

**THE ERROR ANALYSIS OF THE PRONUNCIATION OF DENTAL
FRICATIVE CONSONANTS (/θ/,/ð/) BY THE STUDENTS OF ENGLISH
EDUCATION STUDY PROGRAM FACULTY OF TEACHER TRAINING
AND EDUCATION SRIWIJAYA UNIVERSITY**

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Abstract: Pronunciation is one of the key factors in communication. An error in pronunciation might cause a miscommunication in meaning. This descriptive analytical descriptive study tries to find pattern in error of the pronunciation of dental fricative consonants (/θ/,/ð/) by students of English Education Study Program Faculty of Teacher Training and Education Sriwijaya University on the onset, in the middle and coda of a word. A randomly taken sample of 120 students was taken from a population of 240 students of the study program. The sample was asked to pronounce 30 words in which some of the words were distractors and the rest contained the consonants on onset, in medial and coda. The pronunciations were recorded and then analyzed. A native speaker of English was involved in analyzing the errors. The results show that in pronouncing the two consonants the most errors that arise are that they were pronounced as /t/, /d/ which is the closest equivalents of the consonants in Bahasa Indonesia. While other sounds, i.e. /s/, /d/, /θ/, and /ð/, also occurs but in much lower frequency. It is suggested that the result of the study can be used in other similar studies and also used as teaching and learning material in relevant courses.

Keywords: *errors, pronunciation, dental fricatives, consonant*

Pronunciation is one of the main aspects of language that help learners of English as a Foreign Language to communicate in English, as argued by Zimmermann (2004) that the pronunciation is very important because it is the first thing to note about the person's ability to speak, in this case the English language. Errors in pronunciation of sounds in one word can eventually lead to misunderstandings. Even many foreign language learners believe that the major difficulties they experience in

communicating in English is the pronunciation. In general, they assume that the pronunciation errors is a major problem in communication (Derwing & Rossiter, 2002; Al-Kahtany, 1995)

Previous studies show that foreign language learner made mistakes in pronouncing words in target language, such as the deletion of the consonants at the end of words by learners of English in Korean and Portuguese (Tarone, 1980), the replacement of the vowel / ü / with / u / by learners English in France,

replacement of consonants / θ /, / ð / with / t /, / d / by the speakers Farouse learning English (Hjølum & Mees, 2012), and similar findings can also be seen in learners of English in Gorontalo, (Jumrina, 2014).

A preliminary observations done in the English Education Study Program Sriwijaya University indicate that errors in pronunciation of consonants / θ /, / ð /, / ʃ / and / ʒ / also takes place, with most errors are in / θ /, / ð /. Regarding the errors, Weinberger (1997) found that error occurs in the absence of certain sounds in the native language, and as a result, the learners replace them with similar sounds. In other words error occurs because of the differences between source language and target language.

Many differences exist when the two languages if compared directly, such as differences in phonemic inventory, character of sounds, the distribution of phonemes, syllable structure and rhythm (Chan and Li, 2000). Indonesian and English in general have such differences, including different phonemic inventory and distribution of phonemes. Only 47 out of the 566 languages in inventory by UPSID (UCLA phonological Segment Inventory Database) (Maddieson 2005) have / θ / and / ð / in their inventory (Maddieson 2005). English and Arabic are examples of languages that have them, and Indonesia is not one of them. Furthermore, Cruttenden (2008) states that these two phonemes are very difficult and problematic to master.

Analyzing the errors can benefit the teaching of pronunciation since it can provide an insight of what needs to be improved and in the end might result in a proper technique in teaching it. Therefore, this study focuses on describing the errors in pronunciation of dental fricatives (/ θ /, / ð /) by students

of English Education Study Program Sriwijaya University.

METHODOLOGY

This is an analytical descriptive study in which the analysis is based on the observations of study objects. Initially, preliminary observations of error in pronunciation were done to see the tendency of it in the English Education study program. A literature study was conducted to see patterns of error in other studies.

Error (error) in this study is the pronunciation produced by learners of English as a Foreign Language in English Education Study Program Sriwijaya University which deviates from the standard rules understood by native speakers.

This study only discusses error in pronouncing consonants of voiceless dental fricative (/ θ /) and voiced dental fricative (/ ð /). Pronunciation Error in Voiceless dental fricative (/ θ /) is the pronunciation that deviate from the following: the position of active articulator, i.e. tongue, touching the passive articulator, i.e. the upper teeth, forming air resistance but at the same time providing a small gap for the passage of air; and the vocal cords do not vibrate. The pronunciation of voiced dental fricative consonant (/ ð /) is the same as the Voiceless dental fricative (/ θ /) except that in this consonant vocal cords vibrate.

The population in this study is 240 students of English education Study Program in academic year 2016/2017 Semester 1, 3, and 5. A number of 120 students were selected randomly and proportionally from the population. For more details, see Table 1.

Table 1. Population and Sample

No	Semester	Population	Sampel
1	I	80	40
2	III	80	40
3	V	80	40
Total		240	120

An English native speaker from the United States of America was involved to rate the students' pronunciation.

Data collection in this study was conducted using word list which contains 30 words of English consisting of the target words and distracters. The target words will focus on pronunciation of voiceless and voiced dental fricatives (/θ/, /ð/) on the onset, in the middle and coda.

This word list, before it was used for the recording process, was given to the native speaker to check its content validity. In addition, the native speaker was also requested to pronounce the words and was recorded. The word list was then given to research subjects and they were given 15 minutes to check the list and given an opportunity to clarify the content of the list. The recording process was carried out in the language laboratory of Faculty of Teacher Training and Education and in the language laboratory of UPT Bahasa Sriwijaya University.

See Table 2 to see samples of words in the word list.

Table 2. Samples of Words

No.	Position	voicing	Words	Transcript
1	Onset	Voiceless	Thin	/θɪn/
2	Onset	Voiced	They	/ðeɪ/
3	Medial	Voiceless	Some-thing	/səmθɪŋ/
4	Medial	Voiced	Bathing	/beðɪŋ/
5	Coda	Voiceless	Path	/pæθ/
6	Coda	Voiced	Breathe	/brið/

The results of the recording were classified by categories: (1) θ on onset, (2) θ in the middle, (3) θ at coda, (4) ð

on onset, (5) ð in the middle, and (6) ð at coda. They were compared with the recording of native speakers. After that, the pronunciation errors in each category were described. In describing the error, the native speaker was involved.

FINDINGS

Voiceless Dental Fricative (/θ/)

From the analysis of recording of the subjects' pronunciation, it was found out the most variations of errors occur when the consonant was in medial position. The summary of the analysis is in Table 3.

Table 3. Summary of Pronunciation Variation of Voiceless Dental Fricatives

Consonant	Position	Subjects' Pron	%	Total times of Pronun
	Onset	/s/	0,28	363
		/t/	37,74	
		/θ/	61,98	
/θ/	Middle	/s/	0,28	363
		/t/	33,33	
		/d/	4,13	
		/θ/	56,20	
		/ð/	5,79	
	Coda	/t/	42,12	273
		/d/	1,83	
		/θ/	55,68	
		/ð/	0,37	

From the results, it was shown the consonant was pronounced correctly more than half of the time it was pronounced. Furthermore, it was most frequently substituted in every position by voiceless alveolar stop /t/. It was also shown that some other pronunciation variation existed, such as voiceless alveolar fricative (/s/), voiced alveolar stop (/d/), and voiced dental fricative (/ð/), but the frequency was much lower than voiceless alveolar stop /t/.

Voiced Dental Fricatives

The pronunciation of this consonant showed an interesting finding. The most frequent variation or error is voiced alveolar fricative (/d/), but only at onset and in the middle positions. Interestingly, at coda, it was voiceless alveolar fricative (/t/). The summary of the analysis is in Table 4.

Table 4. Summary of Pronunciation Variation of Voiced Dental Fricatives

Consonant	Position	Subjects' Pronun	%	Total times of
	Onset	/t/	7,44	363
		/d/	43,80	
		/θ/	2,48	
		/ð/	46,28	
/ð/	Middle	/t/	8,388521	453
		/d/	37,52759	
		/θ/	13,46578	
		/ð/	40,6181	
	Coda	/t/	32,2314	363
		/d/	8,539945	
		/θ/	47,6584	
		/ð/	11,57025	

The frequency of the correct pronunciation of this consonant was lower than the voiceless dental fricative (/θ/). It was even much lower at coda position. In general, it was substituted by the voiced alveolar fricative (/d/), but with other variations, i.e. voiceless alveolar stop and voiceless dental fricatives (/θ/), much lower frequency, also occurred. An exception took place at coda; where the frequency of correct pronunciation was only very low.

The Pronunciation and Length Study in English Education Student Program

The samples were divided into groups based on length of study: Semester I, in which group the samples have studied in the study program less than 6 months, (2) Semester 3, less

than 18 months, and (3) Semester 5, less than 30 months.

The error in pronunciation of semester 1 of the voiceless dental fricative (/θ/) was a little less than half of the total number of the frequency it was pronounced, but it was much higher for the voiced dental fricatives (/ð/). Furthermore, in semester 3, for /θ/ it was much lower than semester 1, while /ð/, it was more or less the same. Interestingly, in semester 5 whose length of study is longer, the error is lower in frequency as compared to semester 3. Table 5 shows a more complete description.

Table 5. Pronunciation and Semester

Consonant	Position	Semester I		Total times of pronun	
		Pronunciation	%		
	Onset	/θ/	58,73	126	
		other than /θ/	41,27		
	Middle	/θ/	57,94		126
		other than /θ/	42,06		
/θ/	Coda	/θ/	47,62	84	
		other than /θ/	52,38		
		Average /θ/	54,76		
		Average other than /θ/	45,24		
	Onset	/ð/	45,24	126	
		other than /ð/	54,76		
	Middle	/ð/	37,50		168
		other than /ð/	62,50		
/ð/	Coda	/ð/	15,08	126	
		other than /ð/	84,92		
		Average /ð/	32,61		
		Average other than /ð/	67,39		
Semester III					
	Onset	/θ/	68,8172	93	
		other than /θ/	31,1828		
	Middle	/θ/	70,96774		62
		other than /θ/	29,03226		
/θ/	Coda	/θ/	67,74194	93	
		other than /θ/	32,25806		
		Average /θ/	69,18		
		Average other than /θ/	30,82		
	Onset	/ð/	49,20635	63	
		other than /ð/	50,79365		
	Middle	/ð/	48,80952		84
		other than /ð/	51,19048		
/ð/	Coda	/ð/	9,52381	63	
		other than /ð/	90,47619		
		Average /ð/	35,85		
		Average other than /ð/	64,15		
Semester V					
	Onset	/θ/	84,13	63	
		other than /θ/	15,87		
	Middle	/θ/	87,30		63
		other than /θ/	12,70		
/θ/	Coda	/θ/	88,10	42	
		other than /θ/	11,90		
		Average /θ/	86,51		
		Average other than /θ/	13,49		
	Onset	/ð/	56,98925	93	
		other than /ð/	43,01075		
	Middle	/ð/	44,35484		124
		other than /ð/	55,64516		
/ð/	Coda	/ð/	18,27957	93	
		other than /ð/	81,72043		
		Average /ð/	39,87		
		Average other than /ð/	60,13		

DISCUSSION

It was shown from the findings that there was a tendency that voiceless dental fricative was substituted by voiceless alveolar fricative and voiced dental fricative by voiced alveolar fricative, when error occurs. This tendency might be a linguistic system developed by learner that was in between The English language and Bahasa Indonesia system. As Selinker (1972) states that in second language acquisition process, the learner can acquire a system of language that is in between the source language and the target language. This system is what Selinker (1972) called as interlanguage. This tendency of error, if it is related to interlanguage, is the point of development of language system of the language learner.

Language transfer (Eckman, Moravcsik, and Wirth, 1986; Seliger & Vago, 1991; Lado, 1957; Stockwell, Bowen dan Martin, 1965; and Ellis, 1997) i.e. the application of source linguistic rules toward the target language might also be the cause of the error. The absence of the consonants in Indonesian language makes the learners transfer the closest equivalent of them existing in the source language as Weinberger (1997) found that error occurs in the absence of certain sounds in the native language, and as a result, the learners replace them with similar sounds. It is in line with the markedness theory (Moravcsik, and Wirth, 1986; Seliger & Vago, 1991) that the marked aspects of language, in this case voiceless and voiced dental fricatives, which are absent in bahasa Indonesia, are more difficult to learn than the unmarked voiced and voiceless alveolar fricatives, which are very common sounds in almost all, if not all, languages.

The occurrence of variability of errors might also be explained also with interlanguage theory. Every learner develops their own system of language, which is different in every individual that is in between the target language and source language. Some learners might develop a system in which the pronunciation of the consonant conforms to the system of target language, while others are not. Those not conforming might deviate to other sounds which more or less similar. This variability is what Ellis (1997) called as individual variability. In this study the two dental fricatives when incorrectly pronounced are substituted with alveolar fricative and alveolar stops which are very close in the point of articulation.

One finding worth noting is the pronunciation of voiced dental fricative at coda position has the lowest frequency of correct pronunciation. It was actually very low. This interesting finding still conforms to all theories discussed before, interlanguage, language transfer and markedness. Another explanation is related to contrastive analysis hypothesis (Lado, 1957; Stockwell, Bowen dan Martin, 1965). In this hypothesis, language transfer is predicted with the degree of similarity between source and target languages. The more similar the easier to learn, and vice versa. The voiced dental fricative at coda position is at no point similar to the system of Bahasa Indonesia. It might be safe to say that it is predictable that the error will occur when a native speaker of Bahasa Indonesia learning English try to pronounce the sound at coda position. If it is related to markedness theory, even though both sounds are marked aspects, the results show that the more marked aspect is the voiced dental fricative at coda position which has the lowest frequency of correct pronunciation.

When the pronunciation error is interrelated with the length of study in English Education Study Program, the tendency shows that the longer the study the better the pronunciation of students. Although the direct relation between length of study and pronunciation error cannot be determined, there might be an effect of the situation and process, including curriculum, lecturers, facilities, etc., in the study program that support the students' development in pronunciation.

CONCLUSION AND SUGGESTION

Some conclusions could be drawn in this study: (1) there was a tendency that the voiced and voiceless dental fricative are substituted with voiced and voiceless alveolar fricative, (2) variability of error took place in this study, not only /t/ and /d/ were produced when pronouncing /θ/, and /ð/, but also /s/, /d/, /θ/, and /ð/, (3) voiced dental fricative at coda position is the most marked aspect in this study, and (4) there is a tendency that the longer the length of study, the better the pronunciation of this two sounds. It is suggested that the result of the study can be used in other similar studies and also used as teaching and learning material in relevant courses.

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