THE MISPRONUNCIATIONS IN PRODUCING THE ENGLISH ALVEOLAR AND POST-ALVEOLAR STRIDENTS BY THE FINAL YEAR ENGLISH DEPARTMENT STUDENTS OF UNIVERSITAS DIPONEGORO

A THESIS

In Partial Fulfillment of the Requirement for the Sarjana Degree Majoring

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PRONOUNCEMENT

The writer sincerely assures that the entire thesis is written according to the writer's thoughts and observations by considering the references involved in the writing of the thesis.

Semarang, May 2019

Coni Yuniar Lestari

MOTTO AND DECLARATION

Nothing simply does not carry reasons to happen.

Conny Y L

This thesis is specially dedicated to

my ones and only beloved parents and little sister

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The writer is entirely aware of all the imperfections on the thesis. Accordingly, the writer heartily takes any suggestion in order to develop better writings and research in the future.

The writer truly hopes that the thesis can be worthwhile for readers.

Semarang 22 May 2019

Coni Yuniar Lestari

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ABSTRACT

As a global language, English has also been being used in Indonesia as a foreign language. Both English and Bahasa Indonesia come from the different language families. Accordingly, both obviously have different systems including grammatical and phonological systems. Meanwhile, the students of English departments are expected to be fluent in English including speaking aspects. The problem is that the different systems between English and Bahasa Indonesia lead the students to making whether mistakes or errors. Although the students of English Departments study English, it does not mean that they certainly master all the aspects. In the English Department of Universitas Diponegoro particularly batch 2015, those who are from the English literature and the American cultural studies interests do not aware that mispronouncing a sound in English can produce different meanings. It is studied in a subject that they do not study namely phonology. According to the phenomenon with some considerations from the previous studies, the writer developed the study on mispronunciations focusing only on the strident fricative English consonants which have not been studied yet. The study is a descriptive qualitative study which applies the theories of phonemics in order to describe the errors. The writer uses English words and noun phrases containing the strident fricative English consonants taken from "English Pronunciation Illustrated" written by John Trim (1975) page 56, 57, 58, 64, 65, 66, 67, 68, 69 pronounced by the final year non-linguistic students of the English Department of Universitas Diponegoro. The writer uses a non-participant observing method in collecting the data and the *padan* method in analyzing the data. The writer transcribes the data by using the broad transcription. In all, the study shows that the errors are divided into devoicing, fronting, cluster reduction, affrication, velar assimilation, elision, de-affrication, stopping, addition of a segment, assimilation, labialization, and coalescence. These errors occur due to some reasons. As a start, it is obvious that English and Bahasa Indonesia have different phonological rules. Other reasons are that some sounds in both English and Bahasa Indonesia have different realizations, some consonants in Bahasa Indonesia which have same phonetic features as in English have different distributions, no certain sounds are found in Bahasa Indonesia, the students tend to apply the same phonological rules as in different words, there is a segment which has an entire closure between the edge of the tongue and the post-alveolar region. Finally, the errors also happen due to phonotactic restraints produced by the speakers.

Key words: error analysis, consonants, pronunciation problems

CHAPTER 1

INTRODUCTION

The chapter explains background of the study, scope of the study, research questions, purposes of the study, previous studies, and organization of the writing.

1.1. Background of the Study

English as a global language has been used by many people all over the world. Crystal (2003) believes that even if English is not the mother tongue of an individual, each may be forcefully motivated to learn it. As it is a global language, it will make an individual communicate easily with others using speech. According to Ladefoged and Johnson (2011: 2), speech is likely to evolve in a place and to flatten. Ladefoged and Johnson (2011: 138) add that it is common to recognize many people who are able to speak more than one language.

In Indonesia, English is considered as a foreign language. Ramelan (1985) proposes that in studying a language, an individual will deal with phonology and grammar. Every language has different systems, including grammars and phonological rules.

The students of English departments are expected to have abilities in using English, including speaking abilities. The problem is that every language has different phonological rules, including English and Bahasa Indonesia. Ramelan assumes that foreign language learners will confront problems in learning a language including the sound system of a language, particularly those who do not

specifically learn linguistics as speaking is a habit that has been put strongly in someone's mind and character since each own childhood, and so does how an individual move each own speech organs in when each individual is producing sounds. Accordingly, English utterances spoken by Indonesian people sometimes cannot be understood clearly. Ramelan also claims that sometimes an individual tends to take similar sounds from each own mother tongue: for example, many Indonesian people mispronounce the word "she" as /si:/. There is no distinction whether they intend to say the word "she" using a post alveolar segment /ʃi:/ or "see" using an alveolar segment /si:/. Another example can be found in the word "his". Indonesian people mostly mispronounce it as /hɪs/, whereas it should be pronounced as /hɪz/ with a voiced alveolar fricative. Furthermore, /hɪs/ using a voiceless alveolar fricative is used to respresent the word "hiss". There might be mispronunciations in producing English utterances by Indonesian people due to the different phonological systems. According to the phenomenon, the writer tries to give the objectives of the study by considering some previous studies which have no identical research with the research conducted by the writer. However, there will be some developments of the previous studies.

1.2. Scope of the Study

The scope of the study is concerned with the error analysis of the English alveolar and post-alveolar stridents produced by the final year English Department students of Universitas Diponegoro.

1.3. Research Questions

The problems are explained specifically as follows.

1. What are the kinds of deviation in producing the English alveolar and post-alveolar stridents?

2. What are the factors that affect mispronunciation in producing the English alveolar and post-alveolar stridents

1.4. Purposes of the Study

According to the research questions, the aims of the study are explained as follows.

1. To identify and to categorize the kinds of deviation in producing the English alveolar and post-alveolar stridents

2. To identify the factors that cause the errors

1.5. Previous Studies

Considering the phenomenon, the writer has done some research on some previous studies. In order to find novelties, the writer tried to find gaps that have not been conducted by other researchers. It is also possible for the writer to develop the research that has been conducted in mispronunciation of English sound productions. The previous studies are arranged topically from the general topics to the closest topic.

Laila (2012) studied the pronunciation quality of Javanese students of English as Second Language in producing the English sounds. In this case study, the researcher found that the consonant sounds were mispronounced due to the lack of

maximal force. They tend to be lenis. The students tend to pronounce some vowel sounds as if they are phonemes. In addition, the Javanese ESL students' change their articulations in producing the English sounds represented in words which have 53,8% perceived intelligibly. It means that it is still perceived and understood properly by the Native Speakers of English (NSE)/the Foreign Speakers ofEnglish (FSE).

Candradewi (2013) analyzed the Javanese pronunciation interferences in speech of the fifth semester English students of Muhammadiyah university of Purworejo in the academic year 2012/2013. The researcher found that the interference of Javanese pronunciation in speech such as vowel interference /ʌ, u:, I, a:, æ/ change into /o, a, u:/, plosive consonant interference /p, t, k/, and diphthong interference.

Nurwulan (2014) and Luvia (2016) studied the mispronunciations of some English consonants. In this research, the researcher found that several consonants were misproduced by the respondents. These mispronunciations often happened to sound changes.

Guntari (2013) studied the sundanese students' production of English dental fricative consonant sounds. The researcher found that the acceptability level as judged by the informant of the Sundanese students' production of the dental fricative sounds is low, with only 13,80% on average which is judged as not clear by the native speaker. Meanwhile, the researcher found that the highest acceptability is in the sound /f/ with 45,56%.

The writer also has considered the research conducted by Nainggolan (2017) entitled *Kesalahan Pelafalan Fonem Sibilan Bahasa Inggris oleh Siswa SDN Kotagede I Yogyakarta*. The researcher found that the error of sound /tʃ/ is 14%, /z/ is 75%, /ʒ/ is 100%, /dʒ/ is 64%. In addition, the main factor of sibilant sound errors is the difference between the orthography and the phonology of the two languages, Indonesia and English.

After considering some previous studies above, the writer ensures that there is no identical research between the previous research and this study. There are some gaps that have not been done by the previous researchers. There are many researchers that have analyzed mispronunciations, particularly in English consonants, but there has not been research that study mispronunciations in strident fricative English consonants. Furthermore, the writer has not found this kind of research conducted in the non-linguistic final year English students of Universitas Diponegoro.

1.6. Organization of the Writing

To begin with, this thesis is started with the introduction in the Chapter I. This chapter describes the background of the study, the scope of the study, the research questions, the purposes of the study, the previous studies, and the organization of the writing. It is, then, followed by Chapter II composing of the theoretical frameworks which become the fundamentals in conducting the study. This chapter is arranged to the explanations according to the underlying theories which meet the background and the purposes of the study. The following chapter describes the research methods which deal with how the data, the population, and the sample

are obtained. Following the research methods, the Chapter IV consists of the analyses of the data in order to find the kinds of strident fricative English consonants mispronounced by the students, the kinds of deviation in producing the sounds, and the factors that cause the errors. Finally, after the data are analyzed, the Chapter V shows the conclusions of the research and the suggestions for further studies.

CHAPTER 2

THEORETICAL FRAMEWORKS

This chapter describes the underlying theories according to the background and the purposes of the study, namely phonology, error analyses, consonants, the strident fricative English consonants, the consonants of Bahasa Indonesia, phonetic transcriptions, and co-articulation effects.

2.1. Phonemics

According to Buchanan, (1963) this world has approximately 3,000 different languages. These languages have the same features namely being able to be spoken and being formed by unlimited speech sounds in which each language has its unique sounds. However, the number of a language's speech sounds is limited in order to make a language easy to communicate. Buchanan (1963) argues that individual sounds should be combined in order to address meanings. These meaningful units in forms of speech can be formed as whether morphemes, words, phrases, or sentences. They have things to do with sound structures. Buchanan (1963) assumes that sound structures can be studied in two branches of linguistics called phonetics and phonemics

Speech is a segmental intention as composed of a group of sounds called segments in which each follows another in any organization. Segments are noticeably independent sound units of a language which follow each other classified as vowels and consonants (Gussman, 2002: 1-2). According to Carr

(2008: 157), segments are used to analyze speech. Ladefoged (1975: 14) argues that vowels and consonants may be defined as segments grouped together to form speech started from producing syllables in order to make utterances. Carr (2013: 35) assumes that speech sounds are produced by adjusting an airstream. This can be learned in a branch of studies called phonetics.

Buchanan (1963) believes that phonetics deals with speech sound productions. In addition to this, Carr (2008: 127) defined phonetics as the study of speech sounds produced by humans that can be categorized as articulatory phonetics and acoustic phonetics. Phonetics has things to do with defining the speech sounds that exist in the languages of the world in order to find out what the sounds are, how they put into patterns, how they modify in distinct circumstances. In addition, the most crucial thing is what aspects of the sounds for expressing the meaning of what is being said which are essential. Accordingly, a phonetician needs to know what people are committing when they are speaking and when they are listening to speech (Ladefoged, 1975: 1). Each needs to define speech by knowing the mechanisms of speech production and speech perception and how languages apply these mechanisms (Ladefoged, 1975: 23). Furthermore, Yule (2010: 26) believes that phonetics describes the features of speech sounds grouped into acoustic phonetics, auditory phonetics, and articulatory phonetics which will be the concern of the study. Articulatory phonetics concerns with the ways in which speech sounds are produced or articulated by using the almost complex humans' verbal equipment (Carr, 2008: 15; Yule, 2010: 26). As a consequence, Carr (2013: 88-89) claims that it is necessary to consider the study of the articulation of

speech sounds together with the study of the ways of how mental categories work in order to explain those speech sounds. This study is called phonology.

According to WordNet 3.0 in thefreedictionary.com, phonology is also called phonemics. Buchanan (1963) claims that phonemics deals with speech sound functions. Besides, Carr (2008: 130) notes that phonology is the study of functional phonetics which means to investigate the systems and the functions of sound discovered in human languages since sound systems are seen as objects described in human minds. In addition to this, Fromkin, Rodman, and Hyams (2011) state that phonology deals with systems of human languages in combining sounds into words or morphemes represented by phonemes and their phonetic representations. It deals with patterns created by speech sounds. Phonology deals with phonemes.

Phonemes which are also called mental categories are abstract units in a linguistic system represented by a distinctively steadily single sound described by a single written symbol or a written alphabet written down in slanted brackets (/ /) used as the basic idea to write down a language in which each has different functions to differentiate meanings (Ladefoged, 1975: 23; Carr, 1993: 21; Carr, 2008: 122-124; Yule, 2010: 43). Carr (1993: 16) defines it as a contrastive phonetic distinction. Meanwhile, phone is a physically concrete sound representing one form of a phoneme written down in square brackets ([ ]). In addition to this, Fromkin, Rodman, and Hayes (2011: 274) argue that phone is a specific realization in pronouncing phoneme. It deals with phonetics. A set of phones, in short, variations of one phoneme whose occurring positions are predictable in

detailed phonetic transcription are defined as allophones (Ladefoged, 1975: 36; Yule, 2010: 43; Carr, 2013: 95). It is the set of the realizations of the same phoneme that is rule-governed. The contrastive phonetic distinction above, then, is related to minimal pair. Yule (2010: 44) describes minimal pair as identical varieties of two different phonemes. In addition to this, Carr (1993: 88) proposes that minimal pair occurs when two words distinguished to only one abstract sound. The distinction, then, must be contrastive or phonemic to distinguish meanings: a good illustration of this can be seen in the words "sigh" /saɪ/ and "shy" /ʃaɪ/ which differ from the use of only one phoneme /s/ and /ʃ/. Meanwhile, when words are pronounced as phonetically similar, but they do not differentiate the meanings, they are called allophonic. For instance, the word *sebab* in Indonesia can be pronounced as both [sebab] and [sebap]. In Indoneisa, there is no /b/ sound that occurs in a final position. Besides, whether using [b] and [p] will the listener still understand what the speaker means (Carr, 1993: 16). According to Fromkin, Rodman, and Hyams (2011: 275), In English, it can be found in the use of a phoneme [t] in the word "bitter". In American English, it is pronounced as both [biɾer] and [bitʰer]. All the same, both do not differentiate any meaning.

According to Carrel and Tiffany in in Riyani et al,. (2013), pronunciations are producing words by using some sound selections. Riyani and Prayogo (2013) assume that pronunciations figure significant roles in phonology since pronouncing phonemes in distinctive ways will trigger different intentions. Accordingly, it is important to study the pronunciations of second language learners.

2.2. Error Analyses

Brown (2000: 226) assumes that learning is essentially a process in profiting successes that is inherent in producing mistakes. Corder in Ramasari (2017: 39) claims that errors are failures generally made because an individual has not mastered, in this case language systems, yet due to the deficiencies of an individual's references, awareness, and comprehensions. Meanwhile, Wardhaugh emphasizes that errors in learning second languages can be considered by looking through their native languages if there is any connection between the native and the second languages. In addition to this, Jie in Essays, UK (2018) asserts that native languages can affect second language learning processes. This problem can be analyzed by using contrastive analyses in order to see whether there is any similarity or difference. Rustipa (2011) argues that similarities will make second language learning processes easy. Conversely, differences will lead language learing problems. All the same, these problems are not only caused by the different systems of both languages but also the lacks of learners' knowledge of the target languages. This problem deals with error analyses.

Brown (2000: 227) claims that Error Analyses (EA) are ways of observing, analyzing, and categorizing errors in order to express something that is being learned. James in Brown (2000: 227) believes that errors are not self-corrected. Ellis and Barkhuizen (2005: 51) believe that EA is one of methods used for analyzing learner language or L2 acquisition. Ellis and Barkhuizen (2005: 52) propose that EA is a research device used to find out how learners obtain L2. It becomes the main means of conducting research into L2 acquisitions. Ellis and

Barkhuizen (2005: 53) state that it used to be a device used for measuring exactness. EA is made up of a group of procedures used to recognize, to express, and to define errors produced by learners. Technically errors can take place in both comprehension and production. However, comprehension errors are not easy to discover as it is often impossible to detect the exact linguistic sources of errors. As a result, EA is defined as *de facto* in the study of the errors that learners produce whether in their speech or writings. According to Corder (1981: 45), EA has two purposes, namely theoretical aspects dealing with the methodologies in inquiring language learning processes and practical aspects dealing with the remedial actions in correcting errors in learning processes for both students and teachers. Corder in Ellis et al., (2005: 51) notes that there are three important cases of learner errors:

1. they provide pedagogic goals by showing teachers what learners have studied and what they have not yet controlled;

2. they provide research goals by serving evidences about how languages are studied;

3. and finally they provide learning goals by acting as tools by which learners can locate the rules of the target language, namely by serving feedback on their errors. In explaining (1), it needs necessary to conduct both an EA and an Error Evaluation (EE). Meanwhile, (2) and (3) can be reached by means EA alone.

Ellis and Barkhuizen (2005: 56) write that there are two criteria in deciding errors, namely:

1. Grammatically

It deals with a model for identifying errors in learning languages according to Corder, namely overt errors which are errors discovered by investigating the utterances in which the errors occur considered as ungrammatical and covert errors which are grammatical but are not interpretable. They need larger extents to be detected clearly.

2. Acceptedly

It deals with subjective assessments of the researchers. The errors are still acceptable despite their deviations.

2.3. Consonants

Speech sounds are produced by modifying an airstream using human systems of respiratory started by pushing out air from lungs to go up the wind pipe called trachea and passing two small muscular folds called the vocal cords in larynx (Ladefoged, 1975: 1; Yule, 2010: 26; Carr, 2013: 36). Ladefoged (1975: 3) states that sounds, then, are made up by the parts of oral system called articulators. Speech does consist of segments which are divided into vowels and consonants. According to Ladefoged (2011: 140), there exist approximately 600 active consonants from languages around the world. This study concerns with English consonants which has 22 consonants used.

Ladefoged (2011: 101) believes that consonants deal with the positions of vocal organs in describing sounds. In addition to this, a range of consonants are usually

differentiated according to three descriptive parameters or features, which can also be used to differentiate phonemic distinctions or phonological contrasts, namely voicing state which deals with what can be done with vocal cords, place of articulation which has things to do with what places used in mouths to produce sounds, manner of articulation which deals with the effects of the airstream from the lungs (how sounds are articulated) (Carr,1993: 1-2; Yule, 2010:31; Ladefoged, 2011: 101).

2.3.1. Voicing state

Consonants can be categorized by considering the vibrations in vocal cords. Those can be classified as voiceless and voiced sounds. Ladefoged (2011: 54) claims that voiceless sounds occur when the vocal cords are held apart. Moreover, voiceless sounds (without vocal fold vibrations) are produced when the vocal cords are spread apart (usually when breathing out), the air from lungs is not stopped and will have a fairly free passage into the pharynx and the mouth. As opposed to voiceless sounds, voiced sounds (with vocal fold vibrations) occur when the vocal folds are drawn together so that there is only a small passage between them, and then the air pushes apart the lungs a lot. The pressure of the airstream will cause a vibration (Ladefoged, 1975: 1; Yule, 2010: 26). To test the vibrations, individual can put fingertips against larynx (Ladefoged, 1975: 2).

2.3.2. Place of articulation

Another parameter used to describe sounds is place of articulation. According to Ladefoged (2011: 99), consonants can be created narrowing or closing vocal tracts

at some places by impeding air pushed out of the lungs in various ways. Yule (2010: 27) assumes that the places of the articulations of the sounds are the locations inside the mouth at which the long friction of the shape of the oral cavity take place through which the air is passing in producing consonant sounds. Ladefoged (1975: 137) claims that place of articulation specifies the parts of the upper surface of vocal tracts and the articulators on the lower surface involved.

2.3.3. Manner of articulation

Consonants are expressed as parts of the set of human speech sounds formed with three different degrees of stricture or constriction well-known as manner of articulation. Carr (2008: 39-40) defines the term "degree of stricture" itself as the measurement to which airflows are obstructed by articulators in producing a sound. These three different degrees of stricture are classified by Carr (1993: 1-2) into:

1. Complete closure shows the highest degree of stricture. It occurs when the airflow is obstructed completely. It forms sounds called stops or plosives.

2. Close approximation considers a less extreme degree of stricture. It happens when the articulators come into close contacts, but the airflow is not fully obstructed. It remains a small gap, which cause turbulent noises, heard as audible frictions. It creates fricative sounds. Ladefoged (2011: 55) notes that fricatives occur when the frictions considered as the resistances to the air as the results of how they rush by way of narrow gaps.

3. Open approximation is the least extreme degree of stricture. It occurs when the articulators do not come close enough to result frictions. It produces approximant consonants.

Picture 1. The International Phonetic Alphabet of the English Consonants
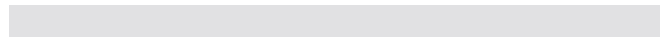
THE INTERNATIONAL PHONETIC ALPHABET (revised to 2005)

CONSONANTS (PULMONIC)   © 2005 IPA

	Bilabial	Labiodental	Dental	Alveolar	Post alveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			r					ʀ		
Tap or Flap				ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

CONSONANTS (NON-PULMONIC)

Clicks		Voiced implosives		Ejectives	
ʘ	Bilabial	ɓ	Bilabial	'	Examples:
ǀ	Dental	ɗ	Dental/alveolar	p'	Bilabial
ǃ	(Post) alveolar	ʄ	Palatal	t'	Dental/alveolar
ǂ	Palato alveolar	ɠ	Velar	k'	Velar
ǁ	Alveolar lateral	ʛ	Uvular	s'	Alveolar fricative
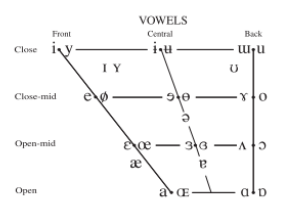
VOWELS

Where symbols appear in pairs, the one to the right represents a rounded vowel.

(Continued on inside back cover)
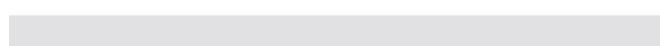
(Ladefoged and Johnson, 2011)

The upside denotes the places of the articulation, whereas the downside indicates the manners of articulation.

2.4. English Stridents

Chomsky and Halle in Ladefoged (1975: 246) note some features of strident sounds. First of all, they are marked acoustically as massively more turbulent than their non-strident partners. Finally, it is also much the same as the main features of sibilants. According to Ladefoged (1975: 247), the features found in strident sounds can be used to differentiate both dental and alveolar fricatives and between dental and alveolar affricates. Furthermore, Katamba (1989) proposes that strident is an acoustic criterion used to describe the noisier fricatives and affricates according to their relative loudness. According to Bleile (2004), stridents include labiodentals, alveolars, and post-alveolars in fricatives and affricates. All the same, the writer focuses on only alveolar fricatives, post-alveolar (palate alveolar) fricatives, and alveolar affricates. Carr (1993: 57) proposes how to differentiate fricative and affricate sounds by considering the presence of high frequency noise using the feature [+stri] and [-stri].

2.4.1. Alveolar fricatives

Carr (2013: 39) writes that when there is a constriction between the edge of the tongue and the alveolar ridge, namely the teeth ridge behind the upper teeth as the passive articulator, it produces sounds called alveolar. To make it simpler, Ladefoges (2011: 99) claims that in producing alveolar sounds, the edge of the tongue reaches the alveolar ridge. In other words, Carr (2013: 43-44) believes that alveolar fricatives are produced by entailing the blade or edge of the tongue into a narrow of close approximation with the alveolar ridge. The voiceless alveolar fricative is /s/ as in "sin", while its voiced partner is /z/ as in "zoo". In addition to

this, Ladefoged (2011: 56) proposes that these two sounds are also considered as sibilant sounds which are far louder than other voiceless fricatives, namely /f/ and /θ/.

2.4.2. Post-alveolar fricatives

Carr (2008: 133) assumes that post alveolar sounds are created with a stricture including the tip of the tongue and the area behind the alveolar ridge. Carr (2013: 43-44) claims that post-alveolar fricatives are produced by entailing the tip of the tongue into a narrow of close approximation with the post-alveolar region. To put it simpler, according to Carr (2013:40), if there is a constriction between the tip of the tongue and the post-alveolar region, it creates post-alveolar sounds. The voiceless post-alveolar fricative is /ʃ/ as in "ship", whereas its voiced counterpart is /ʒ/ as in "seizure". The air is about to escape, but the articulators are close together. Therefore, a friction is produced as the escapes of the air. In addition to this, Ladefoged (2011: 57) states that /ʒ/ is likely not able to emerge at the beginning of a word.

2.4.3. Post-alveolar affricates

Affricates happen when there is an entire closure between the edge of the tongue and the post-alveolar region. In spite of that, it seems like a fricative. It obviously includes audible frictions. Those frictions happen during the slow release step of the closure. Sounds created with a narrow of entire closure followed by a release step in which friction appears are called affricates. Thus, affricates are also considered as stops with a slow, fricative, release phase (Carr, 2008: 10; Carr,

2013: 52). In addition, Ladefoged (2011: 101) writes that affricates occur as the results of stops followed by fricatives created at the same place of articulation. Ladefoged (2011: 140) also proposes that affricates happen when there are air obstacles in tongues touching the palates of mouths behind the tips. The voiceless post-alveolar affricate is /tʃ/ as in "chip", whereas the voiced partner is /dʒ/ as in "joy". To make it simpler, Ladefoged (2011: 60) says that those are the strings of t + ʃ and d + ʒ. Those, according to Ladefoged (1975: 145), are the only affricates that can occur initially in the most forms of English. Carr (2008: 35) notes that affricates are constantly considered as contour segments because they are made up of a stop closure preceding a fricative release. Ladefoged (2011: 58) also assumes that affricate sounds are not really single sounds. In addition to this, Carr (2013:140) states that affricates are complex segments as they act like single segments, whereas they are consisted of internal structures, namely a closure element and a fricative release element, which are similar to two segments. According to Carr (2013: 54) there are versions of affricative transcriptions, for example /tʃ/ transcribed as /č/ and /dʒ/ as /ǰ/.

2.5. Stridents of Bahasa Indonesia

Every language has its own different rules because it shows what sounds are in in each language. However, Fromkin, Rodman, and Hyams (2011) propose that the types of rules and the natural classes they refer to are basically the same. Ladefoged (1975: 137) believes that there are large forms of consonant in languages in the world. Each has different places and even manners of articulation. However, a large number of non-English sounds can also be found in

other languages using different manners of articulation at the same places of articulation as in English.

According to Quinn (The Indonesian Language), Bahasa Indonesia does not belong to English which is a part of Indo-European language family. It is a part of Austronesian language family. There are some differences found including in the phonological rules. According to Ruijgrok (2008), fricatives such as /f, v, ɵ, ð, z, x, and ɣ/ are borrowed.

2.6. Phonetic Transcriptions

Yule (2010: 26) proposes that spoken English sounds do not always show the same rules when they are combined in written English letters. It is necessary to create a separate alphabet with a set of symbols called phonetic alphabets that represent sounds of English words and noun phrases containing vowels and consonants and to see what human vocal tracts included. Moreover, Gussman (2002): 2) assumes that English offers an extreme example of the differences between sounds and the orthographies. Debatably, Gussman claims that all languages should have shown a consistent one letter one sound and one sound one letter nodes.

In order to cope with kinds of ambiguities of segments occuring in speech, Gusmann (2002: 1) suggests that it is necessary to use phonetic transcriptions by considering the fundamental mechanism of spelling rules. For example, Gussman (2002: 1) claims that same words can have both different pronunciations and meanings as in "wind" and "lower". Contrarily, words with same phonetics can have different spellings. Finally, Gusmann also notes those with same phonetics

and pronunciations can have whether different words or meanings. Nevertheless, phonetic transcription is differed from phonological or phonemic transcription. In spite of that, Ladefoged (1975: 23) believes that in order to understand how phonetic transcriptions run, it needs to know the fundamentals of phonology.

(Ladefoged, 1975: 37) has arranged some phonetic transcriptions into:

1. Narrow transcription which is a kind of transcriptions that denotes more phonetic details, such as the use of small circle [̥] to indicate a voiceless sound. It uses square brackets ([ ]).

2. Broad transcription which is one type of transcriptions that adopts to designate a simpler set of symbols. Carr (2008: 24) considers it as a phonemic transcription. It uses slanted brackets (/ /).

   The writer applies the broad transcription in this research because the writer intends to analyze and to show how the sounds which are analyzed should be pronounced rather than to analyze every single phonological feature of the English words and noun phrases which are used as the data in this research (Atkielski, 2005: 2).

2.7. Pronunciation Problems

According to Ramelan (1985: 7), language learners whose learned languages' systems are grammatically different from their mother tongues will face problems in learning. In pronunciations, these differences can be found in the foreign sounds that are not available in their language systems, different distributions of same phonetic features, different allophones of the similar sounds. Accordingly, it is necessary for second language learners to be aware of correct pronunciations of

the target languages, particularly English, since failures in differentiating sounds will lead to misunderstandings. These differences are also due to the natures of pronunciation problems. Ramelan (1985: 9) assumes that language learners have to bear in minds the acoustic qualities and to exercise their organ of speech to produce their target languages.

2.8. Co-Articulation Effects

Ladefoged (2011: 2) assumes that no sound in any language that is hard to form by its native speakers. Ladefoged believes that every language has adequately different sounds that can be easily distinguished particularly by its native speakers according to articulatory ease, auditory distinctiveness, and many similar attributes which are considered as the barriers in developing sounds of a language. Moreover, how people's brains arrange and bear sounds in mind is also considered as the additional factor. Finally, Yule (2010: 42) states that different individuals in physically different would certainly have physically different vocal tracts. Accordingly, in purely physical terms, every individual might have different ways in pronouncing the same word or not in the same manner on every occasion. Nevertheless, Carr (1993: 23) writes that the occurrences of sounds are rule-governed. The same word itself will always have the same rules to be pronounced. It is studied in phonology.

In using a second or a foreign language, there might be deviations, which are considered as differences from standard rules, detected including phonological deviations. Kročilová (2008) states that phonological deviation occurs when sounds and pronunciations deviate phonologically. They cause mispronunciations

which are ways of pronouncing a word in wrong ways when saying a word. Ladefoged (2011: 174) says that speech errors happen by pulling out a syllable that is similar to another. They occur because people cannot always store bigger units combined together becoming a word than smaller units as individual speech sounds. Ladefoged (1975: 48) notes that a big problem in describing speech is that all utterances including co-articulation which is the overlapping of adjacent articulations. Yule (2010: 46) states that co-articulation effects well known as phonological processes are the ways of forming a sound almost as the same time as the next one. It happens because individuals usually pronounced speech consciously, almost in slow motions. Conversely, our speaking is generally so fast and spontaneous that it involves our articulators to move fast from one sound to the next without stopping. Furthermore, Ladefoged (1975: 48) proposes that English consonants often differ their places of articulation so that they become similar the next sounds. Moreover, Ladefoged (2011: 105) notes that the articulations of consonants are influenced by the movements of vocal organs, namely lips and tongue which are necessary for adjacent or neighboring sounds. That is why there might be some phonological processes in producing speech sounds.

Phonological processes include assimilation and elision involving feature changes (Fromkin et al, 2003: 284; Yule, 2010: 46). According to Gironda and Fabus (2011), there are a large number of phonological processes arranged into such as follows:

1. Substitutions

a. Baking

   It is the way of replacing alveolar sounds with velar sounds.

b. Fronting

   It is the way of substituting velar or palatal sounds with alveolar sounds.

c. Gliding

   It is the way of replacing /r/ sounds with /w/ and /l/ sounds with /w/ or /y/.

d. Stopping

   It is the way of changing fricative or affricative sounds to stop consonants.

e. Vowelization

   It is the way of substituting consonants with vowels, such as /wabbit/ for "rabbit",

   /jejəʊ/ for "yellow".

f. Affrication

   It is the way of substituting non affricates with affricates.

g. Deaffrication

   It is the way of changing affricates to fricatives or stops.

h. Alveolarization

   It is the way of replacing non alveolar sounds with alveolars.

i. Depalatalization

   It is the way of substituting palatals with non palatals.

j. Labialization

   It is the way of changing non labials to labials.

2. Assimilations

a. Assimilaion

According to Carr (2013: 54), assimilation is a kind of phonological processes in which a sound found in a sequence becomes more like to an adjacent sound. This process requires a principle of ease of articulation.

b. Denasalization

It is the way of replacing nasals to non nasals.

c. Devoicing

Carr (2008: 42) assumes that devoicing is a kind of assimilation process in which a voiced phoneme is sensed as a voiceless segment. It can be found in fricative alveolar and post-alveolar sounds in morpho-syntax in the phonetic form of the plural morpheme. For example, words indicated as ending in /z/ pronounced as voiced sounds; otherwise, in Indonesia, they tend to be pronounced as voiceless sounds /s/ instead (Carr, 2008: 104-105).

1. Final consonant devoicing

It is the way of substituting voiced consonants in the final positions of words with voiceless consonants.

2. Prevocalic voicing

It is the way of substituting voiceless consonants in the initial positions of words with voiced consonants.

d. Coalescence

According to Carr (2008: 29), coalescence also known as reciprocal assimilation is one process in which two sounds assimilate to each other. For example, in

English, this can be found in "Miss you". A sequence of alveolar /s/ preceding the palatal approximant /j/ will produce the post-alveolar sound /ʃ/. Hence, they are pronounced as /mIʃə/.

e. Reduplication

It is the way of restating full or partial syllables.

3. Syllable Structures

a. Cluster reduction

It is the way of reducing consonant clusters to single consonants.

b. Elision/Deletion

Another kind of phonological processes is elision. Carr (2008: 49) assumes that elision well-known as deletion is one type of phonological processes which occurs when a segment or syllable is omitted or unpronounced generally due to the phonological rules of individuals' mother tongues. Yule (2010: 48) believes that elision is a way of not pronouncing a segment in a word. For example, the word "friendship" is pronounced as /frenʃip/. There is a deletion in the segment /d/.

1. Final consonant deletion

It is the way of unpronouncing the final consonant in a word.

2. Initial consonant delition

It is the way of unpronouncing the initial consonant in a word.

3. Weak syllable delition

It is the way of omitting the weak syllable in a word, such as /nana/ for 'banana".

c. Epenthesis

It is the way of inserting a sound.

In addition to this, Ramelan (1985: 161) believes that there is another kind of sound changings, namely similitude. Similitude is a way of replacing a sound with another sound coming from the same phoneme.

CHAPTER 3

RESEARCH METHODS

This chapter deals with how the data, the population, the sample, and the methods used in obtaining and analyzing the data.

3.1. The Data and The Data Sources

The data used in this research are the English words and noun phrases. The data are taken from English words and noun phrases containing the English alveolar and post-alveolar stridents, namely /s, z, ʃ, ʒ, ʧ, and ʤ/, taken from "English Pronunciation Illustrated" written by John Trim (1975), page 56, 57, 58, 64, 65, 66, 67, 68, 69 which have been already arranged according to the each consonant. The source of the data are spoken data. Each word of the data is pronounced by ten English Department students of Universitas Diponegoro from the eighth semester which are chosen with the randomly purposive technique by choosing non-linguistic students who do not study phonetics and phonology. Accordingly, since they might not fully know how English words and noun phrases should be pronounced correctly, there might be mispronunciations in producing those words.

3.2. The Population, Sample, Sampling Techniques

The data are chosen with a purposive sampling technique by using a book proposed by John Trim (1975) which gives many examples of words containing

the English alveolar and post-alveolar strident sections. However, the writer limits the samples only on the words found in the English alveolar and post-alveolar strident sections.

3.3. The Methods

1. The Data Collecting Methods

Sudaryanto (2015: 3) assumed that there are two periods in investigating a language, namely searching a problem and solving the problem. The first period has been served in the first chapter. The second period which is the period of solving the problem deals with preparing data, analyzing the data, and serving the data. This chapter concerns with preparing the data. The study is a surveying qualitative research. The data are collected by using a non-participant observing method. The students are asked to pronounce the collected English words and noun phrases in order to identify the errors.

2. The Analyses Methods

In analyzing the obtained data, the writer uses the *padan* method claimed by Sudaryanto (2015). It is, then, followed by the *pilah unsur penentu (PUP)* technique using the articulatory phonetics. It uses consonants as its linguistic unit. It is combined with the *simak* method using *sadap* technique as its main technique. It is continued by the *simak bebas libat cakap* (*SBLC)*, audio-recording, and note-taking techniques. The writer uses an audio recorder to record the pronounced words. The collected data are trancribed phonetically by using broad transcriptions. The data are then categorized and observed in order to

identify and to categorize the kinds of deviation in producing the sounds the factors that cause the errors.

CHAPTER 4

RESULTS AND DISCUSSIONS

This chapter deals with the representations of the consonants mispronounced by the students along with the kinds of deviation and the factors causing the deviations.

After conducting the research, the writer found the kinds of the errors explained as follows.

1. Devoicing

There are at least 12 words which are considered as devoicing mispronounced by the students. All of the students mispronounce the word "jones" The voiced segment /z/ in the word "jones" is pronounced as the voiceless segment /s/. It should be pronounced as /ʤerəmɪ ˈʤəʊnz/, but all of the them mispronounce it as /ʤerəmɪ ˈʤɒns/ whch lead to the final consonant devoicing. All of the students also mispronounce the word "spinsters". It should be pronounced as /spɪnstəz/, but the voiced segment /z/ in the word "spinsters" is pronounced as the voiceless segment /s/. All of them mispronounce it as /spɪnstərs/. The other devoicing is found in the pronunciation of the word "camouflage". The correct pronunciation for this word is /kæməflɒːʒ/, but some students mispronounce it as /kamuflɒːʃ/ by mispronouncing the voiced segment /ʒ/ as the voiceless segment /ʃ/. Some students also mispronounce the word "orang". It should be pronounced as /ɒrɪnʤ/,

but the students mispronounce it as /ˈprɪntʃ/ by mispronouncing the segment /dʒ/ in as the voiceless segment /tʃ/. There is also a student who mispronounce the word "judge". The student mispronounce it as /dʒʌtʃ/, while the correct pronunciation is /dʒʌdʒ/. The voiced segment /dʒ/ in the word "judge" is pronounced as the voiceless segment /tʃ/. Next, most of the students also produce this kind of deviation in the word "cages". It should be pronounced as /keɪdʒɪz/, but most of them mispronounce it as /keɪdʒɪs/. The voiced segment /z/ is pronounced as the voiceless segment /s/. Most of the students also mispronounce the word "bars". They should have pronounced it as /bɑːz/, but the voiced segment /z/ in the words "bars" is pronounced as the voiceless segments /s/. Accordingly, they mispronounce it as /bɑːs/. Another devoicing is found in the word "daisies". Most of them mispronounce /deɪsɪs/ it as by pronouncing the voiced segments /z/ in the final position as the voiceless segments /s/. As a result, they mispronounce it as /deɪzɪz/. Some of the students also mispronounce the word "rouge" which should be pronounced as /ruːʒ/. They mispronounce it as /ruːʃ/. The voiced segment /ʒ/ is pronounced as the voiceless segment /ʃ/. Some of the students also mispronounce the voiced segment /z/ in the words "Charles", "his", "fens", "pens", and "Chinese" becoming its counterpart /s/. They should have pronounced them as /tʃɑːlz/, /ɪz/, /fenz/, /penz/, and /tʃaɪniːz/, but they mispronounce them as /tʃɑːls/, /hɪs/, /fens/, /pens/, and /tʃaɪniːs/.

2. Elision

The other kind of deviation found in this research is called elision or deletion. There are 2 words which are considered as elision. First, some of the students

make a deletion on the word "sausages". They omit the medial segment /s/ in the word "sausages". It should be pronounced as /sɒsɪʤɪs/, but they mispronounce it as /sɒʤɪs/. The second elision is found in the word "cages". Some of the students delete the final segment /z/. It should be pronounced as /keɪʤɪz/, but they mispronounce it as /keɪʤ/.

3. Assimilation

The third kind of deviation found in this research is assimilation. There is a student who substitutes the segment /s/ in the word "race" becoming more like to an adjacent segment /ʃ/. It should be pronounced as /ə ˈreɪs/, but she mispronounce it as /ə ˈreɪʃ/. There is also a student who replaces the initial segment /s/ in the word "sunshine" becoming more like to an adjacent segment /ʃ/. The correct pronunciation for this word is /sʌnʧaɪn/, but the student mispronounces it as /ʃʌnʧaɪn/. Many of the students also change the voiced segment /z/ in the word "prison" as the voiceless segments /s/. They should have pronounce it as /prɪzn/, but they produce a deviation by pronouncing it as /praɪsn/. There is also a student who mispronounces the word "saucer". The student changes the segment /s/ become more like to an adjacent segment /ʃ/. Hence, the student pronounces it as /e ˈsɔːʃə:/, while it should be pronounced as /ə ˈsɔːsə/. Most of the students also produce an assimilation in the word "daisies". Most of them mispronounce it as /deɪsɪs/ by replacing the voiced segments /z/ in the medial with the voiceless segments /s/. It should be pronounced as /deɪzɪz/.

4. Fronting

The students also produce the other kind of deviation called fronting. There is a student who replaces the post alveolar segment /ʃ/ in the word "sunshine" with the alveolar segment /s/. The student should have pronounced it as /sʌnʧaɪn/, but she pronounces it as /sʌnshaɪn/ instead. The student also applies the same rule in the word "rash" which should be pronounced as /ə ˈræʃ/. The student mispronounces as /ə ˈræs/. There is also a student who mispronounces the word "measure". The student mispronounces it as /ˌmɪsər/ by changing the post alveolar segment /ʒ/ with the alveolar segment /s/. It should be pronounced as /ˌmeʒə/. The other kind of fronting is found in the word "rubbish". The student substitutes the post alveolar segment /ʃ/ with the alveolar segment /s/. The student mispronounces it as /rʌbɪs/, while it should be pronounced as /rʌbɪʃ/. The post alveolar segment /ʃ/ in the word "shawl" is also replaced with the alveolar segment /s/. The correct pronunciation is /ə ˈʃɔ:l/. The students mispronounce it as /ə ˈshɔ:l/. The same rule is also applied in the word "treasure". It should be pronounced as /treʒə/, but the student mispronounces it as /treɪsə:/.

5. Cluster reduction

The other kind of deviation found in this research is cluster reduction. Most of the students reduce the consonant cluster /kʃ/ in the word "six" to one segment /k/. They pronounce it as /sɪk/ instead of /sɪkʃ/.

6. Addition of a sound

Some of the students pronounces the unnecessary segment /s/ in the final of the word "sheep". The correct pronunciation is /ʃiːp/. The students mispronounce it as /ʃiːp/.

7. Affrication

In this kind of deviation, there are some students who substitute the post alveolar segment /ʒ/ in the word "camouflage" with the affricative segment /ʧ/. It should be pronounced as /kæməflɒːʒ/, but they pronounce it as /kamufleːʧ/. In the same word, there are also some students who replace he post alveolar segment /ʒ/ with the affricative segment /ʤ/. They pronounce it as /kæməfleːʤ/. In the word "rouge", there is a student who changes the post alveolar segment /ʒ/ into the affricative segment /ʧ/. It is pronounced as /rɒːʧ/. The correct pronunciation is /ruːʒ/. Some students also replace the post alveolar segment /ʒ/ in the same word with the affricative segment /ʤ/. Some students pronounce it as /rɒːʤ/. In the word "fence", there some students who substitute the alveolar segment /s/ with the affricative segment /ʧ/. They pronounce it as /fenʧ/. It should be pronounced as /fens/. It also occur in the word "pence". It should be pronounced as /pens/, but there is a student who pronounces it as /penʧ/ instead.

8. Stopping

To begin with, there is a student who replaces the fricative segment /ʒ/ with the stop segment /k/ in the word "camouflage". The student mispronounces it as /kamufleɪkː/. The correct pronunciation for this word is /kæməflɒːʒ/. Some

students also mispronounce the word "arch" as /ənˈɑːk/. They change the affricative segment /ʧ/ into the stop segment /k/. The correct pronunciation is /ənˈɑːʧ/. There is also a student who mispronounces the word "age" as /eɪk/ by replacing the affricative segment /ʤ/ with the stop segment /k/. The correct pronunciation is /eɪʤɪd/. The other student applies the same rule on the word "large". The student mispronounces it as /lɑː/, while it should be pronounced as /lɑːʤ/. In the word "gingerbread", there is also a student who substitutes the affricative segments /ʤ/ with the stop segments /g/. It should be pronounced as /ʤɪnʤəbred/, but the student mispronounces it as /gɪŋɡɑːbred/ instead. The last stopping is found in the word "rouge". Some students replace the fricative segment /ʒ/ with the stop segment /k/. It should be pronounced as /ruːʒ/. They mispronounce it as /rɒːk/.

9. Coalescence

Many of the students mispronounce the word "measure". The voiced segment /ʒ/ in the word "measure" is pronounced as the voiceless segment /ʃ/. They mispronounce it as /meʃəː/. It should be pronounced as /meʒə/. Most of the students also apply the same rule on the words "invasion", "treasure", and "vision". They mispronounce it as /ɪnˈfeɪʃn/, /trɪʃər/, and /əˈfɪʃn/. They should be pronounced as /ɪnˈveɪʒn/, /treʒə/, and /vɪʒn/

10. Deaffrication

This kind of deviation is also found in this research. There is who student who mispronounces the word "orange" by changing the affricative segment /ʤ/ into

the fricative segment /s/. The student should have pronounced it as /ɒrɪndʒ/ instead of /ɒrɪns/.

11. Velar assimilation

Velar assimilation is also found in the word "gingerbread". The affricative segments /dʒ/ are substituted with the velar segments /g/. It should be pronounced as /dʒɪndʒəbred/. There is a student who mispronounces it as /Gɪŋgərbred/.

12. Affrication

The last kind of deviation found is affrication. There are at least six affrications found in this research. Firstly, some students mispronounce the word "camouflage" by replacing the post alveolar segment /ʒ/ with the affricative segment /ʧ/. They mispronounce it as /kamufle:ʧ/. It should be pronounced as /kæməflɒːʒ/. On the same word, some students changing the post alveolar segment /ʒ/ into the affricative segment /dʒ/. They mispronounce it as /kæməfle:dʒ/. There is also a student who mispronounce the word "rouge" by replacing the post alveolar segment /ʒ/ with the affricative segment /ʧ/. It should be pronounced as /ru:ʒ/, but the student mispronounces it as /rɒ:ʧ/. Using the same word, some of the students also substitute the post alveolar segment /ʒ/ with the affricative segment /dʒ/. They mispronounce it as /rɒ:dʒ/. The word "fence" and "pence" are also mispronounced by some of the students. The alveolar segment /s/ is substituted with the affricative segment /ʧ/. They mispronounce them as /fenʧ/ and /penʧ/. The correct pronunciation for this word is /fens/ and /pens/.

Meanwhile, the kinds of deviation mentioned above occur due to some reasons as follow.

1. Devoicing

The most common error produced by the students is devoicing. In English, the sound /s/ that follows a voiced consonant will be realized as a phone [z]. Furthermore, the errors occur because some consonants in Bahasa Indonesia which have same phonetic features as in English have different distributions as generally shown in the segment /z/. Both English and Bahasa Indonesia have the segment /z/. All the same, both have different distributions. In English, it can occur either in an initial, in a medial, or in a final position. Meanwhile, in Bahasa Indonesia, there is no /z/ segment which occurs in a final position. As a consequence, the phone [z] in the word "Jones" /ʤəʊnz'/ which represents the letter "s" tends to be pronounced as a voiceless counterpart of the segment /z/ namely /s/. In addition, both the voiced and the voiceless segments do not di fferentiate any meaning in Bahasa Indonesia. Another example can obviously be found in the word "pens" /penz/ which has a minimal pair "pence" /pens/. The students tend to pronounce it as /pens/ which means there is no difference in pronouncing the word "pens" /penz/ and "pence" /pens/ which clearly have different meanings. The students should have been aware that both /z/ and /s/ in the word "pens" and "pence" have distinctive or phonemic features, namely voicing feature which leads to differentiating the meanings. Both are allophones of different phonemes because if it substitutes each other, it will produce a different meaning.

2. Fronting

Another deviation produced by the students can be categorized into fronting. Some of the students tend to replace the post alveolar segment /ʒ/ as in the word "measure" /ˌmeʒə/ with the alveolar segment /s/. It is because there is no /ʒ/ segment in Bahasa Indonesia. Another example can be found in the mispronunciation of the segment /ʒ/ in the word "treasure" /treʒə/. The post alveolar segment /ʒ/ is substituted with the alveolar segment /s/ as the segment letter "s" has different variants both in English and Bahasa Indonesia. In English, it can be represented by the segments /ʃ, ʒ, z/ and so on. In Bahasa Indonesia, there is no variant. Every "s" letter seems to be produced as the same /s/ segment.

3. Cluster reduction

In Bahasa Indonesia, there is no word that has a consonant cluster that occurs in a final position. Accordingly, there is no wonder that the students have difficulties in producing the consonant cluster /kʃ/ as found in the word "six" /sɪkʃ/. They tend to omit /kʃ/ to one segment /k/.

4. Affrication

The students tend to replace the non affricative segments with the affricates. For instance, the students substitute the segments /ʒ/ with the segments /ʧ/ in the words "camouflage" /kæməflɒːʒ/ and "rouge" /ruːʒ/. It is because as the students of English department, it has beared in minds that the letter *"g"* in English can also be represented by post-alveolar affricates such as /ʤ, ʧ/: for example, it can be found in the word "sausages" /sɒsɪʤɪs/. Consequently, the students mispronounced the letter "g" which should be represented by /ʒ/ by substituting it

with the voiceless affricate instead. Another example can be found in the words "fence" /fens/ and "pence" /pens/. The alveolar segment /s/ is substituted with the affricate /ʧ/. It is because the students transfer their native sound /c/ to the similar English segment /ʧ/.

5. Velar assimilation

The students also make deviations in producing the affricative segments /ʤ/ to represent the letter "g". It can be found in the word "gingerbread". The students mispronounced the affricative segments /ʤ/ by substituting them with the velar segments /g/ on account of transferring their native sounds into their foreign language. In Bahasa Indonesia, the letter "g" is pronounced as the segment /g/. In English, it can be represented by the segment /ʤ/. It also occurs in the words "arch" /ɑːʧ/ in which the affricative segment /ʧ/ is substituted with the stop segment /k/. It occurs due to the influence of a borrowed phoneme from Arabic velar /x/ to represent "ch" read as "kh".

6. Elision

The segments which are mostly omitted by the students are the fricative alveolar segments /z/ and /s/. The students tend to omit them particularly when they occur in final positions. It can be seen in the words "cages" /keɪʤɪz/ and "sausages" /sɒsɪʤɪs/. It is because in English, there is a word such as "begged" /begd/ in which the sound /g/ has the similar position to those in the words "cages" and "sausages". Hence, the student applies the same rule on the words "cages" and "sausages".

7. Deaffrication

There is also a student who substitutes the affricative segment /ʤ/ in the word "orange" with the fricative segment /s/. It is because affricates happen when there is an entire closure between the edge of the tongue and the post-alveolar region. In spite of that, it seems like a fricative. Therefore, the student substitutes the affricative segment /ʤ/ with the fricative segment /s/ instead.

8. Stopping

The students also make errors in producing non stop segments such as /ʒ, ʧ, ʤ/ by substituting them with the stop segments. The fricative segment /ʒ/ in the word "rouge" /ruːʒ/ is substituted with the stop segment /k/. It is because Indonesian people tend to produce the letter "g" as a final consonant as a voiceless stop /k/ which also can be found in the words "aged" /eɪʤɪd/ and "large" /əˈlɑːʤ/ in which the affricative segments /ʤ/ are substituted with the stop segments /k/, and also "camouflage" /kæməflɒːʒ/ in which the fricative segment /ʒ/ is substituted with the stop segment /k/. It also occurs in the word "gingerbead" /ʤɪnʤəbred/. The affricative segments /ʤ/ are substituted with the stop segments /g/. It is because the student transfers her native sound to English.

9. Addition of a segment

The students also pronounce the unnecessary segment /s/ in the final of the word "sheep" /ʃiːp/ showing a generalization that an addition of a segment occurs because of phonotactic restraints produced by the speakers.

10. Assimilation

Another devoicing problem can be seen in the production of the segment /z/ in the word "prison" /prɪzn/. 5 of 10 students substitute the /z/ segment with the /s/ segment as a result of transferring their native sounds into their foreign language. In English, the letter "s" is represented by the segment /z/ in the word "prison", whereas the students replace it with an adjacent segment /s/. Another exmple can be found in the words such as "orange" /ɒrɪndʒ/. Some of the students tend to replace the voiced segment /dʒ/ with its voiceless partners /tʃ/.

11. Labialization

The student also mispronounces the fricative segment /ʒ/ by substituting it with the labial segment /f/. It can be seen in the word "rouge". It is because as an EFL student, she has been familiar with the word such as "laugh" which is pronounced as /lɑ:f/. For this reason, she also applies the same rule in the word "rough".

12. Coalescence

Finally, the students also mispronounce the segment such as /ʒ/ as found in the word "treasure" /treʒə/. It happens because there is no /ʒ/ segment in bahasa Indonesia. Moreover, the students tend to produce coalescences by assimilating the sound /s/ with the sound /u/ becoming the /ʃ/ segment.

CHAPTER 5

CONCLUSIONS

As is shown in the results and discussions, it can be concluded that the kinds of deviation in producing strident fricative English consonants by the final year English students can be categorized into twelve kinds of phonological process, namely devoicing, fronting, cluster reduction, affrication, velar assimilation, elision, de-affrication, stopping, addition of a segment, assimilation, labialization, and coalescence. The reasons for these deviations are also due to several factors. To begin with, it is obvious that English and Bahasa Indonesia have different phonological rules. Secondly, the errors occur since some sounds in both English and Bahasa Indonesia have different realizations. Furthermore, the errors occur because some consonants in Bahasa Indonesia which have same phonetic features as in English have different distributions, such as / ʧ, ʤ/. Another reason is that there are no elements such as / ʃ, ʒ/ and so on in Bahasa Indonesia. Next, some letters in both English and Bahasa Indonesia have different realizations. Then, In Bahasa Indonesia, there is no word that has a consonant cluster that occurs in its final position. Fourth, the students tend to apply the same phonological rules as in different words. The students also tend to apply the same rule. Then, there is also a student who makes a kind of deviation such as assimilation by substituting a segment because it has an entire closure between the edge of the tongue and the

post-alveolar region. In spite of that, it seems like a fricative. Finally, the errors also happen due to phonotactic restraints produced by the speakers.

According to the research conducted, the writer suggest that future researchers can develop the research on other consonants such as /t, d, f, v, ɵ, ð/ since these consonants are also often mispronounced by the students.

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APPENDIX

Table 1. The list of words and noun phrases

	List of the Words and the Noun Phrases	Transcriptions
1.	A church	/ə ˈtʃɜːtʃ/
2.	A jelly	/ə ˈdʒelɪ/
3.	Jeremy Jones	/dʒerəmɪ ˈdʒəʊnz/
4.	A jug	/ə ˈdʒʌg/
5.	Some spinsters	/səm ˈspɪnstəz/
6.	Seven sausages	/sevn ˈsɒsɪdʒɪs/
7.	A zoo	/ə ˈzuː/
8.	A zebra	/ə ˈzebrə/
9.	A sum	/ə ˈsʌm/
10.	A race	/ə ˈreɪs/
11.	Sunshine	/sʌntʃaɪn/
12.	A rash	/ə ˈræʃ/
13.	Six sheep	/sɪkʃ ˈʃiːp/
14.	Camouflage	/kæməflɒːʒ/
15.	A tape measure	/ə ˈteɪp ˌmeʒə/
16.	An arch	/ən ˈɑːtʃ/
17.	A juicy orange	/ə ˈdʒuːsɪ ˈɒrɪndʒ/

18.	An aged judge	/ən ˈeɪdʒɪd ˈdʒʌdʒ/
19.	A chill	/ə ˈtʃɪl/
20.	A saw	/ə ˈsɔː/
21.	Cages	/keɪdʒɪz/
22.	A large jug	/ə ˈlɑːdʒ ˈdʒʌg/
23.	A jolly jury	/ə ˈdʒɒlɪ ˈdʒʊərɪ/
24.	Jill	/dʒɪl/
25.	Several mice	/sevərəl ˈmaɪs/
26.	Prison bars	/prɪzn ˈbɑːz/
27.	A zebu	/ə ziːbjuː/
28.	A mouse	/ə ˈmaʊs/
29.	Rubbish	/rʌbɪʃ/
30.	A shawl	/ə ˈʃɔːl/
31.	Invasion	/ɪn ˈveɪʒn/
32.	Treasure	/treʒə/
33.	Gingerbread	/dʒɪndʒəbred/
34.	A chick	/ə ˈtʃɪk/
35.	A jam-jar	/ə ˈdʒæm ˌ dʒɑː/
36.	A saucer	/ə ˈsɔːsə/
37.	Daisies	/deɪzɪz/
38.	A pass	/ə ˈpɑːs/
39.	Sheila	/ʃiːlə/

40.	A traditional politician	/ə trə ˈdɪʃənl pɒlɪ ˈtɪʃn/
41.	A vision	/ə ˈvɪʒn/
42.	Rouge	/ruːʒ/
43.	A watch-chain and watch	/ə ˈwɒʧ- ʧeɪn ənd ˈwɒʧ/
44.	Charles scratching his itching chin	/ʧɑːlz ˈskræʧɪŋ ɪz ˈɪʧɪŋ ˈʧɪn/
45.	An endless fence across the endless fens	/ən ˈendlɪs ˈfens ə ˈkrɒs ðɪ endlɪs ˈfenz/
46.	A few pens costing a few pence	/ə ˈfjuː ˈpenz ˌkɒstɪŋ ə fjuː ˈpens/
47.	A huge treasure-chest on a large Chinese junk	/ə ˈhjuːʤ ˈtreʒə- ʧest ɒn ə ˈlɑʤ ˈʧaɪniːz ˈʤʌŋk/
48.	A mission station in the bush	/ə ˈmɪʃn ˌsteɪʃn ɪn ðə ˈbʊʃ/