An analysis of students' pronunciation errors of friction consonants in spoken production

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ABSTRACT
Pronunciation is an essential component of communicative competence, yet many EFL learners make pronunciation errors frequently. The objectives of this research were to find out i) pronunciation errors of friction consonants that students made frequently and ii) the factors that influenced the errors. The approach of this research was qualitative, with a total of 20 second-grade student participants of a private senior high school in Bandar Lampung, Indonesia randomly taking part in the current study. A performance assessment rubric was used to collect the data. The data were analyzed by using the formula of Measures of Central Tendency, using the SPSS 26.0 software for Windows. The result showed that the friction consonants that the students frequently produced were /v/ (31.5%) and /ʒ/ (26%). In addition, the students’ responses showed that there were several contributing factors resulting in their pronunciation errors, including lack of exposure, first language (L1) background, lack of confidence, and attitude. The implications of the findings and suggestions for future research are also discussed.

KEYWORDS
Pronunciation, pronunciation errors, friction consonants, error analysis

Introduction
Speaking is valuable to be mastered in communication. It is essential as the way of language learning. Learners can communicate with others to achieve certain goals or express their opinions, intentions, viewpoints, and hopes through speaking (Samy, 2015). Speaking is an essential factor that can increase the quality of communication in English. According to Harris (1969), there are five aspects of speaking skills: vocabulary, pronunciation, fluency, grammar, and comprehension.

As English increasingly becomes the language used for international communication, it is vital students are able to exchange meaning effectively. According to Terrell & Brown (1981) the goal of the language learners is to make sure that they can communicate what they have in mind effectively; they have to be understood when they are uttering the words. From the statement, pronunciation becomes an important aspect for language learners to understand when the communication occurs.

The study of English as a foreign language (EFL) learners’ pronunciation errors has become an important aspect of the investigation in recent years. Pronunciation is an essential component of communicative competence (Nikbakht, 2011), yet many EFL learners frequently make pronunciation errors. Studies conducted by Geylanioglu & Dikilitaş (2016), Al Mafaees (2020), Wuri (2014), Dabaghi & Tavakoli (2009), and Hojati (2013) found that pronunciation errors are frequently made by EFL learners. The error in this context refers to a systematic and consistent deviation, which is dissimilar to mistake, something that is done with consciousness (Azevedo & Corder, 1983). Pronunciation errors are closely related to speech sounds, namely consonant, vowel, and diphthong (Al-Hattami, 2010; Taqi et al., 2018; Roach 2020). For example, many language learners have difficulty in differentiating the pronunciation of /v/ and /ʃ/, such as "vast". They pronounce this word /vəːst/ of which the proper pronunciation is /ʃəːst/.

It is common that EFL learners tend to make pronunciation errors (see, for example, Geylanioglu & Dikilitaş, 2016; Wuri, 2014; Al Mafaees, 2020; Dabaghi & Tavakoli, 2009; Hojati, 2013). Based on
interviews with an English teacher at a private senior high school in Bandar Lampung, it was found out that students make errors when speaking. The English teacher also stated that students find it difficult to pronounce English words with certain consonants, including friction consonants. Despite the early observation, what pronunciation errors of friction consonants and why students make such errors when pronouncing English words have remained unclear.

Therefore, it was of interest to conduct the present research which was aimed to find out high school students’ pronunciation errors of friction consonants and investigate the factors that influence the errors.

**Literature review**

**Error analysis**

According to Schmidt & Richards (2010) error analysis is a technique for identifying, classifying, and systematically interpreting the unacceptable forms of a language in the production data of someone learning either a second or foreign language. Furthermore, Ellis (1994) defines error analysis as a procedure, adopted in this study which includes collecting samples of language learners, identifying, describing the errors, and evaluating the errors made by the language learners.

**Speaking and pronunciation error**

People should have a good speaking ability to communicate efficiently and effectively with others. According to Harris (1969), there are five aspects of speaking skills: vocabulary, pronunciation, fluency, grammar, and comprehension. Pronunciation is viewed as one of the aspects of speaking. Pronunciation is the way a word or a language is spoken (Pourhosein, 2011). It is the act of producing the sounds of speech, including articulation, stress, and intonation; it refers to some standard of correctness or acceptability.

Many EFL learners have difficulties with English pronunciation even after years of learning the language. EFL students have difficulties in pronunciation because they are not frequently exposed to the target language (Gilakjani et al., 2011). Pronunciation errors can lead to many cases of misunderstanding in communication.

**Friction consonants**

According to O’Connor (1980) the friction or fricative consonant is a speech sound produced by pushing the air through a narrow opening where it causes friction of various kinds. There are nine consonants phonemes whose main sounds all have friction as their most important feature, they are /f/, /θ/, /ð/, /s/, /z/, /ʃ/, /ʒ/, and /h/. The fricative sounds /v/, /θ/, /ð/, and /ʒ/ are voiced, they are pronounced with vibration in the vocal cords, while the sounds /f/, /θ/, /s/, /ʃ/, and /h/ are voiceless, it produced only with air.

**Contributing factors in pronunciation errors**

Pronunciation error in speaking, according to some experts, is most likely influenced by several factors. Those factors include first language (L1) background (Avery & Ehrlich, 1992), age (Lenneberg et al., 1967), attitude (Elliot, 1995), and exposure (Moyer, 2007).

**Methods**

**Participants**

This study adopted a descriptive qualitative approach to provide qualitative data regarding errors made by the second-grade students of a private senior high school in Bandar Lampung, Indonesia, with a total of 15 male and 5 male participants taking part in the current study.

**Instrument**

The instrument used in this study was an oral performance rubric, an act of presenting something with a student’s mouth (Palm, 2008).

**Data analysis**

The collected data were analysed by using measures of central tendency also known as a statistical average using the following formula.
\[ \text{Mean (or } X\text{) }^* = \frac{\sum X_i}{n} = \frac{X_1 + X_2 + \cdots + X_n}{n} \]

\( X \) = mean (pronounced as \( X \) bar)
\( \sum \) = symbol for summation
\( X_i \) = total of errors of all students 1, 2, …, \( n \) (errors of each student)
\( n \) = total number of students
\( P = \frac{F}{N} \times 100\% \)
\( P \) = percentage of each error type
\( F \) = frequency of each error type
\( N \) = number of overall errors.

**Results**

**Performance assessment**

According to the results of analysis, it was found that the students frequently make three consonants, which include /\( v \)/, /\( ð \)/, and /\( θ \)/. To take a case in point concerned with the frequency of each error type classified in a pre-test, Table 1 and Table 2 below illustrate the case.

**Table 1.** The average error of all students (mean)

| Statistics |               |
|------------|---------------|
| N Valid    | 20            |
| Missing    | 0             |
| Mean       | 9.20          |
| Minimum    | 0             |
| Maximum    | 18            |

Based on the performance assessment, which involved 20 students, the total of pronunciation errors was 184. The average error of all students (mean) was 9.20.

**Table 2.** Frequencies of pronunciation errors of friction consonants

| Error Types | /f/ | /v/ | /ð/ | /θ/ | /s/ | /z/ | /ʃ/ | /ʒ/ | /h/ |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Students    |     |     |     |     |     |     |     |     |     |
| 1           | 0   | 4   | 1   | 0   | 0   | 0   | 0   | 3   | 0   |
| 2           | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   |
| 3           | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   |
| 4           | 0   | 3   | 1   | 0   | 1   | 0   | 3   |
| 5           | 0   | 0   | 0   | 0   | 0   | 0   |
| 6           | 0   | 3   | 0   | 1   | 0   | 1   | 2   |
| 7           | 0   | 3   | 2   | 1   | 0   | 1   | 2   |
| 8           | 1   | 4   | 2   | 2   | 0   | 1   |
| 9           | 0   | 4   | 2   | 1   | 0   | 2   |
| 10          | 0   | 3   | 0   | 1   | 1   | 1   | 2   |
| 11          | 0   | 3   | 0   | 1   | 1   | 1   |
| 12          | 0   | 4   | 2   | 1   | 1   | 2   |
| 13          | 0   | 4   | 1   | 1   | 0   | 2   |
| 14          | 1   | 4   | 3   | 3   | 0   | 1   |
| 15          | 0   | 0   | 0   | 0   | 0   | 0   |
| 16          | 0   | 4   | 2   | 2   | 1   | 0   |
| 17          | 0   | 3   | 2   | 1   | 0   | 1   |
| 18          | 0   | 4   | 0   | 0   | 0   | 1   |
| 19          | 0   | 4   | 0   | 0   | 0   | 2   |
| 20          | 0   | 4   | 3   | 1   | 0   | 1   |
| **Total**   | 2   | 58  | 21  | 18  | 5   | 12  |

Table 2, as can be observed above, noticeably indicates that the students had difficulty in pronouncing /\( f \)/, /\( v \)/, /\( ð \)/, /\( θ \)/, /\( s \)/, /\( z \)/, /\( ʃ \)/ and /\( ʒ \)/. The pronunciation error of friction consonants that students frequently made was
/v/ with 58 errors. Meanwhile, the pronunciation error of /ʒ/ type was produced 48 times. The students made 21 errors in pronouncing /θ/ and 20 errors for /ʃ/ sound, whereas students made errors in pronouncing /ð/ as many as 18 errors. The pronunciation error of /z/ type was produced 12 times. Certainly, the least frequently made errors in their pronunciation were /f/ as many as two errors and /s/ as many as five errors. There was no error in /h/ sound during the performance assessment. In addition, the percentage of each error type is also needed to be provided to identify the most and the least produced error types. We found the mode by applying the formula of Measures of Central Tendency.

Table 3. Percentage of each error type

| Error Types | Percentage |
|-------------|------------|
| /f/         | 1%         |
| /v/         | 31.5%      |
| /θ/         | 11.4%      |
| /ð/         | 9.7%       |
| /s/         | 2.7%       |
| /z/         | 6.5%       |
| /ʃ/         | 10.8%      |
| /ʒ/         | 26%        |
| /h/         | 0          |

In general, it can be deduced from Table 4.3 that the students had difficulty in pronouncing /v/ (31.5%) and /ʒ/ (26%). Besides, they also produced errors in pronouncing /θ/ as many 11.4% and /ʃ/ amount to 10.8%. Meanwhile, the friction consonant /ð/ accounts for 9.7%. Certainly, as could be seen from the rates, /z/ (6.5%), /s/ (2.7%), and /f/ as many as 1%.

Students' response regarding difficulties in pronunciation of friction consonants

Almost all the students believed that their unfamiliarity of English sounds caused their difficulties. They said that there were some words with /ʒ/ and /θ/ sounds which they had never heard as written in the reason column on the performance assessment sheet:

Student 1: "Those words are rarely used in our daily conversation."

Besides, some of the students believed that their difficulties were caused by L1 background. Student 8 said that she speaks Javanese at home. They also speak Lampungese and Sundanese with their family. Students 13 said she is not good at English because there was no English subject in boarding school. She always spoke Arabic with their friends and the teachers.

Student 2, Student 3, Student 6, Student 12, Student 14, and Student 17 felt confused in pronouncing /f/ and /v/. As can be found in the audio transcription in the Appendix, many students encountered difficulty in differentiating the pronunciation of /v/ and /f/, such as "fast" and "vast". They thought that the sounds are similar.

Student 3: "The pronunciation is almost the same. It's quite tricky."

Attitude also became one of the reasons why they felt difficulty in pronouncing English words with friction consonants. As said by Student 6, Student 8, Student 12 said that they had no interest in English. Meanwhile, Student 19 and 20 said that they lack confidence in pronouncing English words as written in the reason column on the performance assessment sheet:

Student 20: "bingung mengucapkannya, sehingga tidak percaya diri."

Many students did not realise that they made pronunciation errors in performance assessment. They thought they had pronounced the English words correctly, such as "genre", "vast", and "finish". Meanwhile, some of the students admitted that they were realise. They believed that they made some errors and it caused by confusion and they did not know how to pronounce those words correctly, such as "bathe" and "beige".

Based on the data, there were four students that made almost no errors during the tests; those were Student 2, Student 3, Student 5, and Student 15. They said that they love English, especially speaking. Besides, they also often participate in English competitions such as speech and newscasting. Student 3 and Student 15 believed
that they could pronounce English words well because they usually watch English movies or videos and listen to the pronunciation.

Discussion

Based on the result, the students under investigation had difficulty in pronouncing minimal pairs of friction consonants. This finding resonates with Wuri's (2014) finding that students find it hard to pronounce consonant sounds including friction consonants. The causes of students' errors were dialect, accent, the similarities of pronouncing the words between L1 and L2, and the lack of students' interlanguage knowledge.

The friction consonants that the students produced frequently were /v/ (31.5%) and /ʒ/ (26%). A research by Dabaghi & Tavakoli (2009) found that the most mispronounced sound was the /ʒ/. Almost 90% of the students could not articulate this consonant correctly. Meanwhile, Anggrarini & Istiqomah (2019) found the students pronounced /t/ instead of making a sound of /v/.

Supported by students' responses, the students believed that their errors were caused by some factors. The lack of exposure became the first factor. Some of them believed that they were confused and they did not know how to pronounce those English words correctly. Moyer (2007) found that experience with more orientation to the language appears to be important factors in developing native-like pronunciation, for example, children who go to English-speaking school may have a better pronunciation than those who study English only a couple of times a week.

The second factor was L1 background. Thus, the particular result was in line with Avery & Ehrlich (1992) who stated that language learners from different L1 backgrounds are likely to produce pronunciation errors when they learning the target language. Some participants speak Lampungnese, Javanese, Bahasa Indonesia, and Arabic at their home. It is also supported by a research undertaken by Al Mafalees (2020) which found one of the causes was the Yemeni students' mother tongue background that influenced the target language. The third factor was the lack of confidence. Some of the students said that they often feel hesitant in pronouncing English words.

As clearly stated by Elliot (1995) language learners who are more concerned about their pronunciation have better pronunciation of English as a target language. Attitude became the last factor that influenced students' pronunciation errors. The students said that they had no interest in English. In other words, the language learners who have a negative attitude for English will be less successful and are likely to produce pronunciation errors. Therefore, it can be concluded that the factors mentioned can influence the students' pronunciation especially in friction consonants. This can be a concern for the teachers to determine the appropriate way to improve the students' pronunciation.

Conclusion

The second-year students under investigation found it hard to pronounce the friction consonants, including /t/, /v/, /θ/, /ð/, /s/, /z/, /ʃ/, and /ʒ/. The friction consonants that the students produced frequently were v/ (31.5%) and /ʒ/ (26%). Some factors caused the students' pronunciation errors, including lack of exposure; inadequate encouragement to practice English outside the classroom to get familiar with English, their L1 background (Lampungnese, Javanese, Indonesian, and Arabic). In addition, they also lacked of confidence becoming one of the factors that caused them incorrectly pronounce English. Finally, their attitude also contributed to their pronunciation errors.

Since this study only focused on students' pronunciation errors of friction consonants, future researchers are hence suggested to investigate other types of consonants such as stop consonants, nasal consonants, lateral consonants, and gliding consonants. Most importantly, future researchers are expected to find a good method or technique to improve students' English speaking skill especially pronunciation.

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