EFL STUDENTS' RECOGNITION OF FRICATIVE SOUNDS AT A UNIVERSITY IN THE SOUTH OF VIETNAM

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Abstract:

This research aims at investigating learners' capacity to aurally and visually recognize and properly pronounce the fricative sounds. A descriptive study was conducted with 156 participants. Since research about pronunciation which has incidentally been assumed and framed to be extremely outdated in the research context, various tests and research tool for both qualitative and quantitative data were utilized for better triangulation of the evidence. The two listening tests focused on the learners' ability of sound recognition for fricative sounds. Then, interviews were utilized to collect both teachers and learners' strategies for learning pronunciation. Regarding the two tests, a minimal pair is designed for each question using a native speaker's voice. In each pair of words in test #1, learners choose one that they can distinguish. Similarly, in test #2 one word of each pair would be pronounced incorrectly (e.g. most of pairs) and learners listen and determine the right or wrong sound(s). Afterwards, four teachers and eleven learners were interviewed about this matter. Finally, this study reveals several surprising findings. Learners cannot identify and recognize these sounds /f/-/v/, /f/-/θ/, /s/-/z/, /s/-/ʒ/, /s/-/ʃ/, /ʃ/-/θ/, /z/-/ʒ/, and /ʒ/-/ʃ/. The reasons for such dominated problems in identifying these fricative sounds include their mis-matched cognitive knowledge about different sounds and their psychology in uttering the sounds. From this study, several implications are drawn out to raise a proper awareness to learners' practice of pronunciation with recommended methods so that teachers can help learners develop their abilities in distinguishing the sounds to pronounce accurately and improve their communicative efficiency.

Keywords: fricative sounds, student's performance, sound recognition, capacity

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1. Introduction

In many contexts of language learning, a variety of studies have been done about pronunciation, its factors on learners' acquisition, its roles in language speaking or competencies, the methods of instruction and mastering the sounds, the interaction or difficulties in practicing the sound segments, and so on (Fauzi, 2014; Herman, 2016; Bui, 2016; Metruk, 2017; Ahmad & Muhiburrahman, 2013; Fouz-González, 2017; Lee, Jang, & Plonsky, 2015; Nguyen, 2007; Bernhardt, Másdóttir, Stemberger, Leonhardt & Hansson, 2015; Georgios P. Georgiou, 2019; Chen & Han, 2019; Shabani & Ghasemian, 2017; and Rahimi & Ruzrokh, 2016).

Pronunciation is considered to be an outdated research theme and the importance of teaching and learning pronunciation is usually underestimated although it is one of the most challenging competencies for every learner (Fouz-González, 2017). Regarding different aspects of foreign language pronunciation, a wide range of techniques to facilitate pronunciation training have been concentrated as its impact on intelligibility, comprehensibility and "*accentedness*" (Lee, Jang, & Plonsky, 2015). In the Vietnamese context, English learners' competencies in speaking are hindered regarding the main problems of pronunciation and the "*final consonants*" (Nguyen, 2007). This language has a finite set of consonants, particularly final consonants which cannot be found in the similar sound system of Vietnamese language. For examples, native speakers of Vietnamese acquiring English as a second language may pronounce the word "knife" with the assumption to be understood or recognized as "nice", "nine", or "night".

Focusing on a narrow aspect of the sound system, the phonological acquisition of fricative ones is found relatively late (Bernhardt, Másdóttir, Stemberger, Leonhardt & Hansson, 2015). Georgiou (2019) focuses on the instruction of pronunciation of which the teaching of EFL pronunciation was neglected leading the difficulties of learners regarding the production of the English vowels. In addition, language pronunciation learning experience about the interaction of Cantonese, English, and Mandarin is generating to different aspects of the speakers with L1 and L2, L3 acquisition versus the monolingual ones (Chen & Han, 2019).

Furthermore, Shabani & Ghasemian (2017) emphasized one important requirement for pronunciation to be understandable by and for the language learners. The proficiency in language is to safe the pronunciation and assist them improve their efficiency of which it would satisfy the basic aims of pronunciation instruction in any course as intelligible pronunciation. Despite the neglect of pronunciation in English language teaching which have not included pronunciation or classified it to be minor in the teachings to other language skills (Rahimi & Ruzrokh, 2016).

From the researcher's teaching experience and context, different directions of teaching and learning pronunciation have been conducted so far. However, limited findings have been focused on the troubles in pronouncing English final sounds. The majority of learners seems to be unsure about how to pronounce the sounds accurately. That phenomenon would become a great factor that influences their success in the major of English after graduation. They may begin their career in many different job positions

such as interpreters, tour guides, international relationships, or teachers, obtaining the wide knowledge and good language skills. At that time, pronunciation becomes very important because they translate the messages from speakers to listeners or transferring the lessons to the students.

Importantly, current research has focused on the learners' errors of pronouncing fricative sounds, distinguishing voiced versus voiceless, improving fricative pronunciation, and finding guidelines for pronouncing English final sounds (Fauzi, 2014; Herman, 2016; Bui, 2016; Metruk, 2017; Ahmad & Muhiburrahman, 2013). Fauzi (2014) concentrated on errors in pronouncing the fricative sound /f/ and /v/ of Sundanese students. Herman (2016) determined the difficulties in pronouncing the English labiodental sounds of Indonesian students. Bui (2016) conducted research about the errors of pronouncing the consonants of /ð/ and /θ/. Metruk (2017) explored the difficulties in producing the English sounds of dental fricatives. Finally, Ahmad and Muhiburrahman (2013), found out about phenomenon of having lack of motivation in pronouncing English consonants leading the mistakes in sounds of /p/, /d/, /v/, /ʧ/, /ʒ/, /ŋ/.

Regarding the above aspects of research about pronunciation and the contextual conditions of the researcher, not many studies have concentrated on the recognition of sounds or fricative sounds. That creates the possible gap for this study about the recognition and production of fricative sounds to be conducted in the research context. Therefore, the study about this matter would be important to understand the mismatch between learners' perception and practice of sound recognition and production for the fricatives.

2. A review of relevant literature

It is essential to briefly revisit some basic concepts of this study. Pronunciation in general terms indicates the production of significant sound in two senses. The first sense is to talk about pronunciation as the production and reception of sound speech. Then, the second is to talk about pronunciation with reference to acts of speaking. From the theories and the reality of language learning, existing a fact that not many people are able to pronounce correctly (Dalton & Seidlhofer, 1994).

Currently, many studies have been conducted about English fricatives mispronunciation of both EFL and ESL learners and recommended the guidelines for pronouncing English final sounds (Fauzi, 2014; Herman, 2016; Bui, 2016; Metruk, 2017; Ahmad and Muhiburrahman, 2013; Keshavarz and Abubakar, 2017).

Fauzi (2014) sets up to find out the errors in pronouncing the fricative sound /f/ and /v/ of Sundanese students. The results showed that no errors were made on pronouncing /f/ because it is not changed into another sound but they did /v/ mostly because those substitute ones are similar to their L1 sounds. Similarly in the selection of fricative sounds, Herman (2016) also carried out a study to find out the difficulties in pronouncing the English labiodental sounds of Indonesian students with the focuses on the labiodental sounds /f/ and /v/. The findings show that most difficult position is the

final one in sound /v/. The students are not aware of pronouncing /f/ - voiceless and /v/ - voiced because they pronounce the same voice in words (in the Indonesian language). Thus, the sound /v/ is substituted by /f/ when it is mispronounced.

In a different context, Bui (2016) conducted research about the pronunciations of consonants /ð/ and /θ/ by 125 EFL Vietnamese adult learners to find out the errors of pronouncing the above two sounds. The results showed that the participants replaced the L1 on L2 in some cases. They also expressed some reasons for mispronouncing English consonants; especially they lacked the environment for practicing English regularly.

In addition, Metruk (2017) conducted a paper to explore the difficulties in "Pronunciation of English Dental Fricatives" with 44 first-year students, who are majoring in teaching English and Literature. The results indicate that a number of participants have errors of pronouncing English voiceless and voiced fricative dental sounds. In brief, this research points out the great important role of teaching pronunciation because it seems to be forgotten in the teaching English at Slovakia context.

In a different perspective, Ahmad & Muhiburrahman (2013) aimed at researching about pronunciation instructions or orientations. The findings show that there are not right orientations for teaching pronunciation and EFL students seem to lack motivation in pronouncing English consonants. Thus, they make mistakes. The sounds /p/, /d/, /v/, /ʧ/, /ʒ/, /ŋ/ are the ones that most teachers and students have errors on pronouncing.

According to Kelly (2000), the articulation of consonants is described in terms of the manner of articulations and place of articulations. The manner of articulations includes plosive, affricate, fricative, nasal, lateral and approximant whereas the place of articulation has bilabial, labio-dental, dental, alveolar, palato-alveolar, palatal, and velar and glottal. In Roach (2009), fricative is a "*continuant*" consonant because the speaker can pronounce the sound as long as possible in case the more they keep the air in their lungs, the more they produce the sounds. Eight fricatives include /f/, /v/, /ð/, /θ/, /s/, /z/, /ʃ/, /ʒ/, and /h/ and they are also divided fricatives into two kinds: "fortis ("voiceless") and lenis ("voiced")". The voiceless fricatives have /f/, /θ/, /s/, /ʃ/, and /h/. The voiced ones include /v/, /ð/, /z/, and /ʒ/.

For more norms about fricatives, Kelly (2000) defined that labio-dental fricatives were produced by using the lower lip and the upper teeth, e.g. /f/ and /v/. Dental fricative is produced when the tongue tip is used either between the teeth or close to the upper teeth, e.g. /ð/ and /θ/. Alveolar fricative is "the blade of the tongue is used close to the alveolar ridge" including /s/ and /z/. Finally, the place of articulation /ʃ/ and /ʒ/ seems to be the same alveolar but the top of the tongue will touch the hard palate. The sound /ʃ/ is not vibrating while /ʒ/ is in contrast

Regarding minimal pairs, Nordquist (2018), as cited in The Anthropology of Language, 2013) defined that a minimal pair is the sounds that differ two words in the same position appearing in the initial, medial and final positions of the consonants. This really makes the listeners feel confused when their competence of pronunciation is not fully developed.

In case, if students can find the guidelines in books and obtain their own pronunciation, the ability of performance will not be the same. This means that people can achieve good understanding of the theories and they know what the fricatives are or how to pronounce them. Nevertheless, many reasons affect their ability to perform these fricative sounds properly. In other words, the ability to recognize or distinguish the sounds is more important in order to pronounce exactly and improve their communication effectively. Besides that, it is hard to find out the research of learners' ability to distinguish the English final sounds; which common fricative sounds are mispronounced much and the rate of mispronouncing these sounds. And, regarding to students' pronunciation difficulties, thus, that is the reason why it is significant to implement an investigation into EFL students' performance to find out which fricative sounds including /f/, /v/, /ð/, /θ/, /s/, /z/, /ʃ/, and /ʒ/ in minimal pairs that learners cannot distinguish how the sounds are pronounced accurately and how to recognize these differences.

3. Research methodology

This mixed-method descriptive study was conducted with the participants of four teachers and 152 English majored sophomores and juniors in the academic year 2019-2020 in a university in the South of Viet Nam (i.e. 141 students all participated in tests #1 and #2 and 11 students joined in the interviews). Two aural tests of fricative recognition and interviews were designed as the main research instruments for both qualitative and quantitative data collection. In terms of participants, teachers are those who have been teaching in the research context from five to nearly six years with different subjects such as writing, reading, speaking, and phonetics whilst English major students include both good and inaccurate pronunciation performance and they all join in a phonetics subject at the research period.

Test #1 has a total of **50** questions with **two** answers (a minimal pair) for each one including repeated two pairs (i.e. "lease – leash" and "tease – teeth") to check whether the participants can recognize the sounds. Test #2 has **48** questions with also two answers (i.e. Right/Wrong). These two tests were designed to utilize forms from www.office.com and the links were sent to the participants after an in-class careful orientation of the purposes, ethical issues, and related aspects to increase the validity of the tests. They must listen to the records of the native speaker's voice and choose one answer for each question in the tests and then "submit" for checking the results and the researcher received the results right away. The listening tests' data were analyzed and displayed in tables and figures while the results of interviews would be presented according to five clusters including "Wrong", "Recognition", "Reason", "Psychology", "Methods", and "Time".

About the interviews, some students and teachers were asked to show their perceptions about (a) which sounds or positions of sounds in words that the students usually cannot recognize; (b) the reasons why the teachers think that the learners can or cannot recognize these sounds; (c) in what ways that the students can develop their mistakes; and (d) how long the students can improve their accurate pronunciation.

After the data collection process, quantitative data from counting the phonological recognition mistakes in different positions of the minimal pairs of fricative sounds were descriptively presented in the findings. Besides, the qualitative data from the interviews were analyzed using Nguyen's (2018) new application of Raymond Padilla's unfolding matrix in analyzing qualitative data. It focused on using Padilla's technique to solve common issues of qualitative study in order to help researchers to choose the necessary data or collect the important data. In addition, this technique used a practical educational research sample for illustrating the use of the technique and repairing and changing this into another version, which was different from the original one.

4. Findings

4.1 The common fricatives that students can and cannot recognize properly
From the two tests, all tested fricative sounds indicate the interesting findings and confirm the difficulties of Vietnamese learners in learning English pronunciation in general and fricative sounds in particular.

Regarding the recognition of sound /f/, the participants presented the limit at recognizing this sound at the initial position in both tests with cases of the minimal pairs of /f/ and /θ/ (test #1) and with cases of the minimal pairs of /f/ and /p/ (test #2). However, this fricative sound of /f/ was found differently in the medial position in test #1 and final position in test #2. Details about the findings from both tests of sound /f/ are as follows:

Among eight sounds, the sound /f/ had minimal pairs with the other six sounds in test #1, except the sound /z/, and the numbers of appearing times of the /f/ were seventeen.

Table 1: The students' ability in recognizing the sounds /f/ with other sounds in test #1

Sounds for comparison	Questions and positions in words			
	Question	Initial	Question	Medial
/f/			#12	**97**
/v/				44
/f/	#4	76		
/θ/		**65**		
/f/	#45	51		
/θ/		**90**		

Table 1 shows that the students seemed not to be able to recognize the sound /f/ versus /v/ and /θ/ in all three positions of this sound in the words. There was a significant difference in the numbers of choosing answers for this sound. For example, in question #4, the aimed sound was /θ/ with 65/141 students chose this whereas 76/141 others chose /f/. To be more specific, the numbers of answers were nearly equal to each other.

Then, the sound /f/ appeared in test #2 six times. The results showed that students seemed not to recognize /f/ in the initial and final positions in words even it was original or changed.

Table 2: The results of students' answers of recognizing the sound /f/ versus /p/

Question	Word for testing	Planned phonetics	"Right" choices	"Wrong" choices
#1	Feel	/**p**iːl/	85	56

Table 3: The results of students' answers of question #3

Question	Word	Planned phonetics	"Right" choices	"Wrong" choices
#3	Fluid	/**f**luːɪd/	80	61

As seen in Table 2, the students could properly recognize the sound /f/ when it was changed into /p/ in the initial position. The numbers of two types of answers were nearly equal to each other including 56/141 for "Wrong" and 85/141 for "Right" in question #1. In addition, the same problem was for question #3 although the sound /f/ was kept. The finding illustrated that students seemed to be able to recognize /f/ with 80/141 students chose "Right" while 61/141 chose "Wrong" in Table 3.

Regarding the fricative sound /s/, it is interesting that both tests have compatible results that the participants could hardly distinguish sound /s/ and /ʃ/ in both initial and final positions while the sounds of /s/ and /z/ make the learners confused in the first test at the medial and final positions, but not similar results were found in the second test. The learners could distinguish these two sounds in test #2. More details can be found as follows.

The sound /s/ in test #1 was the only one that had minimal pairs with all seven other sounds with twenty-four times appearing in fifty questions.

Table 4: The students' ability in recognizing the sounds /s/ with other sounds in test #1

Sounds for comparison	Question	Initial	Question	Medial	Question	Final
/s/					#7	68
/z/						**73**
/s/					#25	58
/z/						**83**
/s/			#48	**92**		
/z/				49		
/s/	#22	68	#50	87		
/ʃ/		**73**		**54**		
/s/	#46	**48**				
/ʃ/		93				
/s/					#24	37
/ʃ/						**104**

As seen from Table 4, it exposes that the participants made mistakes with sound /z/, /ʃ/, /ʒ/, and /θ/ in all three positions. Then, the results actually presented surprising data that the respondents could not recognize the sound /s/ - /z/, /s/ - /ʃ/, /s/ - /ʒ/, and /s/ - /θ/.

As for the sound /s/ in test #2, there were seven times that this sound appeared including 2 times in the initial, 2 in the medial and 3 in the final positions. Moreover, it was replaced by /ʃ/ and /z/. While the students could distinguish /s/ with /z/, nearly half of them could not do the same with /ʃ/ including initial and final positions (see more in table 5).

Table 5: The respondents' capacity in recognizing /s/ when it was changed into /ʃ/

Question	Word for testing	Right phonetics /s/	Wrong phonetics /ʃ/	"Right" choices	"Wrong" choices
#26	Face	/feɪs/	/feɪʃ/	78	63
#48	Saw	/sɔː/	/ʃɔː/	83	59

Table 5 shows that the numbers of the respondents' ability in recognizing /s/ were less than the other one from over 50 to under 63 (i.e. n = 141). It could be concluded that the participants are still confused in recognizing /s/ and /ʃ/.

For other sounds of /v/, /ʃ/, /v/, various findings were presented with the aforementioned and other minimal pairs in different positions. The common phenomenon was that the participants were not able to fully recognize the minimal pairs by both recognizing or selecting the proper sounds. The diversity was also found in distinctive positions of the pairs.

Regarding the sound /v/ in test #1, the total times of appearing of this sound were 10 and at all three positions in the words. There were only minimal pairs of /v/ - /f/, /v/ - /s/, and /v/ - /ʃ/.
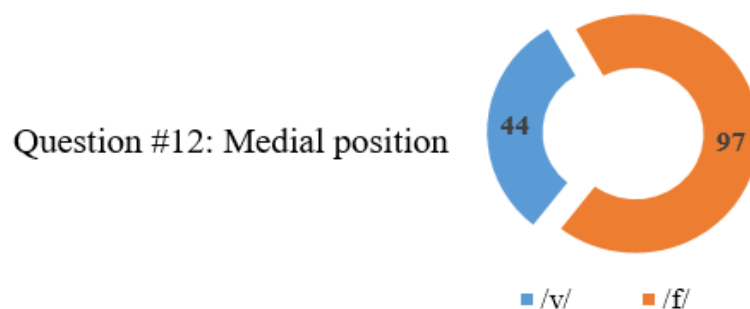

Question #12: Medial position

44 97

■ /v/   ■ /f/

Figure 1: The students' capacity in recognizing /v/ versus /f/

As seen from Figure 1, the results indicated that the students seemed not to be able to recognize the sound /v/ in the medial position because the answers were nearly equal between /v/ and /f/ with 44/141 and 97/141, respectively.

In test #2, the total times that the sound /v/ appeared was five. The findings exposed that the students could not recognize /v/ when it was changed into /f/ in the final position.

Table 6: The students' choices in identifying /f/ in question #41

Question	Words for testing	Right phonetics /v/	Wrong phonetics /f/	"Right" choices	"Wrong" choices
#41	Negative	/ˈnegətɪv/	/ˈnegətɪf/	51	90

Table 6 indicates that 90/141 were right answers while 51/141 were wrong. It seemed that a number of students still made mistake between /v/ and /f/.

Regarding the sound /ʃ/ in test #1, its total times of appearing were 11 and at all three positions in the words. However, there were only minimal pairs of /ʃ/ - /f/, /ʃ/ - /v/, /ʃ/ - /s/, and /ʃ/ - /ʒ/.

Table 7: The numbers of answers of /ʃ/ and /s/ in the initial and medial positions

Sounds for comparison	Questions and positions in words			
	Question	Initial	Question	Medial
/ʃ/	#22	73	#50	54
/s/		68		87
/ʃ/	#46	93		
/s/		48		

Table 7 shows that the participants made mistakes in recognizing /ʃ/ versus /s/ in the initial and medial positions. There was not a significant difference in the numbers of participants' answers between these two sounds because they were nearly equal to each other.

In test #2, there were six words utilized for six questions in testing the participants' capacity in recognizing the sound /ʃ/.

Table 8: The respondents' capacity in recognizing /ʃ/ when it was changed into /z/ and /s/

Question	Word for testing	Right phonetics /ʃ/	Wrong phonetics /z/ or /s/	"Right" choices	"Wrong" choices
#17	Push	/pʊʃ/	/pʊz/	71	70
#38	Shape	/ʃeɪp/	/seɪp/	81	60

Table 8 illustrates that the numbers of "right" and "wrong" choices seemed to equal to each other with 71/141 for the "right" and 70/141 for the "wrong" in question #17 in the final position whereas 81 for the right and 60 for the wrong in the initial place in question #38. It seemed that there was a little bit different in both types of answers so it could not be confirmed whether the students could distinguish /ʃ/ with /z/ and /ʃ/ with /s/. It was not clear that the respondents could recognize /ʃ/ when the phonetics changed into /z/ and /s/.

Regarding the sound /z/, it had 15 times appearing in test #1 in total 50 questions including three times of the initial position of a word, seven times of the medial, and five times of the final one. Nevertheless, the minimal pairs randomly lacked of /z/ - /f/; /z/ - /ʃ/; and /z/ - /v/.

Table 9: The participants' ability in distinguishing /z/ - /ʒ/ and /z/ - /s/

Sounds for comparison	Questions and positions in words			
	Questions	Medial	Question	Final
/z/	#44	61		
/ʒ/		**80**		
/z/	#25	**83**		
/s/		58		
/z/	#48	49	#7	**73**
/s/		**92**		68

Table 9 shows that the numbers of right answers (i.e. the aimed sounds) were over 80 while the wrong were over 40 to over 60 (i.e. n = 141). The distance between the two types of numbers was not significant. This pointed out that the respondents still could not differentiate these sounds separately.

In test #2, the total times that the sound /z/ appeared was eight.

Table 10: The percentages of students' capacity in distinguishing /z/ and /ʒ/, /ʃ/, and /s/

Question	Words for testing	Right phonetics /z/	Wrong phonetics /ʒ/ or /ʃ/ or /s/	"Right" choices	"Wrong" choices
#9	Visit	/'vɪzɪt/	/'vɪʒɪt/	55	**86**
#15	Has	/hæz/	/hæʃ/	58	**83**
#21	Apologize	/ə'pɒlədʒaɪz/	/ə'pɒlədʒaɪʃ/	55	**86**
#43	Zip	/zɪp/	/sɪp/	46	**95**
#44	Breeze	/briːz/	/briːs/	68	**73**

As seen from Table 10, most students could recognize /z/ when it was changed into /ʒ/, /s/ and /ʃ/ in all three positions because the numbers of aimed answers were over seventy. Nevertheless, there were over forty answers provided evidences that the participants could not identify the exact sounds through listening.

Examining the fricative sound /θ/, inconsistent results were found in two tests about sound /θ/. In test #1, participants displayed that sound /θ/, /ʃ/ and /f/ cannot be distinguished properly. However, in test #2, when sound /θ/ was replaces by sound /ð/, the participants cannot identify the differences.

The sound /θ/ was a voiceless sound and its articulation was also difficult for people to pronounce accurately. In test #1, the total times of appearing of this sound were 10 but it lacks minimal pairs of /ð/, /v/, and /ʒ/. The research results explicated that the participants could not identify the sound /θ/ with /ʃ/ and /f/ most, especially in the initial positions because the numbers of answers between two sounds seemed to be equal to each other. The results were displayed in Figure 2 as follows:
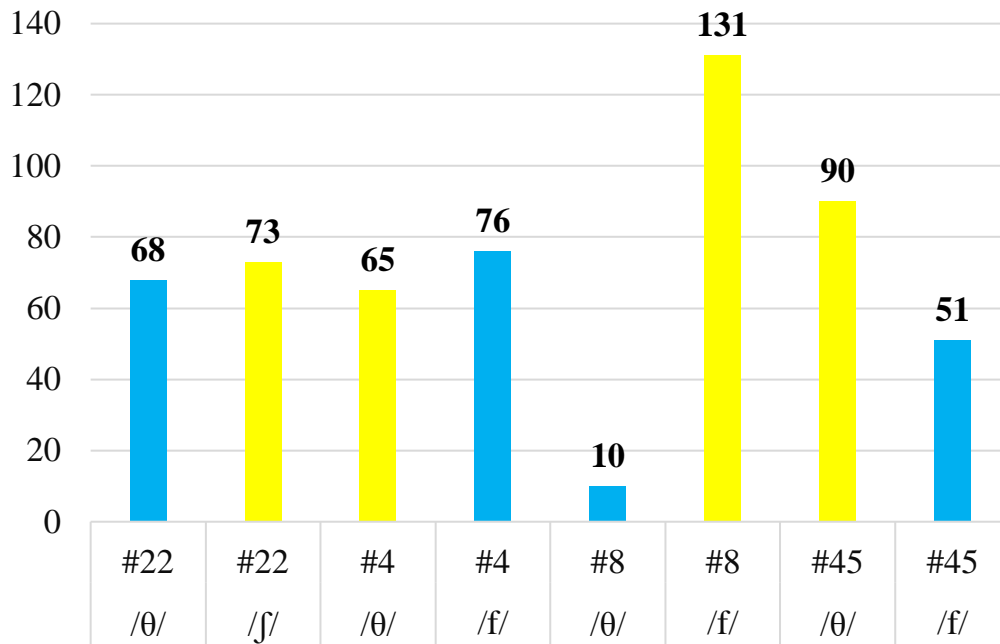
Figure 2: The learners' ability in identifying sound /θ/ with /f/ and /ʃ/

The sound /θ/ had 6 times appearing in test #2 equivalent to 6 questions. There was a difference from the numbers of the "wrong" choices in question #13 were 97/141 when the sound /θ/ was replaces by /ð/.

Table 11: The respondents' capacity in recognizing /θ/ and /ð/

Question	Word for testing	Right phonetics /θ/	Wrong phonetics /ð/	"Right" choices	"Wrong" choices
#13	Three	/θriː/	/ðriː/	44	97

Only a minority of learners get confused with the sounds /ð/ and /z/ in their minimal pairs in test #1 while the sounds /ð/ were recognized at quantity in different position with sound /θ/. More details about this sound /ð/ were presented below.

The total times of appearing in test #1 of sound /ð/ were six and all in three positions of words. However, it lacked the minimal pairs of /θ/, /v/, /ʃ/, and /ʒ/.

Table 12: The percentages of the students' capacity in distinguishing /ð/ with /z/

Sounds for comparison	Questions, positions in words and percentages between two sounds		
	Questions	Final positions	Percentages
/ð/	#13	11	7.8%
/z/		130	92.2%
/ð/	#42	120	85.1%
/z/		21	14.9%

Table 12 demonstrates that the respondents could identify the aimed sounds in questions #13 and #42, making up 85.1% to 92.2%. However, over 10 to 20 students are still confused between /ð/ and /z/, making up to nearly 15%.

In test #2, the sound /ð/ only appeared three times and all of these sounds were changed their phonetics into /θ/ and /d/, especially in questions #5 and #11. There was a significant difference between these two questions because 89/141 respondents could distinguish /θ/ instead of /ð/, whereas only 58/141 could recognize /ð/, which was replaced by /d/ (see in Table 13).

Table 13: The results of students' answers in recognizing /ð/ versus /θ/ and /d/

Question	Word for testing	Right phonetics /ð/	Wrong phonetics /θ/ or /d/	"Right" choices	"Wrong" choices
#5	Weather	/ˈweð̱ər/	/ˈweθ̱ər/	52	**89**
#11	Their	/ð̱eə(r)/	/**d**eə(r)/	83	**58**

Both tests illustrated the participants' problems with recognizing the /ʒ/ properly in the medial position in test #1 and a high percentage of wrong choice in test #2.

There were not any minimal pairs in the medial positions. The times of appearing of /ʒ/ in test #1 were eight within 8 questions and randomly lacked of /ʒ/ - /θ/; /ʒ/ - /v/; and /ʒ/ - /ð/.

Table 14: The percentages of recognizing the two sounds /ʒ/ with /z/ and /ʃ/

Sounds for comparison	Questions, positions in words and percentage between two sounds		
	Question	Medial	Percentages
/ʒ/	#44	**80**	56.7%
/z/		61	43.3%
/ʒ/	#14	108	76.6%
/ʃ/		**33**	23.4%

Table 14 exposes that the students could not absolutely recognize /ʒ/ in the minimal pairs with /z/ and /ʃ/. In questions #44, 80/141 participants still made mistakes in distinguishing /ʒ/ to /z/ and it made up to 56.7% (/ʒ/) and 43.3% (/z/). It seemed to be equal to each other. However, the students could not recognize the sound /ʃ/ completely although it was the aimed sound in question #14.

The sound /ʒ/ appeared seven times in all three positions in words in test #2. The results showed that there was a significant point about the respondents' ability in recognizing /ʒ/ in the initial and final positions when its phonetics were not changed. The numbers of right choices were from over 90 and higher than 50 of the wrong answers. In fact, approximating one-third of participants still could not recognize sound /ʒ/ (see more in Table 15)

Table 15: The respondents' capacity in recognizing /ʒ/ when its phonetics were not changed

Question	Words for testing	Planned sounds for testing /ʒ/	"Right" choices	"Wrong" choices
#23	Massage	/'mæsɑːʒ/	95	46
#25	Prestige	/pre'stiːʒ/	91	50
#35	Jabot	/'ʒæbəʊ/	103	38
#40	Beige	/beɪʒ/	94	47

4.2 The participants' perceptions of students' performance of fricative sounds

It was interesting but normal that the perceptions about learners' performance of fricative sounds from teachers and students are quite dissimilar. Five clusters of "Wrong", "Recognition", "Reason", "Psychology", "Methods", and "Time" were focused to present the findings about this matter of the fricative sounds. The findings of this section would be shown separately from the two points of view.

First, the students' perspective would be displayed about their performance of fricative sounds with the aforementioned five clusters of data.

Regarding the aspect of "Wrong" – the mistakes that the participants usually make in practice

The students in the interview expressed that they inaccurately pronounced all three positions of fricatives in words but all students (e.g. 11/11 students) did the same errors in the final positions and a sentence. Participants #5 and #2, revealed:

"I usually pronounce inaccurately when the sound is in the final position of words." [5L37Wfi004]

"I usually get mistakes when I speak a whole sentence." [2L159W123]

In addition, there were two types of pronouncing fricatives incorrectly including mispronunciation and being confused one sound with other sounds such as /f/ - /z/, /ð/ - /θ/, and /s/ - /z/. It could be concluded that the participants were not still able to distinguish voiced with voiceless sounds.

For recognition – the respondents' capacity in recognizing fricative sounds. Most participants could recognize the aimed fricative sounds although they were original or changed sounds. Nevertheless, they were still confused with some other sounds, which were not fricative sounds or they supposed that there were other words or Vietnamese sounds. Participant #9 gave the answers,

The interviewer: *"Thirst /θɜːrst/…."*
#9: *"That's right."*
The interviewer: *"Which was the consonant in this word?"*
#9: The sound /f/ *"[9L297L299L301L303RGfθ234]"*
Participant #6 also confirmed,
The interviewer: *"Save (/v/)"*

*#6: "**Seo**???… It means "wrong"… I usually pronounce "xépv (/v/)' ... you pronounce "xép (/f/)"* [6L243L244L246RGvf463]

In addition to the reasons why they pronounce fricative sounds inaccurately, the explanations revealed that the respondents did not pay much attention to the final fricative sounds or they had to pay more attention to speak sentences and forgot her pronunciation. Additionally, L1 and native speakers' speaking also affected the respondents' ability in recognizing the fricative sounds because their speaking was too fast to follow and identify the fricative sounds. Especially, due to lacking of English practice environment, they did not have many chances for practicing and performing their language learning ability. Participants #2, #5, and #7 expressed,

"… it was because of her natural reflection … there were not any sounds like these while Vietnamese did." [2L61L62R117]
"Because I lack English-speaking environment." [2L26R112]
"That means it will take a longer time when I pronounce the final sounds." [5L43L44RFi032]

Thus, they usually ignored pronouncing the fricative sounds, especially the final sounds. Moreover, they sometimes forgot to speak the sounds or they did not know how to pronounce the fricative sounds so they often uttered the words as habit or their guessing on words. Finally, some of the students expressed the reason for pronouncing accurate fricative sounds was wasting of time.

Concerning psychology as the elements that affect on the students' performance of fricative sounds, it affected students' ability to perform fricative sounds because when they felt shy or embarrassed in pronouncing fricative sounds. They were afraid of being evaluated or received unkind feedbacks from the listeners. Thus, they could not pay much attention to their pronunciation leading to make mistakes so frequently or felt unconfident, sad, or even lost their motivation. However, some respondents who were good at pronunciation would be very active to speak to other people. Even though they made mistakes and given feedbacks from the listeners, they also supposed that these were the motivation for acquiring the language.

"Because it's impossible to express my ideas so I felt so worried. Besides that, I also was embarrassed about my pronunciation." [5L129L130P015]
The interviewer: *"How do you feel when other people remind you due to your inaccurate pronunciation"*?
The interviewee: *"I'll listen to them and correct my pronunciation right away."* [2L197L199P129].

About the ways that the participants use to improve their pronunciation, the methods are about looking up in the dictionary to find the words' IPA; taking notes; studying the Pronunciation dimension; self-study such as studying the pronunciation

online or watching English teaching clips online and using some apps online or setting up in the mobile phone (e.g. TFLAT and ELSA speak); practice at home before giving presentations in class, and asking their teachers or friends to give them advices or help them to recognize the errors and correct them so that their pronunciation was improved. Participant #4 and #5, expressed:

 "After finishing the pronunciation dimension, I've known how to pronounce the ending sounds and I can recognize these sounds clearly." [4L130L131M182]
"…look up in the dictionary to find the word's phonetic in order to know the ways of pronouncing the word exactly". [5L95L96M012]

Next, the amount of time spending in the learning activities as the periods that the learners needed to apply the methods and achieved the effective results should be revisited. Applying some methods on learning and practicing pronunciation is essential but it seems that time also plays a core role in this process. The time was perhaps from two times per week to four months. Nevertheless, most suggestions from the participants were that the learners should use these methods regularly. Participant #9, supposed

The interviewer: *"In your opinion, what does "regularly" mean? Is it every day or a few times per month or sometimes per two or three months*?"
The interviewee: *"two to three times per week."* [9L352L356T242]
She also mentioned,
The interviewer: *"In your opinion, how long will it help you to improve your pronunciation if you apply this method?"*
The interviewee: "From three to four months." [9L358L359L361T244]

From the teachers' viewpoints, four interviewers expressed their perceptions about the students' capacity in recognizing and pronouncing fricative sounds as follows.
Importantly, "Wrong" as the main signal from teachers that most of them thought that students could not pronounce exactly or even ignore these sounds such as /z/, /s/, /f/, /v/, /ð/, and /θ/ in the initial and final positions of words or made mistakes in pronouncing /s/, /ʃ/, /z/, /ʒ/, and /ʃ/.

"… lacking of pronouncing the final sounds, especially the final sound /s/." [T1L54L55WsFi513]
"the initial sounds like /ð/ versus /θ/... they sometimes pronounce incorrectly." [T4L122L123WInðθ576].
"… the most common pronunciation errors are these sounds such as /s/ with /ʃ/, /z/ with /ʒ/, and /ʒ/ and /ʃ/." [T2L41L42L43Wszʃʒ540]

Interestingly, regarding students' recognition, the teachers supposed that the learners usually could not distinguish /f/ versus /p/, /z/ versus /ʒ/, /ð/ versus /θ/ or they

could recognize /s/ in the initial positions of words but not in the final places. Participant #T4, revealed

> "*For example, they know how to pronounce the sound /s/ at the end of a word. But when this sound is at the beginning of the word, they will not imagine it and just read it reflexively.*" [T4L28RGsFi564], [T4L29RGsIn565]

The teachers confirmed about their explanations of "reasons" that the students' organization of articulator affected to their abilities to perform fricative sounds. On the other hand, some students considered English sounds were the same as Vietnamese so they seemed not to be able to pronounce the sounds accurately. Finally, the learning attitude of the learners seemed to be the most important reason that influenced their capacity in recognizing and performing fricative sounds. Participant #T4 shared that:

> "*The students maybe think that the sounds /ð/ and /θ/ are the same /th/ and /đ/ in Vietnamese, respectively.*" [T2L50R542]

> "*…some students cannot pronounce some sounds or pronounce correctly due to their tongue formation.*" [T3L103L104R484]

About psychology, due to the learning attitude so the learners could not achieve their proficiency in recognizing and practicing fricative sounds. These were not good for those who were major in English because of their psychological status. The students would feel that it was really embarrassed to speak. As participant #T3 expressed:

> "*Being seldom speaking English so they feel shy and weird whenever they speak English. As a result, they do not really want to talk at all.*" [T3L192L193P495]

Nevertheless, the people those who were more confident about their pronunciation, they tended to speak more.

> "*Some people, who are in the beneficial level, also take part in learning activities even they are still limited in pronunciation.*" [T3L86L87P480]

At some points for applying learning methods in dealing with the learners' ability and attitude in applying their suggestion methods, the time would be different but it could be from two to three months equivalent to a semester, and this depended on learners' capacity.

Last but not least, a similar method between teachers and students exist that they supposed the learners should look up in the dictionary to check the word's IPA and learn how to pronounce the sounds after completing a Pronunciation dimensions to understand which sounds they were. Besides that, listening to speaking audio files or

English songs and watching English clips or films were also the best ways for them to practice and cultivate their knowledge.

On the other hand, the teachers also helped the learners to correct their mistakes of pronunciation. For example, the teachers could ask learners to read the words or give presentations so that she could listen and give the feedback right away.

Teachers also encouraged their students to take notes words' IPA and contexts; to play games or work in groups; to use some learning apps; or integrated teaching pronunciation into the lessons in classes so that the learners had chances to approach these sounds and increased their abilities in distinguishing L1 with L2.

5. Discussions

The results of the students' ability in recognizing of two questions show that there was a significant difference from the tests with the participants' perceptions because in test #1 the students could recognize /ð/ properly in all positions, whereas the participants supposed this sound was recognized only in the final places. As for the sound /f/, the learners could recognize it in the final ones (e.g. test #1), in the medial positions (e.g. test #2) versus in the initial and medial positions (e.g. participants' perceptions). The students seemed to be able to identify the sound /θ/ in the final and the medial positions (test #1 & #2). However, the participants did not mention about the learners' ability in recognizing the /z/ in test #2 and participants' thought because it was only mentioned in test #1 (e.g. in the initial position). Similarly, /v/ was identified in the initial and final positions only in test #1. On the contrary, the sound /ʒ/ was recognized in the initial and final places in the two tests. Especially, the learners could properly recognize /s/ and /ʃ/ in the medial places (e.g. in the interviews).

Fauzi (2014), Herman (2016), Keshavarz and Abubakar (2017), Yakout and Amel (2019) and Ahmad and Muhiburrahman (2013) mentioned that the students made mistakes or mispronounced the fricative sounds including /v/, /f/, /θ/, /z/, /ð/ and /ʒ/. Similarly, this was also the results of this study. However, these aforementioned researches did not find out which positions of fricative sounds in words, except Herman (2016) found the position was the final one of sound /v/. While, this research could point out the specific numbers of inaccurate pronunciation and positions of these fricative sounds in word, phrase and even sentence. These contributed to provide more information about the insight aspects of mispronunciation fricatives sounds. Actually, the results of this research were strongly different from previous researches because the learners could recognize /f/, /v/, /z/, /ʒ/, /ð/, /θ/, /s/ and /ʃ/ in some positions.

In addition, Metruk (2017) and Ahmad and Muhiburrahman (2013) supposed that teaching pronunciation for learners was one of the great important roles for them to pronounce accurately because teaching pronunciation did not have in teaching programs. As for its importance, most English major students in this university had to join in the Pronunciation dimenson but they still confused in performing these sounds. Thus, teaching pronunciation only is not enough for developing learners' accurately pronunciation unless the teachers should focus on "*knowledge about phonetics and*

phonology" and "*knowledge about pronunciation pedagogy*" (Nguyen & Newton, 2020). Besides that, Shabani and Ghasemian (2017) claimed that personality types of teachers and learners' motivation significantly affect to teaching pronunciation also because teachers with different characteristics (i.e. introvert and extrovert) tend to use disparately techniques. Regarding these requirements, teaching techniques are one of the significant keys for contributing to teaching-learning pronunciation process effectively. Then, teachers should pay more attention to apply more various techniques in teaching and meet the students' learning demands (Shabani & Ghasemian, 2017). In addition, there were more methods from this study and they seemed to be easy for students to apply in practicing their pronunciation. However, these depended on the learners' motivation. They will develop their capacity in case they spend more time in practicing these sounds.

5.1 Limitations of the study

First, the author only focuses on studying about the following fricative sounds such as /f/, /v/, /θ/, /ð/, /s/, /z/, /ʃ/ and /ʒ/, except /h/ and the sound /ʒ/ which lacked the initial positions in words. In addition, the sounds were randomly chosen so the times of appearances in the tests were not equal to each other. Second, a number of participants are rather small (i.e. 152 students and 4 teachers). Thus, the results cannot generally illustrate for the whole EFL learners in the research context. Third, not all the teachers teach pronunciation so they sometimes cannot share deep perceptions about students' pronunciation. Whereas, the students all cannot recognize exactly the fricative sounds, and they do not still find out the ways of improving their pronunciation. Then, the perceptions are just the participants' obvious thinking and sometimes do not base on any theories. Finally, the methods seem not to be effective for learners to improve their ability because these mostly depend on learners' learning motivation.

5.2 Pedagogical implications

The results of the current research pointed out that students still confuse in recognizing all eight fricative sounds. Thus, the reasons that were found in this study provided more information to understand more about the students' capacity in recognizing these sounds. The lessons for pronunciation should be carefully master these problems of the learners. Learners should have more chances to practice their capacity in sound recognition for better production of fricative sounds and others in their learning process.

Besides the subjective reasons, objective ones also affect learners' abilities. Moreover, the methods also the solutions which should be considered to apply in both teaching and learning. Different approaches in teaching and practicing pronunciation should be planned and applied for learners in order to proper development of their capacity and awareness about the sound system. Learners should be guided so that they know their limit and improvement of pronouncing and recognizing the sounds.

Last but not lease, teachers' awareness about their teaching and methods in guiding learners to practice the matter of pronunciation should also be studied and reflected for the sake of better language learning and teaching in the research context.

6. Conclusions

It can be concluded that Vietnamese learners in the research context still have problems with recognizing and producing the fricative sounds of English. Different reasons have been drawn out and discussed for possible methods to improve the situation.

Many sounds in different minimal pairs at initial, medial, and final positions of the words cannot be recognized properly. This phenomenon would be solved easily in this research context and that is why it is necessary to find more methods for students to enhance their capacity in recognizing and performing fricative sounds, especially the way of remembering and recalling the sounds.

Both teachers and students should practice more with their language awareness about pronunciation in general and these fricative sounds in particular. The language learners should be more careful with their learning and practicing of the sounds so that they can improve the situations for better influences in language communication.

In addition, in order to cultivate for their knowledge, it is essential to have a strategy to help them. Therefore, pronunciation learning strategies are the further issue that is needed for students to experiment and find out suitable guides for them to develop their pronunciation in the future.

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