Vowel	Correct(%)	Incorrect(%)	Longer Vowel	Correct(%)	Incorrect(%)
late	100%	00%	laid	00%	100%
cub	100%	00%	cup	00%	100%
hurt	100%	00%	heard	10%	90%
back	100%	00%	bag	00%	100%

Table 4.13 *Problems of vowel length*

4.4. Interview of lecturers' perception

4.4.1. Lecturers' perceptions of pronunciation problems

Several issues of pronunciation were raised by all lecturer participants during the interview. One of the common issues was the dropping of ending sounds (see Figure 4.1). L1 and L4 said that many Cambodians pronounced the word, for example, *white /wait/* as */wai/*, because the Khmer language has no ending sounds. Aside from this, L3 mentioned that the most challenging sound

was interdental (/θ/ & /ð/) as in the word *theme* and *this*. By the way, he did not give reasons why this was so. L2 and L4 also raised concerns of pronunciation which challenged many students. Those concerns were stress and intonation. For example the, word *eleven* /əˈlev.ən/ was pronounced as /əlevən/ without stress and intonation. The pronunciation was just flat.

L4 also outlined the classification of English as inner circle and outer circle. The inner circle refers to native speakers whereas the outer circle refers to those who speak English as a second language.

"*English is divided into two circles: inner and outer. An inner circle is a group of people who speak English as their first language, for example, UK, USA, and Australia. Outer circle is a group of people who use English as their second language such as the Philippines. For Singapore, English is its first language too, but its accent is different from UK and US…*" (L4).

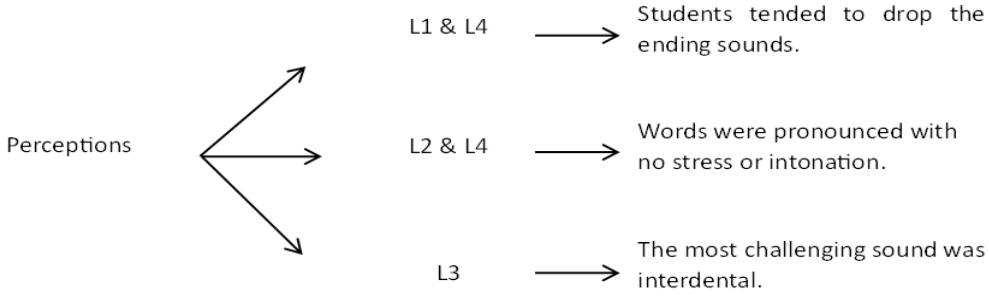

Figure 4.1 *Lecturers' perceptions on the issues of pronunciation*

4.4.2. Lecturers' perceptions on factors affecting pronunciation

During the interview, all lecturers were also asked to share their perceptions on factors contributing to the pronunciation problems. First, they were asked to indicate the main factors, and then the relevant factors. The finding showed that the very crucial factors that negatively influenced students' pronunciation were inadequate human resources, L1 interference, and ill-prepared curriculum followed by other relevant factors, such as motivation and responsibility, insufficient learning resources, environment, age, belief, opportunity, and teaching methodology.

All lecturers agreed that the lack of good English teachers was really problematic for language learning. When teachers did not teach students proper pronunciation, it affected students' pronunciation badly as well.

> "*The main factor affecting students' pronunciation is the lack of good teachers of English from the very first grade. Most Cambodian students don't have a chance to study with native speakers. They only study with Khmenglish teachers who sometimes don't pronounce words correctly, thus badly influencing students, and it keeps going like this until the end of the day.*" (L1, L2, L3, & L4)

L1 and L3 mentioned that the national curriculum was not of well design provided that English subject was not included in primary school from grades 1 to 6. Therefore, students had no foundation when they moved to the higher grades. Moreover, the amount of time learned in class was also not enough. It was short.

> "*Actually in Cambodia there is no English subject in public primary schools from grade 1 to grade 6. English is integrated only in junior and senior high school. So, when students move to grade 7, they have no foundation in English. This is their obstacle…*" (L3)

> "*There must be something to do with the timetable. We have only a few sessions on pronunciation, so we don't have much time. This year, for example, the session has been cut since we study only one shift. Last year, students studied both in the morning and in the afternoon around six or seven hours a day.*" (L4)

L1's interference was another main contributing factor to the problem. Participants L1 and L3 explained that different language systems caused difficulties for students because in the Khmer language there was no stress or intonation in how we speak. In addition, there were also some sounds that did not have a perfect match with the Khmer language such as /θ/ and /ð/.

> "*…You know it's so confusing in other words. For example, many Cambodians pronounce the word white as /wai/ not /wait/. So, this is because of L1 interference that causes problems in pronunciation…*" (L1)

> "*…Thirdly, L1 interference also contributes to the problems of pronunciation. In Khmer language, there is no stress in words. For example, the word Kompingpoy /kɒmpiŋpɔɪ/ is not pronounced as /kɒm'piŋpɔɪ/. So, there is no such intonation or stress in Khmer language.*" (L3)

Motivation and responsibility were related factors adding to the problems. L2 raised that it would be difficult to improve students' language learning if they themselves did not try hard to study. They must have done a lot of self-studies. Insufficient learning resources also caused problems with pronunciation. Learning resources such as audio and speakers were scarce for teachers. Moreover, the environment played a role in pronunciation as well. L2 explained that if students were surrounded by people who used English on a daily basis, their ability gradually improved. Other relevant factors were age and belief. L1 maintained that when people got older, their language fossilized, thus jeopardizing their pronunciation. He also said that some people did not take pronunciation seriously as they believed that as long as people understood their English, it was just fine. On top of that, teaching methodology and lack of opportunities to study in good schools and learn with native teachers were the other issues. Most Cambodian students could not afford to study in international schools taught by foreign teachers.

Factors	L1	L2	L3	L4
Inadequate human resources	✓	✓	✓	✓
Ill-prepared curriculum			✓	✓
L1 interference	✓		✓	
Motivation and responsibility		✓		
Insufficient learning resources	✓			
Environment		✓		
Age	✓			
Belief	✓			
Opportunity				✓
Teaching methodology				✓

Table 4.14 *Factors Affecting Pronunciation*

4.4.3. Lecturers' suggestions and recommendations to improve pronunciation

The last question asked in the interview was "What are the lecturers' perceptions of improving pronunciation?" All of the lecturers stated that using technology and social media was of great help for the improvement of students' pronunciation. Students could find lectures about pronunciation on YouTube or Facebook, listen to songs in English, use digital dictionaries or apps and so on and so forth.

> *"…to improve pronunciation students themselves should try to develop their pronunciation ability by listening to songs, watching YouTube, or listening to the radio in English…"* (L1)

> *"…Furthermore, there are many free lectures on Facebook about pronunciation, we can learn from it. We can also listen to programs on TV or Google that are broadcasted in English…"* (L2)

> *"…Another better way to help students improve their pronunciation is to introduce them to some technologies and many tools to learn English…"* (L3)

> *"We can ask students to search on the internet and YouTube how to pronounce correctly if they can access them. There are a lot of video clips about pronunciations and everything there…"* (L4)

Moreover, L1, L2, and L3 suggested that curriculum developers should reform the English program by adding extra time and courses on pronunciation. The current timetable did not respond to students' needs. However, L1 cautioned that it would be difficult to do so.

> *"…and the curriculum developers should add extra lessons and time on pronunciation. It would be great if there is a course on pronunciation so that we can teach the students to pronounce it correctly. Unfortunately, it is not easy to change the whole thing…"* (L1)

> *"…Apart from that we should add extra time to pronunciation and use tape in the classroom, yet in public school it is hard because teachers have to bring the tape…"* (L2)

"…Extra time should also be added to the courses as well so that students have more time to study and improve their English…" (L3)

The last suggestion was proposed by L3. He recommended that students should practice speaking with their friends and parents in order to boost their pronunciation ability on a daily basis.

"…Teachers should also ask their students to practice speaking with their parents and friends if possible in order to improve their pronunciation…"(L3)

By the way, when asked whether we should employ native English teachers in every school in Cambodia. L3 said that it was good, but it was not necessary, for it is highly costing.

"It's good but I don't think that it's important for the time being while technologies are so advanced. Students can access and use technologies to improve their pronunciation. There are many apps that are very helpful now. Hiring foreign teachers is pretty costly, because there are many schools in Cambodia. What we need to do is to build the capacity of local teachers, for example teach them how to use technologies. We can encourage them to have commitment and be well prepared in their teaching." (L3)

Table 4.15 reports the lecturers' perceptions on how to enhance pronunciation skills. Three themes emerged with using technologies and social media as the most recommended one, followed by adding more time and extra lessons and practicing speaking English with parents and friends.

Suggestions	L1	L2	L3	L4
Use technologies and social media such as YouTube, Facebook, apps, digital dictionary, and listening to songs and radio in English.	✓	✓	✓	✓
Add more time and extra lessons on pronunciation	✓	✓	✓	
Practice speaking English with parents and friends			✓	

Table 4.15 *Lecturers' suggestions to improve pronunciation*

DISCUSSION

The findings obtained from pronunciation tests and lecturers' interviews indicated that students faced problems with both segmental and supra-segmental features of English sounds. The problems in segmental features were consonants and vowels, and the problems in supra-segmental features were pronunciation of words with "ed", silent letter and vowel length.

Of course, the study found that one of the challenges in consonants that students faced was labiodental sounds /f/ and /v/ in that /v/ was pronounced as /w/ and /f/ was pronounced as /v/, /s/ and /w/. The discovery was in agreement with the studies by Shak et al (2016), Begum and Hoque (2016), Akram and Qureshi (2012), Siddhipañ̃adhivaṁso (2017), and a few more studies where /f/ and /v/ were the common challenging sounds for students. Other sounds students found challenging were dental /ð/ and /θ/. It was found that 90% of students had problems with /ð/ and /θ/. /ð/ was pronounced as /θ/, /d/ and /t/ while /θ/ was pronounced as /s/ and /ʃ/. Similar findings were found in the studies by Begum and Hoque (2016) and Habibi (2016) in which /ð/ was substituted by /d/ and /θ/, and /θ/ was replaced by /t/ and /s/.

In the interview, the lecturers indeed admitted that most students had trouble with dental /θ/ & /ð/. Notwithstanding, not many problems were found in the alveolar, except the sounds /t/, /z/ and /s/. The sound /t/ was usually omitted when it was placed at the end, and /z/ was pronounced as /ʃ/. For the sound /s/, when it stays in the middle, students pronounced it as /ʃ/ and vice versa. The problems of pronouncing final sounds were also raised by lecturers in the interview who said that students tended to drop the final sounds when they spoke. Some sounds in palatal were also found challenging by students. /dʒ/ was pronounced as /j/ and /d/, and the sound / /ʒ/ was pronounced as /s/. Moreover, the study showed that the middle sound /g/ in velar was pronounced as /k/ and /j/, or it was omitted completely. Just as /g/, /k/ was dropped when it came in the final. However, no challenges were found in bilabial.

Apart from consonants, problems also arose in vowels. Two types of vowel sounds were tested: monophthong and diphthong. In monophthong, /i:/ was pronounced as /i/, and /ɒ/ was pronounced as /əʊ/. The findings corresponded with the studies conducted by Shak et al. (2016) and Begum and Hoque (2016). In contrast, not many problems were discovered in diphthongs. Most students pronounced diphthongs correctly, except diphthongs /eɪ/ and /ɪə/ in which /eɪ/ was pronounced as /ɛ/ and /i/, /ɪə/ was pronounced as /i:/ by a small number of students. The current findings were in alignment with Tsojon and Aji (2014).

The other problems found among the students were pronunciation of words with “ed” ending, silent letter, and vowel length. Most students knew how to pronounce the final "ed" ending in the root words that end with /t/ and /d/ but could not pronounce the final "ed" in the root words that end with voiced and voiceless sounds. They could not dissect between /t/ and /d/. They normally pronounced the words that end with "ed" in present tense form (based form). The findings were compatible with the study by Nguyen (2010) who found that Cambodian learners had difficulty pronouncing the "ed" ending since this kind of sound does not exist in the Khmer language system. Students also faced problems with silent letters. The problem was that they tended to pronounce the silent letter and dropped the letter that was not considered silent. Furthermore, students also had trouble with vowel length. Most of them could not differentiate

between the short vowel and the long vowel. They were presumably pronounced the long vowel as the short vowel.

Multiple studies discovered similar factors that led to the problems of pronunciation. Those reported factors were social factors, inefficient teachers and modern technology insufficiency, economic factors, lack of motivation, less opportunities to expose to target language, L1 interference, lack of knowledge of phonology and phonetics of English, students' age, attitude, inconsistency of English sounds, differences in two language systems, biological factors, personality and linguistic factors (Begum & Hoque, 2016; Chan & Li, 2010; Tsojon & Aji, 2014; Al-Zayed, 2017; Hago & Khan, 2015; Hassan & Hassan, 2007; Liang, 2015; Sahatsathatsana, 2017; and Ehrlich & Avery, 2013). Likewise, the current study found eight factors similar to the aforementioned studies. Of those, three were the most affecting factors for students such as inadequate human resources, ill-prepared curriculum, and L1 interference. The other possible factors were motivation and responsibility, insufficient learning resources, environment, age, and belief. So, we can see that the difference between the previous studies and the current study was that the previous studies did not point out specifically which of those mentioned factors were the most affecting and which were the least affecting.

Of course, it is undeniable that the lack of human resources was a challenge. Twenty years back then many teachers had no opportunities to receive a better education than it is today. They were poorly trained and not proficient enough to teach the language properly. That was because there were not enough teachers of English across the country, especially in the rural areas. So, as long as they could teach some English, they were sent to teach at the public schools. As a result, it negatively impacted many students from generation to generation throughout the kingdom. This issue was also raised by Hayden and Martin (2011), who claimed that poorly qualified teachers did contribute to the pronunciation problems. Aside from the lack of human resources, the improper organization of the national curriculum was another hindrance to language learning in Cambodia. The problem was that the given time was not well allocated for English subjects. Students could study only two to four sessions per week. So, they were not able to learn the language much. Moreover, the lecturers explained that L1 interference was also a crucial factor posing problems for pronunciation. In the Khmer language, there is no stress or intonation, and certain sounds in English do not exist in the Khmer language. Because of these differences, many students could not pronounce the sounds like /θ/ and /ð/ correctly.

All lecturers agreed that using technology and social media was of immense help in enhancing students' pronunciation. Students should make use of technology at all costs as they are available everywhere now. Yet, the question is how we use technologies and what technologies are appropriate to be used for pronunciation. The lecturers suggested that watching social media like YouTube could overcome challenges pertaining to pronunciation, or students could listen to songs in English as much as they enjoyed listening to them. Many lectures on pronunciation were also on social media like Facebook where people posted

short video clips about pronunciation. Students could enjoy watching many videos as they were using Facebook. Besides, students could use digital dictionaries or apps that enable them to access pronunciation on their phone

The second most suggested idea to strengthen pronunciation is adding extra time and lessons to the schedule. As was raised earlier, the time given for English subjects was not enough for students, and so were the lessons. The lecturers mentioned that pronunciation lessons seemed to be taken for granted because some students and teachers believed that as long as people could understand their language, that was the end of the story. Teachers tended to focus more on grammar and all of the four macro skills. They forgot that pronunciation is a part of language proficiency.

The last suggestion is to practice speaking English with parents and friends. As the amount of time learned at school was short, students should practice speaking English whenever and wherever they could to keep them fluent. On top of that, while they were communicating, they could also learn new language inputs, thereby gaining vocabulary knowledge from day to day.

CONCLUSIONS AND RECOMMENDATIONS

This study delves into pronunciation challenges among students at a Phnom Penh institute, in Cambodia, highlighting issues with both segmental and supra-segmental features. Pronunciation difficulties predominantly arose with labiodental, dental, velar, alveolar, and palatal consonants. Among vowels, /i:/ and /ɒ/ were commonly mispronounced as /i/ and /əʊ/, respectively, with diphthongs /eɪ/ and /ɪə/ often replaced by /ɛ/ and /i:/, /i/. Factors impeding pronunciation proficiency included inadequate teacher expertise, poorly structured language programs, first language interference, limited educational resources, motivational aspects, environmental influences, age, and beliefs. However, the recommendations for improvement emphasized leveraging technology and social media platforms like YouTube and Facebook for accessing pronunciation tutorials. Expanding instructional hours and incorporating more pronunciation lessons could enhance exposure and learning opportunities. Furthermore, regular English-speaking practice was advised to bolster language skills daily.

The study, despite its limited scale and focus on specific English phonological aspects, underscores the importance of prioritizing pronunciation in English Language Teaching (ELT). It provides valuable insights for policymakers and educators on addressing pronunciation issues, the underlying causes, and effective remediation strategies. Highlighting the role of pronunciation in effective communication, the study advocates for expanded research into the influences of gender differences, motivation, family background, student perspectives on pronunciation challenges, and coping strategies. Future research should also broaden the demographic scope to include students across various disciplines and academic levels, enriching the understanding of pronunciation proficiency in EFL contexts

REFERENCES

Akram, M., & Qureshi, A. H. (2012). Problems in learning and teaching English pronunci pronunciation in Pakistan. *International Journal of Research in Linguistics and Lexicography*, *1*(4), 43-48.

Al-Zayed, N. N. (2017). Non-native pronunciation of English: Problems and solutions. *American International Journal of Contemporary Research*, *7*(3), 86-90.

Bardakci, M. (2015). Turkish EFL pre-service teachers pronunciation problems. *Educational Research and Reviews*, *10*(16), 2370-2378.

Begum, A., & Hoque, M. A. (2016). English pronunciation problems of the tertiary level students in Bangladesh: A case study. *Researchers World*, *7*(4), 50.

Chan, A. Y., & Li, D. C. (2010). English and Cantonese phonology in contrast: Explaining Cantonese ESL learners' English pronunciation problems. *Language Culture and Curriculum*, *13*(1), 67-85.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative* (Vol. 7). Prentice Hall Upper Saddle River, NJ.

Ehrlich, S., & Avery, P. (2013). *Teaching American English pronunciation-Oxford handbooks for language teachers*. Oxford University Press.

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). How to design and evaluate research in education.

Friederici, A. D. (2017). *Language in our brain: The origins of a uniquely human capacity*. MIT Press.

Jones, R. H. (1997). Beyond "listen and repeat": Pronunciation teaching materials and theories of second language acquisition. *System*, *25*(1), 103-112.

Keuk, C. N. (2008). English language variety in Cambodia. In *CamTESOL Conference on English Language Teaching: Selected Papers Volume 4, 2008* (p. 98).

Keuk, C. N. (2015). Participation in teacher research at a tertiary institution in Cambodia. *Language Education in Asia*, *6*(1), 31-45.

Habibi, M. W. (2016). *English pronunciation problems encountered by Indonesian advanced students* (Doctoral dissertation, Universitas Islam Negeri Maulana Malik Ibrahim).

Hago, O. E., & Khan, W. A. (2015). The pronunciation problems faced by Saudi EFL learners at secondary schools. *Education and Linguistics Research*, *1*(2), 85-99.

Hassan, E. K. M. I., & Hassan, S. A. W. A. (2007). *Pronunciation Problems. A Case Study of English Language Students At Sudan University of Science and Technology* (Doctoral dissertation, Sudan University of science and Technology).

Hayden, M., & Martin, R. (2011). The Education System in Cambodia: making progress under difficult circumstances. *Education in south-east Asia*, 31-51.

Heng, K. (2017). Cambodian EFL university students' learning strategies and motivation to improve their English language speaking skills: A qualitative study. *Journal of Studies in the English Language*, *12*(2), 45-70.

Index, E. E. P. (2021). The world's largest ranking of countries by English skills. *Retrieved March 30*, 2022.

Ladefoged, P., & Johnson, K. (2014). *A course in phonetics*. Cengage learning.

Liang, D. (2015). Chinese learners' pronunciation problems and listening difficulties in English connected speech. *Asian Social Science*, *11*(16), 98.

Lim, S. (2016). Learning to teach intelligible pronunciation for ASEAN English as a lingua franca: A sociocultural investigation of Cambodian pre-service teacher cognition and practice. *RELC journal*, *47*(3), 313-329.

Lin, L. C. (2014). Understanding pronunciation variations facing ESL students. *International Journal of Humanities and Social Science*, *5*(1), 16-20.

Moore, S. H., & Bounchan, S. (2010). English in Cambodia: Changes and challenges. *World Englishes*, *29*(1), 114-126.

Nguyen, T. H. (2010). Cambodia: Cultural background for ESOL teachers. *Retrieved on March*, *25*, 2016.

Richards, J. C., & Rodgers, T. S. (2014). *Approaches and methods in language teaching*. Cambridge university press.

Sahatsathatsana, S. (2017). Pronunciation problems of Thai students learning English phonetics: A case study at Kalasin University. *Journal of Education, Mahasarakham University*, *11*(4).

Shak, P., Lee, C. S., & Stephen, J. (2016). Pronunciation problems: A case study on English pronunciation errors of low proficient students. *International Journal of Language Education and Applied Linguistics*.

Siddhipaññadhivaṁso, P. S. (2017). *A Study Of English Pronunciation of Third and Fourth-Year Cambodian Students of Faculty of Humanities Mahachulalongkornrajavidyalaya Unversity Based on Linguistic Approach* (Doctoral dissertation, Mahachulalongkornrajavidyalaya University).

Sim, S., & Hum, C. (2021). English pronunciation challenges for English major university students in Battambang province, Cambodia. *Cambodian Journal*, 77.

Tsojon, I. Y., & Aji, Y. N. (2014). Pronunciation Problems Among Jukun (Wapan English Speakers. *European Journal of Research and Reflection in Arts and Humanities*, *2*(1), 6-12.

English Speakers. *European Journal of Research and Reflection in Arts and Humanities*, *2*(1), 6-12.

Tweed, A. D., & Som, M. (2015). English language education in Cambodia and international upport ahead of ASEAN integration. *ASEAN integration and the role of English language teaching*, 13-40.

Wei, Y., & Zhou, Y. (2002). Insights into English Pronunciation Problems of Thai Students.

Yule, G. (2020). The study of language. Cambridge university press.