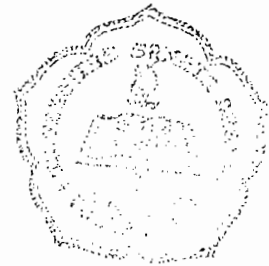


**A DESCRIPTIVE STUDY ON THE INFLUENCE OF THE ADJACENT ALVEOLAR  
CONSONANTS ON INTERDENTAL FRICATIVES AND THE METHODS OF  
TEACHING INTERDENTAL FRICATIVES THAT ARE PRECEDED  
BY ALVEOLAR CONSONANTS**

**A SARJANA PENDIDIKAN THESIS**

**Presented as Partial Fulfillment for the Requirements  
to Obtain the Sarjana Pendidikan Degree in  
English Language Education**



by

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1988**

A Sarjana Pendidikan Thesis on  
A Descriptive Study on the Influence of the Adjacent  
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THE SARJANA PENDIDIKAN THESIS ON  
A DESCRIPTIVE STUDY ON THE INFLUENCE OF THE ADJACENT  
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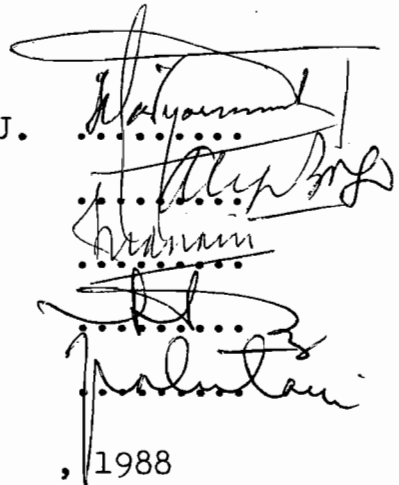
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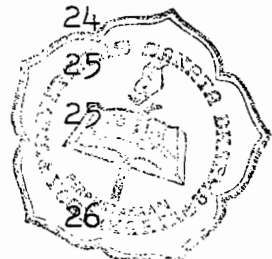
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# CHAPTER 1

## INTRODUCTION

### 1.1 BACKGROUND OF STUDY

In learning a language the main thing we must gain is the ability of speaking it, since language is primarily spoken (Verhaar, 1985: 3). Therefore oral practice and the pronunciation in the language are important. However, there are seemingly still many students who do not care about pronunciation. In almost every English course what is heavily emphasized is the fluency in speaking it. Beginners have in mind that their ideal should be fluency in English. Because of that the correctness of pronouncing English words is often ignored. This can easily be found for example, they often replace  $\text{[}^{\text{h}}\text{ð}_\text{7}$  with alveolar  $\text{[}^{\text{h}}\text{d}_\text{7}$  or dental  $\text{[}^{\text{h}}\text{d}_\text{7}$  in these words:

the	this	that	they	them
thus	though	these	those	their
theirs	there	than	etc.	

In some cases this replacement does not bother the meaning of words or conversation. In some other cases, however, this replacement could matter. It will be much better if the speaker can pronounce all English words or phrases having the sound  $\text{[}^{\text{h}}\text{ð}_\text{7}$  as well as possible. To gain such a mastery of pronunciation, Indonesian learners of English have to do extra practice.

For those above reasons I would rather choose a topic concerning pronunciation, specifically on the in-



fluence of the adjacent alveolar consonants on interdental fricatives. Indeed, there are many other better topics, but because of the limited knowledge and just for the sake of private preference I do not choose one of those better topics but dare to write a thesis on that topic.

The writing of this thesis is mostly inspired by an idea held in an article written by Mason (1981: 15). The article tells about the assimilation of /t/ or /d/ and /θ/. Also, the writing of this thesis is guided by one of the statements cited by Chastain (1976: 61):

Errors in second-language learning would occur at those points at which the two language systems were dissimilar. The solution was a systematic analysis of both languages followed by the prescription of pattern drills to overcome first language habits.

Basing on the above assumption, we can then have a general conclusion concerning the pronunciation of a foreign language, namely that there is a tendency for a language learner to transfer the sound system of his mother tongue to that of the target language (Lado, 1957: ...).

In learning English for the Indonesian learners the interference is, of course, coming from Indonesian which, for most its speakers, stands as the second language after Sundaese, Javanese, Balinese, and many other regional languages in Indonesia (Suprihartanta, 1979: i).

For many Indonesian learners of English the interdental fricatives are, whether or not they are preceded

by alveolar consonants or other consonants, still difficult sounds to pronounce. The article 'the', for examples, tends to be pronounced incorrectly. It is pronounced  $[\text{nd}]$ , in which the dental sound  $[\text{n}]$  comes before the dental sound  $[\text{d}]$ . Even there are some who pronounce it as  $[\text{d}]$ , in which the  $[\text{d}]$  is alveolar. This indeed is not a great surprise, for there are many causes for the mispronunciation.

The problem of the voiced interdental fricative becomes serious if the fricative is preceded by an alveolar stop. It serious because this kind of assimilation has a heavy syntactic-semantic burden (Mason, 1981: 15). Mason gives three examples of which one of them has such a burden:

- (1). We pay the bill.
- (2). We paid the bill.
- (3). We paid a bill.

If the voiced interdental fricative in (1) and (2) is uttered as alveolar  $[\text{d}]$  in rapid speech, the result will likely be sentence (3) on which there is no voiced interdental fricative in initial position but voiced alveolar stop in final position. The role of the fricative is thus crucial.

Therefore, if an alveolar stop like  $[\text{d}]$  can influence the quality of the following voiced interdental fricative, the other alveolar sounds might be expected to do as what the alveolar stop  $[\text{d}]$  does. The reason is that the sounds  $[\text{t}]$ ,  $[\text{d}]$ ,  $[\text{n}]$ ,  $[\text{s}]$ ,  $[\text{z}]$ , and  $[\text{l}]$  are homorganic (Aryanto, : 46).

Besides the voiced interdental fricative  $[\theta]$ , we have a voiceless interdental fricative  $[t̪]$ . If the sound  $[\theta]$  can be influenced by alveolar consonants, the sound  $[t̪]$  can also be influenced by alveolar consonants. Of the two sounds the voiced interdental fricative has a more crucial role, for it often occurs as an initial sound at many words that are used at high frequency (Mason, 1981: 17). Such words are as follows: the, that, this, these, those, them, they, though, thus, therefore, then, than, etc.

Because of the reasons that have been discussed above the topic of this thesis involves all alveolar consonants  $[t]$ ,  $[d]$ ,  $[n]$ ,  $[s]$ ,  $[z]$ ,  $[l]$ , and both interdental fricatives  $[\theta]$  and  $[t̪]$  in the case of the influence of the adjacent sounds at syllable boundary, within a word, or at intersyllabic boundary.

This thesis does not discuss a completely new study. In this thesis there are some related studies that have been previously made by other writers. So similarities and differences can be found in this thesis.

## 1.2 TITLE

The title of this thesis is 'A Descriptive Study On The Influence Of The Adjacent Alveolar Consonants On Interdental Fricatives And The Methods Of Teaching Interdental Fricatives That Are Preceded By Alveolar Consonants'.

In this thesis we will find a descriptive study on

the influence of the adjacent alveolar consonants on interdental fricatives. This is a descriptive study, for the core of this work is to describe how the adjacent alveolar consonants influence interdental fricatives. How all sounds involved in this thesis are articulated will also be described. The influence of the adjacent alveolar consonants on interdental fricatives is supposed to happen within a word, at syllable boundary, or at intersyllabic boundary.

The term 'within a word', 'at syllable boundary', or 'at intersyllabic boundary' are used here for the places at which the influence of alveolar consonants on interdental fricatives takes place. The term 'within a word' stands for a place in a syllable of a word or in a word that has only one syllable (Gimson, 1976: 291).

Here are some examples:

In one of the syllable of a word:

eleveth	/ˈiːlevnθ_7
thirteenth	/ˈθɜːˈtiːnθ_7
fourteenth	/ˈfɔːˈtiːnθ_7
fifteenth	/ˈfɪfˈtiːnθ_7
monthly	/ˈmʌnθli_7
sixteenth	/ˈsɪkˈstiːnθ_7

In words consisting of one syllable only:

eighth	/ˈeɪtθ_7
width	/ˈwɪtθ_7
breadth	/ˈbretθ_7
ninth	/ˈnaɪnθ_7

month	/ˈmʌnθ_7
tenth	/ˈtenθ_7

The second term 'at syllable boundary' refers to a place between two syllables of a word that has two or more syllables (Mason, 1981: 15). In the term 'at syllable boundary' the influence of the adjacent alveolar consonants on interdental fricatives really takes place between two syllables of a word. These are some examples:

anthology	/ˈæn'θɒlədʒi_7
synthesis	/ˈsɪnθəsis_7
aesthetic	/i:s'θetik_7
unthinkable	/ˈʌn'θɪŋkəbl_7
cutthroat	/ˈkʌtθrəʊt_7
enthusiasm	/ɪn'θju:zi æzəm_7

The third term 'at intersyllabic boundary' points to a place between two words at which the influence of the adjacent alveolar consonants on interdental fricatives happens. In other words, the influence occurs between a syllable-final alveolar consonant of a word and a syllable-initial interdental fricative of the following word (Gimson, 1976: 291). These are some examples:

in the sky	/ɪn ðə skai_7
at the beginning	/æt ðə bɪɡɪnɪŋ_7
will the man go	/wɪl ðə mæn ɡəʊ_7
the dog is theirs	/ðə dɒɡ i:z ðeəz_7
pull through	/pʊl θru: _7
we paid the bill	/wi: peɪd ðə bɪl_7

### 1.3 OBJECTIVES

As it has been cited above, this thesis is a descriptive study on the influence of the adjacent alveolar consonants on interdental fricatives at syllable boundary, within a word, or at intersyllabic boundary. Thus the objectives of this thesis are as follow:

1. To present a description of the influence of the adjacent alveolar consonants on interdental fricatives.
2. To search the methods to overcome the problems in teaching interdental fricatives as well as provide some techniques for the teachers of English in teaching the interdental fricatives that are preceded by alveolar consonants.

Besides, this thesis is carefully written with the hope of being able to give the readers awareness towards the pronunciation of the interdental fricatives especially when they are preceded by alveolar consonants. This thesis is not to make the readers good pronouncers of the interdental fricatives, since in most cases the substitution of alveolar sound [d] or dental [d̪] does not bother the meaning of the words having the sound [ð].

### 1.4 SCOPE

In order not to work beyond what it should be written this thesis will include:

1. The articulatory description of alveolar consonants [t], [d], [n], [s], [z], and [l]. and

2. The articulatory description of the adjacent:

/t/ and /θ/ sounds

/t/ and /ð/ sounds

/d/ and /θ/ sounds

/d/ and /ð/ sounds

/n/ and /θ/ sounds

/n/ and /ð/ sounds

/s/ and /θ/ sounds

/s/ and /ð/ sounds

/z/ and /θ/ sounds

/z/ and /ð/ sounds

/l/ and /θ/ sounds

/l/ and /ð/ sounds

### 1.5 TECHNIQUES OF COLLECTING THE DATA

Before proceeding to further discussion, data to be examined have been carefully collected and selected. In this thesis the data are of two kinds: words and phrases, though there will also be some sentences. These words and phrases have the adjacent alveolar consonants and interdental fricatives. So the process of articulation of the adjacent alveolar consonants and interdental fricatives is the one that happens in a word or between words (or in phrases). Two kinds of sources are used to collect the data:

1. The first source is dictionaries. Words that have the adjacent alveolar consonants and interdental fricatives are taken from The Oxford Advanced Learner's Dictionary Of Current English

by AS Hornby, 1974. Another dictionary used to collect the data is A Longman Dictionary Of Contemporary English, 1978.

2. The second source is miscellaneous. This means that the source can be more than one, for example: articles from magazines or newspapers, radio broadcast, or even my own experience, which contain words or phrases that have the adjacent alveolar consonants and interdental fricatives.

#### 1.6 TECHNIQUE OF DESCRIBING THE ARTICULATORY PROCESS OF THE ADJACENT ALVEOLAR CONSONANTS AND INTERDENTAL FRICATIVES

As has been mentioned above, this thesis is a descriptive study. The core of the thesis is thus description. The description in this thesis is guided by Mason's description (1981: 17):

.....

(6). At the movie.

(7). At that time.

(8). I helped them regularly.

In pattern (6) there is at once a 'perfect' forward assimilation of the  $/-t/$  and backward assimilation of the  $/-ð-/$  in the two equally stressed (weak) syllables. That is, the blade of the tongue fills the depression where the front teeth enter the gums, as the  $/-t/$  is partially dentalized and the  $/-ð-/$  is partially alveolarized; the two consonants are thus both pronounced at a point roughly halfway between the two places where each is normally articulated. But in (7) the greater stress of the determiner that leads to somewhat greater dentalization for the two successive consonants. In (8), however, the stressed verb helped draws the blade of the tongue down to the



lower inside surface of the upper teeth, while the back of the tongue nestles firmly against the alveolar ridge, and the whole inside surface of the teeth is covered by the points of the tongue in between.

The articulatory process of each pair of an alveolar consonant and an interdental fricative will be described:

- /t/ and /θ/ sounds
- /t/ and /ð/ sounds
- /d/ and /θ/ sounds
- /d/ and /ð/ sounds
- /n/ and /θ/ sounds
- /n/ and /ð/ sounds
- /s/ and /θ/ sounds
- /s/ and /ð/ sounds
- /z/ and /θ/ sounds
- /z/ and /ð/ sounds
- /l/ and /θ/ sounds
- /l/ and /ð/ sounds

## 1.7 PRESENTATION

This thesis starts from chapter 1 discussing about introduction. Housed in this introduction are background of study, title, objectives of study, scope of study, techniques of collecting the data, and technique of describing the articulatory process of the adjacent alveolar consonants and interdental fricatives. The following discussion is about the idea of the influence of the adjacent sounds. That is discussed in chapter 2, whereas

chapter 3 discusses about interdental fricatives that come after alveolar consonants. Before coming to the core of the thesis, all alveolar consonants and interdental fricatives need describing. The descriptions of the consonants are grouped in chapter 4. The core of the thesis, chapter 5, discusses about the description of the articulatory processes of the influence of the adjacent alveolar consonants on interdental fricatives sounds. Finally, problems and the methods of teaching interdental fricatives preceded by alveolar consonants will be presented in chapter 6, which will immediately be followed by conclusion as the closing writing.

## C H A P T E R 2

### THE INFLUENCE OF THE ADJACENT SOUND

Spoken language consists of successions of sounds emitted by the organs of speech (Jones, 1950: 1).

Daniel Jones' statement is quite right. When we speak we produce sounds. The sounds we produce are of two major kinds. They are consonants and vowels (Ripman, 1957: 20). In speech these consonants and vowels do not come one after the other, they come in successions of sounds. Take an example of a word 'bandit'. We say it as [ˈbændɪt]. Because we know English we can divide it into segments as [b], [æ], [n], [d], [ɪ], and [t]. However, when we say the word 'bandit' to someone else, we do not say the single sound [b] first, and then followed by the sounds [æ], [n], [d], [ɪ], and the sound [t] as the final sound. So if we want to utter the word 'bandit', we do not utter each sound of the word by one by one, we have to move our organs of speech continuously, and by doing so we produce continuous sounds (Aryanto, : 10).

In other words, our organs of speech have to make a continuous motion in order to say the word 'bandit'. Because of the action done by the organs of speech, glides occur. That is in line with what Daniel Jones (1950: 1) say:

A glide is the incidental transitory sound produced when the organs of speech are passing from the position for one speech

sound to that of another by the most direct route.

Moreover, in making the continuous motions, the occurrence of the glides is not avoidable. Daniel Jones writes in his book (1950: 1):

Glides occur as the natural and inevitable result of pronouncing two speech-sounds one after the other.

The inevitability of the occurrence of the glides forces the organs of speech to work carefully. This does not mean that we have to speak by paying much attention to every single word or in this case, to the succession of sounds of every word we utter.

Because of the occurrence of the glides another possibility that is most likely to occur is the phonological process. Like the occurrence of the glides the phonological process is also natural and in certain cases avoidable. The process is natural because it can happen by itself at normal conversational speed. The process is avoidable, because the pronunciation of a word, in which the phonological process is most likely to occur, is made slower than that of the ordinary conversation. For example the most common pronunciation of the word 'literature' is  $[\text{ˈ}lɪdə\text{r}\text{ə}tʃ\text{ə}r]$  (Language Files, 1982: 40-1). The pronunciation is found at normal conversational speed. When the pronunciation is made slower however, it becomes  $[\text{ˈ}lɪt\text{ə}r\text{ə}tʃ\text{ə}r]$ .

In the above example, the  $[\text{ˈ}t]$  in slower pronunciation becomes a  $[\text{ˈ}d]$  in normal conversational speed. That

is because in slower pronunciation, the  $[\text{t}]$  stands between  $[\text{i}]$  and  $[\text{ə}]$  which are already voiced. The  $[\text{t}]$  in this case is influenced by both surrounding 'voiced' vowels. This accords with Ripman's statement (1931: 141):

The production of sounds may be affected by the nature of adjacent sounds in several ways.

Therefore, the  $[\text{t}]$  is forced to become a  $[\text{d}]$ . This is because less effort is needed to make the  $[\text{d}]$ , only letting the vocal cords continue vibrating (Language Files, 1982: 40-1). In other words, it is easier for the organs of speech to make glides from the successions of voiced sounds:  $[\text{i}] + [\text{d}] + [\text{ə}]$ . That is why the phonological process is natural.

In the slower pronunciation, the sound  $[\text{t}]$  still remains. This is because we utter the word 'literature' slowly and carefully. We can even control the movements of our organs of speech by feeling them. That is why the phonological process can be avoided.

However, a phonological process can not be avoided in other cases. Take two groups of examples (Language Files, 1982: 40-3):

$[\text{lei}]$	'lay'	$[\text{plei}]$	'play'
$[\text{rei}]$	'ray'	$[\text{prey}]$	'pray'
$[\text{ju:}]$	'you'	$[\text{kju:}]$	'cue'
$[\text{win}]$	'win'	$[\text{twin}]$	'twin'
$[\text{ləʊ}]$	'low'	$[\text{sləʊ}]$	'slow'
$[\text{raɪt}]$	'right'	$[\text{fraɪt}]$	'fright'

The first sounds of words in the first group are liquids and semi vowels. They are originally voiced. But when come after voiceless consonants in the same syllable they

become voiceless too. In the context of the second group they are said to be devoiced. This is because of the influence of the preceding voiceless consonants. In these examples there is no other alternative pronunciation of the words in the second group. Therefore, the liquids and semi vowels in the second group can not be voiced sounds. The phonological process in this context is said to be obligatory or inevitable (Language Files, 1982: 40-3).

Here is an example from Indonesian. The word 'Sabtu', meaning Saturday, is always pronounced  $[\text{ˈsaptu}]$ . The letter 'b' in that word is not pronounced  $[\text{ˈb}]$  but  $[\text{ˈp}]$ . This is because the voicelessness of the sound  $[\text{ˈt}]$  influences the preceding voiced consonant  $[\text{ˈb}]$ . In other words, because of the voiceless sound  $[\text{ˈt}]$  the sound  $[\text{ˈb}]$  becomes  $[\text{ˈp}]$ .

From the above explanation we can conclude that the movements of the tongue from one position into another which are natural and inevitable can produce a phonological phenomenon. We have already seen some phonological phenomena which were inevitable and avoidable phonological processes.

It is also clear that the occurrence of the phonological process is because of the influence of the adjacent sound or sounds. In the former example, the influential sounds to the voiceless alveolar stop  $[\text{ˈt}]$  are both its surrounding voiced vowels  $[\text{ˈi}]$  and  $[\text{ˈa}]$ . In the next example, the influential sounds to the semi vowels and liquids are the preceding voiceless consonants.

In the example from Indonesian the influential sound to the sound /b/ is the following voiceless sound /t/.

In the first example above, there is a phonological process called assimilation, since there is a change in a given sound under the influence of other sounds. The definition of assimilation given above is in line with the definitions below in which the role of the adjacent sound or sounds is crucial to the sound change:

1. Assimilation is defined as the process of replacing a sound by another sound under the influence of a third sound which is near to it in the word or sentence. The term may also be extended to cases where a sequence of two sounds coalesces and gives place to a single new sound different from either of the original sound (Jones, 1950: 202).
2. Assimilation is a change in a given sound made under the influence of other sound near by. The position assumed by an organ or organs, or the action taken by an organ or organs in making a sound is modified toward agreement with the position or action of the organ in making a neighboring sound (Wise, 1958: 153).
3. As has long been known a phoneme or group of phonemes tends to become similar to or identical with a following phoneme or group of phonemes (Sturtevant, 1956: 85).
4. Assimilation is a phonological process whereby one sound becomes more like an adjacent sound in terms of some articulatory features, such as voicing, place of articulation or manner of articulation (Language Files, 1982: 40-3).

In the second example above, there is a kind of phonological process called voicing assimilation, since there is a change in voicing under the influence of the preceding sound.

In the example from Indonesian, there is also a kind of phonological process called voicing assimilation, since there is a change in voicing under the influence of the following sound.



## C H A P T E R 3

### INTERDENTAL FRICATIVES MAY COME AFTER ALVEOLAR CONSONANTS

As it has been mentioned in earlier pages, the interdental fricatives discussed in this thesis are the voiced interdental fricative  $[\text{ð}]$  and the voiceless interdental fricative  $[\text{θ}]$ . Whereas the alveolar consonants are  $[\text{t}]$ ,  $[\text{d}]$ ,  $[\text{n}]$ ,  $[\text{s}]$ ,  $[\text{z}]$ , and  $[\text{l}]$ . Both the fricatives and the alveolar consonants influence each other in adjacent position. It is because of their adjacent position that they influence each other. Moreover, the points of articulation of both the fricatives and the alveolar consonants are also in the vicinity to each other: for both the voiced interdental fricative  $[\text{ð}]$  and the voiceless interdental fricative  $[\text{θ}]$  the points of articulation are in the upper teeth. Whereas for alveolar consonants mentioned, the points of articulation are in the alveolar ridge. Moreover, the active articulator for both the fricatives and the alveolar consonants is the tip or the tip and blade of the tongue.

In this thesis the interdental fricatives are considered to be coming after the alveolar consonants, and the reasons are as follow:

1. The voiced interdental fricative  $[\text{ð}]$  occurs at high frequency as the syllable-initial sound of the most common English words (Mason, 1981: 17) such as: though, than, therefore, the, them, they, their that, this, these, etc. The condition of the occurrence of  $[\text{ð}]$  as the

syllable-initial sound in those words above gives possibility that it can be preceded by other consonants. In this thesis the other consonants are the alveolar consonants. The possibility also applies to the voiceless interdental fricative  $[\theta]$  which stands as the initial sound. This is because the difference between the sound  $[\ð]$  and the sound  $[\theta]$  is only a matter of voicing. The sound  $[\ð]$  is voiced, and the sound  $[\theta]$  is voiceless. The sound  $[\theta]$  can occur as a syllable-initial sound in the following words: thank, think, thought, theatre, theme, theory, etc.

2. The sounds  $[t]$  and  $[d]$  occur as syllable-final sounds in past tense inflections of regular verbs, for example:

walk	-----	walked	$[wɔ:kt]$
absorb	-----	absorbed	$[əb'sɔ:bd]$

The sounds  $[t]$  and  $[d]$  also occur in the common prepositions:

at  
inside

Because of that the occurrence of the sounds  $[t]$  and  $[d]$  as syllable-final sounds in past tense inflections of regular verbs and in some of the common prepositions also gives possibility that they can be followed by the other consonants. In this thesis the other consonants are the sounds  $[\ð]$  and  $[\theta]$ .

3. The sounds  $[s]$  and  $[z]$  occur as syllable-final sounds in pluralization of countable nouns and in

formation of verbs for the third person in simple present tense, e.g.:

<u>Singular</u>	<u>Plural</u>	
book	books	[/bʊks_7]
pen	pens	[/penz_7]
glass	glasses	[/glɑ:sɪz_7]
work	works	[/wɜ:ks_7]
call	calls	[/kɔ:lz_7]

Because of that the occurrence of the sounds [ʌs\_7] and [ʌz\_7] as syllable-final sounds in pluralization of the countable nouns and in the formation of verbs for the third person in simple present tense also gives possibility that they can be followed by the other consonants. In this thesis the other consonants are the voiced interdental fricative [ʌð\_7] and the voiceless interdental fricative [ʌθ\_7].

4. The sound [ʌn\_7] occur as syllable-final sound in the common prepositions such as: in, on, between, within, etc. For example:

in the air	[ʌin ði eə_7]
on the table	[ʌɔn ðə teɪbl_7]

Also, the common occurrence of the successions of the sounds [ʌn\_7] and [ʌθ\_7] in these words:

tenth	[ʌtenθ_7]
seventh	[ʌsevnθ_7]
month	[ʌmʌnθ_7]

## CHAPTER 4

### ENGLISH SOUNDS

#### 4.1 The inventory of English sounds

Before advancing to chapter 5 which will discuss the influence of the adjacent alveolar consonants on interdental fricatives, it would be worthwhile to know the inventory of English sounds, especially English consonant sounds. English sounds can be grouped into two classes namely: vowels and consonants (Ripman, 1957: 20). There are twelve cardinal and twenty four consonants (Arief, : 9). The following sounds are English pure vowels: [i:], [i], [e], [æ], [ɜ:], [ə], [a:], [ʌ], [u:], [ʊ], [ɔ:]. The twenty four English consonants are as follow: [p], [b], [t], [d], [k], [g], [f], [v], [s], [z], [ʃ], [ʒ], [tʃ], [dʒ], [θ], [ð], [m], [n], [ŋ], [h], [l], [r], [w], [j].

PHONETIC TABLE  
CHIEF ENGLISH CONSONANTIAL ARTICULATIONS

		PLACE OF ARTICULATION								
		BILABIAL	LABIO-DENTAL	DENTAL	ALVEOLAR	POST ALVEOLAR	PALATO-ALVEOLAR	PALATAL	VELAR	GLOTTAL
MANNER OF ARTICULATION	COMPLETE ORAL CLOSURE Plosive	p b			t d				k g	
	Affricate						tʃ dʒ			
	Nasal	m			n		-		ŋ	
	INTERMITTENT CLOSURE Roll					r				
	PARTIAL CLOSURE Lateral				l					
	NARROWING Fricative		f v	θ ð	s z		ʃ ʒ			h
	GLIDE Semi vowel	w						j		

Fig. 1

#### 4.2 The production of alveolar consonants and interdental fricatives

Based on the manner of articulation, the alveolar consonants and interdental fricatives involved here can be classified into:

1. Stop consonants            /t/ and /d/
2. Nasal consonant            /n/
3. Lateral consonant         /l/
4. Fricative consonants      /s/, /z/, /θ/, and  
                                  /ð/

##### 4.2.1 Stop consonants /t/ and /d/

Regardless of the points of articulation, stop consonants /t/ and /d/ are like the other stop consonants in that they have three stages in production. They are implosion, compression, and explosion (Wise, 1958:44). The term implosion here refers to closure stage. During this stage, the taking of position by the articulators happens on some certain spots in the mouth. This stage also involves the blockage of the velum in the nasal resonator. This blockage forces the lung air to enter the mouth cavity in which there is another blockage. The place of the blockage in the mouth depends on what sort of stop sound will be made. To produce stop consonants /t/ and /d/, the place of the blockage is on the alveolar ridge. The blockage is made by placing the tip of the tongue against the alveolar ridge. For stop consonants /p/ and /b/ the blockage is made by bringing both upper and lower lips into close contact. Whereas for stop consonants

[k] and [g], the blockage has to be made by raising the back part of the tongue towards the velum.

The second stage is compression. In this stage there is a compression in the pharynx and mouth (Wise, 1958: 44). This is because of the exhalation of air from the lungs and the blockage on a certain place in the mouth. During this stage the vocal bands can be either vibrating or silent, depending on what sort of stop consonants will be made.

The third stage is explosion. It is called explosion because in this stage there will be heard an explosion-like sound for both voiced and voiceless sounds. This explosion results from a sudden release of air compressed behind the closure.

#### 4.2.2 Nasal consonant [n]

Like the stop consonants [t] and [d] the nasal consonant [n] is also formed by making a closure between the tip of the tongue and the teeth ridge or alveolar ridge. The closure is not to make explosion but to let the lung air pass through the nasal cavity that has been opened by lowering the soft palate.

#### 4.2.3 Lateral consonant [l]

To produce lateral consonant, the tip of the tongue is again to touch the teeth ridge. However, the tip of the tongue is not to make a complete closure. The air compressed from the lungs can still go through the sides of the tongue which are down. Another condition is shutting

the nasal resonator and vibrating the vocal cords.

#### 4.2.4 Fricative consonants /s/, /z/, /θ/, and /ð/

What primarily constitutes the fricative consonants is the narrowing of the air passage in the mouth. The air compressed from the lungs passes through the narrow passage built by two certain organs of speech, and therefore produces friction.

For the fricatives /s/ and /z/, it is the tongue and the alveolar ridge that make the friction.

In the production of /θ/ and /ð/, the friction is made between the tip of the tongue and the upper teeth.

For the other fricatives such as /f/, /v/, /ʃ/, and /ʒ/, the friction is made between the upper teeth and the lower lip for /f/ and /v/, whereas for /ʃ/ and /ʒ/ the friction is made by the tip and blade of the tongue and the alveolar ridge and at the same time the front of the tongue raises towards the hard palate.

#### 4.3 The articulation of /t/, /d/, /n/, /s/, /z/, /l/, /θ/, and /ð/

##### 4.3.1 Alveolar stops /t/ and /d/

Alveolar stops /t/ and /d/ are articulated by making a blockage between the tip and rims of the tongue and the upper alveolar ridge and side teeth, and at the same time the soft palate, or velum, is raised to block the nasal cavity. Therefore, there is compressed lung

air in the mouth just behind the mouth closure. This compression happens in a very short moment. During this stage the vocal cords can be made to vibrate or not according to what sort of alveolar stop will be made. For the alveolar stop  $[/t_7]$  the vocal cords are not made to vibrate, so there is not any sound heard. For the alveolar stop  $[/d_7]$  the vocal cords are made to vibrate, so there is voiced sound heard. After a very short moment of the compression, the compressed lung air comes out with force through the sudden separation of the blockage between the tip and rims of the tongue and the alveolar ridge and side teeth.

#### 4.3.2 Alveolar nasal $[/n_7]$

Like the alveolar stops  $[/t_7]$  and  $[/d_7]$ , the alveolar nasal  $[/n_7]$  is articulated by making a blockage between the tip and rims of the tongue and the alveolar ridge and upper side teeth. The soft palate is lowered to let the air from the lungs go out through the nasal cavity. During this stage the vocal cords are made to vibrate and the nasal sound is heard.

#### 4.3.3 Lateral consonant $[/l_7]$

Lateral consonant  $[/l_7]$  is articulated by making a blockage between the tip of the tongue and the alveolar ridge, but both sides of the tongue are down. The soft palate is raised to block the nasal cavity letting the air from the lungs enter the mouth chamber





and go out through both sides of the tongue. During this stage the vocal cords are made to vibrate.

#### 4.3.4 Alveolar fricatives /s/ and /z/

Alveolar fricatives /s/ and /z/ are articulated by making the tip and blade of the tongue approach the alveolar ridge and the sides of the tongue make a close contact with upper side teeth. The soft palate is raised to block the nasal cavity. Therefore, the air stream enters the mouth chamber and goes out of the mouth through a narrow opening made by the blade of the tongue which is made grooved. The narrowing of the opening causes turbulence, producing friction. The friction produces a hissing sound.

The hissing sound can be of two kinds: voiceless hissing sound and voiced hissing sound. If the vocal cords are made to vibrate when the air stream goes out of the mouth chamber, a voiced hissing sound can be heard as a voiced alveolar fricative /z/. If the vocal cords are not made to vibrate, a voiceless hissing sound can be heard as a voiceless alveolar fricative /s/.

#### 4.3.5 Interdental fricatives /θ/ and /ð/

Interdental fricatives /θ/ and /ð/ are articulated by making a light contact between the tip of the tongue and the edge and inner surface of the upper incisors and a stronger contact between the rims of the tongue and the upper side teeth. The soft palate is

raised to block the nasal resonator. The blockage lets the air stream enter the mouth chamber and go out through a very narrow passage built by the tip of the tongue and the edge and inner surface of the upper incisors. The narrowing of the passage causes the air stream passing it to make friction.

Another way to articulate the interdental fricatives  $\text{[}^{-}\delta\text{]}$  and  $\text{[}^{-}\theta\text{]}$  is just to insert the tip of the tongue between the upper and lower incisors. In this case the lower incisors are the base for the tip of the tongue to make light contact with the upper incisors.

When the air stream is going out through the narrow passage built by the tip of the tongue and the upper incisors the vocal cords can be made to vibrate or not. For interdental fricative  $\text{[}^{-}\theta\text{]}$ , the vocal cords do not vibrate, whereas for the interdental fricative  $\text{[}^{-}\delta\text{]}$  the vocal cords vibrate.

## C H A P T E R 5

### ARTICULATORY DESCRIPTION OF THE ADJACENT ALVEOLAR CONSONANTS ON INTERDENTAL FRICATIVES

#### 5.0 Introduction

As it has been discussed in chapter 2, the occurrence of the influence of the adjacent sounds comes from the existence of glides that comes from successions of sounds (see chapter 2: 11). This chapter will describe the the articulatory description of the influence of the adjacent alveolar consonants on interdental fricatives. The description is about the movements of the organs of speech in producing 'glides' (the movements of the tongue from one position into another) in the context of the influence of the adjacent alveolar consonants on interdental fricatives. Indeed, this is not a new description, since there has been a similar description written by Mason (see 1.6).

In order to make it clear, many examples are given. If it is possible the examples are choosen from those in which the adjacent alveolar consonants and interdental fricatives occur within a word, at syllable boundary, or at intersyllabic boundary.

The description in this chapter will also be confronted with description of examples in Indonesian. The examples in Indonesian are, of course, different from those in English. The examples do not involve both interdental fricatives, because Indonesian do not have the

equivalents for the English interdental fricatives. For English interdental fricatives, Indonesian learners of English tend to substitute them with one or more sounds, e.g.: the voiced interdental fricative  $[\theta]$  is substituted with voiced alveolar stop  $[d]$  or voiced dental stop  $[d̪]$ , whereas the voiceless interdental fricative  $[θ]$  is substituted with voiceless alveolar stop  $[t]$  or voiceless alveolar fricative  $[s]$  (Suprihartanta, 1979: 72).

Therefore, the confronting examples in Indonesian will involve alveolar consonants and the three substituting sounds. The choice of the substituting sounds depends on what sort of English interdental fricative is involved in the examples.

### 5.1 The influence of the adjacent sound $[t]$ on $[θ]$

In slower pronunciation the quality of both  $[t]$  and  $[θ]$  can be maintained. Take the following example:

"get through" is pronounced  $[get θru:]$

After moving in gliding actions to produce the preceding sounds, the organs of speech come to a position to produce the sound  $[t]$ . When it comes, the tip of the tongue or the tip and rims of the tongue are in contact with the alveolar ridge and side teeth. This contact makes a closure. At the same time there is compressed lung air behind the closure. After that the closure and the compressed air make a plosion by suddenly opening the closure and releasing the compressed air. The tongue

moves back to neutral position. From this position the tongue or the tip of the tongue immediately moves towards the surface and inner edges of the upper teeth to make a light contact to produce the sound  $[\text{t}^h]$ . At the same time lung air comes out through the opening made by the tip of the tongue and the upper teeth. A friction noise is heard. The vocal cords do not vibrate when the organs of speech move for both sounds  $[\text{t}^h]$  and  $[\text{t}^h]$ . From that position the tongue and the other organs of speech are again ready to make following sound or sounds.

In the description above there is no continuous motions of the organs of speech. The tongue stops working by moving back to its neutral position after making the sound  $[\text{t}^h]$  as the syllable-final sound. In other words, there is a pause before the next sound  $[\text{t}^h]$  comes.

In order to avoid the pause, the tongue does not move back to its neutral position. The tongue does not make the plosion after making contact with the alveolar ridge. The tongue stands still. It is already in a starting position to make the next sound  $[\text{t}^h]$ . From this position the tip of the tongue moves towards the upper teeth to make a narrow opening. The lung air comes out through the opening. The friction is heard.

However, the quality of the adjacent sounds  $[\text{t}^h]$  and  $[\text{t}^h]$  can change in normal conversation. This is because the tip of the tongue is not only to work for the sound  $[\text{t}^h]$  but for the adjacent sound  $[\text{t}^h]$  as well. Moreover, the tip of the tongue has to move quickly,

gliding from the alveolar ridge to the upper teeth. Because of that the tip of the tongue can not move smoothly.

After the organs of speech come to articulate the sound  $[\text{t}]$ , the tip of the tongue is about to move for the sound  $[\text{t}]$ . But the movement of the tongue is already anticipated for the production for the next sound  $[\theta]$ . To move for the sound  $[\text{t}]$ , the tip of the tongue does not make a contact with the alveolar ridge as the usual point of articulation for the sound  $[\text{t}]$  but with the point in front of it. The sound  $[\text{t}]$ , in this case, becomes dental  $[\text{t}^d]$  (Jones, 1958: 71). For the production of the following sound  $[\theta]$ , the tip of the tongue does not make a narrow opening with the edges of the upper teeth but with the point behind the upper teeth in which the tip of the tongue stands for the production of the preceding sound  $[\text{t}]$ . So the tip of the tongue does not articulate both the sounds  $[\text{t}]$  and  $[\theta]$  in different points of articulation but in the same place. Here are some examples of words or phrases containing both the sounds  $[\text{t}]$  and  $[\theta]$  in adjacent position:

The adjacent sounds  $[\text{t}]$  and  $[\theta]$  within a word:

breadth	$[\text{bret}\theta]$
eighth	$[\text{eit}\theta]$
width	$[\text{wit}\theta]$

The adjacent sounds  $[\text{t}]$  and  $[\theta]$  in intersyllabic boundary:

get through	$[\text{get}\theta\text{ru:}]$
great throngs	$[\text{greit}\theta\text{rɔŋz}]$

its not thinkable            /ʔits nɔt θɪŋkəbl̩\_ʔ

Because of the substitution of the sound /ʔt\_ʔ or /ʔs\_ʔ for the sound /ʔθ\_ʔ, Indonesian learners of English may say:

/ʔeit\_ʔ            or    /ʔeits\_ʔ

/ʔbret\_ʔ            /ʔbrets\_ʔ

/ʔwit\_ʔ            /ʔwits\_ʔ

/ʔget tru:\_ʔ            or    /ʔget sru:\_ʔ

/ʔgreit trɔŋz\_ʔ            /ʔgreit srɔŋz\_ʔ

/ʔits nɔt θɪŋkəbl̩\_ʔ            /ʔits nɔt θɪŋkəbl̩\_ʔ

Moreover, the fact that Indonesian has a common possibility of the succession of /ʔ-t + t\_ʔ or /ʔ-t + s\_ʔ increases the tendency for Indonesian learners of English to substitute the sequence of /ʔ-t + θ\_ʔ with that of /ʔ-t + t\_ʔ or /ʔ-t + s\_ʔ. Here are some examples from Indonesian:

sketsa            /ʔsketsa\_ʔ "sketch"

tempat tidur    /ʔtəmpat tidur\_ʔ "bed"

tempat setan    /ʔtəmpat setan\_ʔ "ghost place"

menggamit tangan /ʔmɛŋgamit taŋan\_ʔ "to hold hand"

sempit sekali    /ʔsɛmpit səkali\_ʔ "very narrow"

In the Indonesian examples the sounds involves in the syllable boundary or in the intersyllabic boundary are the syllable-final /ʔt\_ʔ and the syllable-initial /ʔt\_ʔ or the syllable-initial /ʔs\_ʔ. From those examples it is obvious that the tendency for Indonesian learners of English to do substitution is the homorganic condition

of both sounds [t] and [s]. To pronounce these:  
phrase:

[təmpat tidur]  
[məŋgamit taŋan]

the organs of speech do not find any difficulty in moving from those final sounds of the first words to the initial sounds of the next words, for both sounds are the same sounds. Thus the same sounds share the same place of articulation.

Thereby, the formerly-mentioned rule also applies to the other pair of [t + s] as found in this Indonesian examples:

[təmpat setan]  
[səmpit səkali]  
[sakit səkali]

In the examples above the sounds involved in the intersyllabic boundary are the syllable-final [t] and the syllable-initial [s]. Like the sound [t], the sound [s] is dental too. It means that the sound [s] is produced by the tip of the tongue making contact with the lower teeth, whereas for the sound [t] the tip of the tongue makes a light contact with the upper teeth. The organs of speech do not find any difficulty in moving from the final sound [t] to the initial sound [s].

Another cause of the tendency in substituting that deserves to be considered is the fact that the sounds [θ], [t], and [s] are different in some respects



but similar in the other respects. The tip of tongue is the primary active articulator for the three sounds  $[-t_7]$ ,  $[-s_7]$ , and  $[-\theta_7]$ . In spite of that, the three sounds are voiceless. According to the place of articulation, the sound  $[-\theta_7]$ , while both the Indonesian  $[-t_7]$  and  $[-s_7]$  are also dental. According to the manner of articulation, both the sounds  $[-\theta_7]$  and the Indonesian  $[-s_7]$  are fricative; the former is slit fricative, while the latter is grooved fricative (Suprihartanta, 1979: 42). Compared with the fricative  $[-\theta_7]$ , the Indonesian  $[-s_7]$  is a lenis stop.

#### 5.2 The influence of the adjacent sound $[-t_7]$ on $[-\delta_7]$

The quality of the adjacent sounds  $[-t_7]$  and  $[-\delta_7]$  can also be maintained in the same way in slower pronunciation. In normal conversation the way both the sounds  $[-t_7]$  and  $[-\delta_7]$  influence each other in adjacent position is practically the same as that of both the sounds  $[-t_7]$  and  $[-\theta_7]$  do (see 5.1). One reason that can be cited is that both the sounds  $[-\theta_7]$  and  $[-\delta_7]$  are articulated in the same place of articulation. Thus the articulatory process of the succession of the sounds  $[-t_7]$  and  $[-\delta_7]$  is the same as that of both the sounds  $[-t_7]$  and  $[-\theta_7]$ . However, unlike the pair of the sounds  $[-t_7]$  and  $[-\theta_7]$  which is constituted by voiceless sounds, the pair of the sounds  $[-t_7]$  and  $[-\delta_7]$  is constituted by voiceless and voiced sounds. This difference will influence the voicing quality of the sounds  $[-t_7]$  and  $[-\delta_7]$  (Ripman,

1931: 142).

When the organs of speech come to the moment of articulating the sound  $[/t_7]$ , the tip of the tongue makes a contact to build a closure with the point between the alveolar ridge and the edges of the upper teeth. From that point the tip of the tongue is already in a starting position to produce the next sound  $[/ð_7]$ . At the same time the tip of the tongue lowers itself making a narrow opening for the lung air to go through, the vocal cords vibrate and the sound  $[/ð_7]$  is produced. Because of the vibration of the vocal cords at the moment the tip of the tongue touches the point of articulation, the sound  $[/t_7]$  becomes partially voiced. Thus the sound  $[/t_7]$  is said to be partially voiced and dentalized. On the other hand, the sound  $[/ð_7]$  in initial position is already partially voiced (Jones, 1958: 101). Here are some examples of phrases containing the sounds  $[/t_7]$  and  $[/ð_7]$  in adjacent position in intersyllabic boundary:

He thanked them	$[/hi: \theta æŋkt ðəm_7]$
At the beginning	$[/æt ðə bɪɡɪnɪŋ_7]$
At that time	$[/æt ðæt taɪm_7]$
Shut the window	$[/ʃʌt ðə wɪndəʊ_7]$
Not this afternoon	$[/nɒt ðɪs a:ftənu:n_7]$
He passed the test	$[/hi: pɑ:st ðə test_7]$
To hurt them	$[/tv hɜ:t ðəm_7]$

Like the sound  $[/θ_7]$ , the sound  $[/ð_7]$  does not have any equivalent in Indonesian either. For the sound  $[/ð_7]$ , Indonesian learners of English often replace it with

the Indonesian alveolar stop  $[\text{d}]$  or alveolar dental stop  $[\text{d}^h]$ .

The Indonesian alveolar stop  $[\text{d}]$  has a phonetic feature which is the same as that of English  $[\text{d}^h]$ ; the Indonesian alveolar stop  $[\text{d}]$  is voiced. Besides, its active articulator is the tip of the tongue. According to the place of articulation, the sound  $[\text{d}^h]$  is different from the alveolar  $[\text{d}]$ , since the sound  $[\text{d}^h]$  is dental. The distance between the two points is reachably short for the tip of the tongue. Therefore, the voicing, the active tip of the tongue, and the distance between the points of articulation are the main factors for the substitution of the sound  $[\text{d}^h]$  by the alveolar  $[\text{d}]$ . For example, the pronunciation of the words the and other are  $[\text{d}^h\text{e}]$  and  $[\text{a}^h\text{d}^h\text{e}]$  (Suprihartanta, 1979: 49).

Another reason that Indonesian learners of English tend to substitute the sound  $[\text{d}^h]$  by the Indonesian alveolar  $[\text{d}]$  is that it mostly occurs initially and medially. Here are some examples:

data	$[\text{d}^h\text{ata}]$	"data"
dasi	$[\text{d}^h\text{asi}]$	"tie"
dinding	$[\text{d}^h\text{ind}^h\text{ing}]$	"wall"
kuda	$[\text{k}^h\text{uda}]$	"horse"
sedan	$[\text{s}^h\text{edan}]$	"sedan"
tendang	$[\text{t}^h\text{end}^h\text{ang}]$	"kick"

The alveolar  $[\text{d}]$  does not occur finally. In the word

abad  $[\text{a}^h\text{ba}^h\text{d}^h]$

the final sound is not the alveolar  $[\text{d}]$  but dental  $[\text{d}^h]$

(Ngaciman, 1979: 73). However, in most cases the sound  $[\text{c}]$  is substituted by the dental stop  $[\text{t}^{\text{d}}]$ . There are some reasons for that. A sound which is the same as the sound  $[\text{ð}]$  in terms of the point of articulation is the labio dental  $[\text{v}]$  whose point of articulation is the upper teeth but the active articulator is the lower lip. Moreover, the labio dental  $[\text{v}]$  is seldom used in Indonesian. In most occurrence the labio dental  $[\text{v}]$  is pronounced as its voiceless variant  $[\text{f}]$  (Suprihartanta, 1979: 37), as in the word:

Valuta pronounced  $[\text{faluta}]$

Another sound which is near to the sound  $[\text{ð}]$  in terms of point of articulation is the alveolar  $[\text{d}]$ . But the alveolar  $[\text{d}]$  is less similar to the sound  $[\text{ð}]$ . Most learners of English do not put the tip of the tongue in the alveolar ridge but bringing it a bit forward in order to say the sound  $[\text{ð}]$ . However, the Indonesian learners of English still fail to insert the tip of the tongue between the upper and lower teeth and to make a narrow opening for the friction. The tip of the tongue remains behind the upper teeth while the vocal cords continue vibrating. And because the tip of the tongue fails to make friction, a weak explosion as a "substitute" for the friction is heard. The dental  $[\text{t}^{\text{d}}]$  is produced.

For that reason, Indonesian learners of English may say:

$[\text{d}\text{ə}]$	besides	$[\text{ð}\text{ə}]$
$[\text{^}\text{d}\text{ə}]$		$[\text{^}\text{ð}\text{ə}]$

In the case of the adjacent sounds /t/ and /o/, the occurrence of the dental /ð/ is fortified by the existence of the sound /t/ which is already dental in Indonesia. So the Indonesian learners of English may say:

/hi: θ ænkɪ ðəm/

/æɪ ð bɪɡɪnɪŋ/

/æɪ ð æt taɪm/

/æɪ ðə wɪndəʊ/

/nəɪ ðɪs a:tənu:n/

/ni: pɑ:sɪ ðə test/

/tv hɜ:ɪ ðəm/

### 5.3 The influence of the adjacent sound /d/ on /θ/

Like the quality of the adjacent sounds /t/ and /θ/ or of the adjacent sounds /t/ and /ð/, the quality of the adjacent sounds /d/ and /θ/ can also be maintained in slower pronunciation. The way the adjacent sounds /d/ and /θ/ influence each other is also the same of that of the former pairs (see 5.1 and 5.2). Here the preceding sound is voiced. This is different from the two former pairs in which the preceding sounds are voiceless. But the pair of /d/ and /θ/ is almost the same as the pair of /t/ and /ð/, in which one of the two adjacent sounds is voiced (see 5.2). Therefore, like the voicing of /t/ and /ð/, the voicing of /d/ and /θ/ is also influenced.

When the organs of speech come to the moment of the production /d/, the tip of the tongue makes a

contact with the point between the edges of the upper teeth and the alveolar ridge. At almost the same time the following sound  $[\theta]$  is also produced. In other words, the movements of the organs of speech for the production of the sound  $[d]$  are anticipated for the production of the next voiceless sound  $[\theta]$ . Because of the existence of the following voiceless sound  $[\theta]$ , the preceding sound is also influenced to be partially voiced (Jones, 1958: 73). Here are some examples of the words containing the sounds  $[d]$  and  $[\theta]$  in adjacent position in intersyllabic boundary:

spend-thrift	pronounced $[\text{spend } \theta \text{rɪft}]$
the hard theme	$[\text{ðə ha:d θi:m}]$
the good things	$[\text{ðə gʊd θɪŋz}]$
the bad things	$[\text{ðə bæd θɪŋz}]$
the old thermometer	$[\text{ði əvld θe'mɒmɪt}]$

However, because Indonesian learners of English tend to substitute the sounds  $[t]$  or  $[s]$  for the sound  $[\theta]$ , they may:

$[\text{spend trɪft}]$	or	$[\text{spend sɪft}]$
$[\text{ðə ha:d ti:m}]$		
$[\text{ðə bæd ti ri}]$		
$[\text{ðə gʊd tɪŋz}]$	or	$[\text{ðə gʊd sɪŋz}]$
$[\text{ðə bæd tɪŋz}]$	or	$[\text{ðə bæd sɪŋz}]$
$[\text{ði əvld tɒmɒmɪt}]$		

In some of the Indonesian examples above the sound  $[\theta]$  is only substituted by the sound  $[t]$ , because Indonesian has the equivalent words such as:

tema	[-temʌ_7]
teori	[-teori_7]
termometer	[-termometər_7]

The first sound of each word is the sound [-t\_7].

#### 5.4 The influence of the adjacent sound [-d\_7] on [-ð\_7]

Like in 5.1, 5.2, and 5.3, the quality of the adjacent sounds [-d\_7] and [-ð\_7] can also be maintained in slower pronunciation. The way the adjacent sounds [-d\_7] and [-ð\_7] influence each other in normal conversation is also the same as those in 5.1, 5.2, and 5.3. The reason is that the sound [-d\_7] is also an alveolar stop. Consequently, the sound [-d\_7] also becomes dental. Unlike in 5.3, in 5.4 the following interdental fricative is voiced. The similarity of the voicing condition of the interdental fricative does not create any changing in the voicing condition of the two adjacent sounds [-d\_7] and [-ð\_7]. Thus, like in 5.1 in which both of the adjacent sounds remained voiceless, both of the adjacent sounds [-d\_7] and [-ð\_7] remain voiced (Jones, 1958: 73). Here are some examples of phrases containing the adjacent sounds [-d\_7] and [-ð\_7] in intersyllabic boundary:

I understood the reason	[-ai ʌndəstʊd ðə ri:zn_7]
He heard the noise	[-hi: hɜ:d ðə nɔɪz_7]
I had the first prize	[-ai hæd ðə fɜ:t praɪz_7]
I was still unmarried then	[-ai wəz stɪl ʌnmærɪd ðen_7]
I regarded the region as part of China	[-ai rɪgə:dɪd ðə ri:dʒən əz pɑ:t əv tʃaɪnə_7]

She couldn't read the table /ʃi: kʌnt ri:d ðə teɪbl\_7  
 When did the man go ? /wen dið ðə mæn gəv\_7

As it has been mentioned in 5.2, Indonesian learners of English tend to substitute the dental sound /ɸ\_7 for the English sound /ð\_7. Therefore, they may say:

/ai ʌndəstʌɸ ðə ri:zn\_7  
 /hi: hɜ:ɸ ðə nəɪz\_7  
 /ai wəz stɪl ʌnmæriɸ ðen\_7  
 /ʃi: kʌnt ri:ɸ ðə teɪbl\_7  
 /ai hæɸ ðə fɜ:st praɪz\_7  
 /wen diɸ ðə mæn gəv\_7

### 5.5 The influence of the adjacent sound /n\_7 on /θ\_7

The sound /n\_7 here is not like the former alveolar consonants discussed in the former pages. The sound /n\_7 is an alveolar nasal consonant.

In slower pronunciation the adjacent sounds /n\_7 and /θ\_7 do not influence each other. When the organs of speech come to the production of /n\_7, the tip of the tongue touches the alveolar ridge, but does not make sudden separation. The soft palate is lowered to let the lung air come out through the nose. At the same time the vocal cords vibrate. The sound /n\_7 is then produced. From the position in the alveolar ridge, the tip of the tongue is ready to produce the next sound /θ\_7. Immediately, the tip of the tongue moves forward to make a very narrow opening between the tip of the tongue and the edges of the upper teeth. At the same time, the lung air comes



out through the narrow opening and makes friction. The vocal cords do not vibrate. The sound  $[\text{̃}\theta_7]$  is produced.

In rapid speech or in normal conversation the description is not like the above description. Like the other alveolar consonants, the production of the sound  $[\text{̃}n_7]$  in the final position is also influenced by the next sound  $[\text{̃}\theta_7]$ . The movements of the organs of speech for the production of the sound  $[\text{̃}n_7]$  are anticipated. So the tip of the tongue does not make a contact with the alveolar ridge but with the point in front of the alveolar ridge. Thus the sound  $[\text{̃}n_7]$  is dentally produced. (Gimson, 1972: 291). In that point the tip of the tongue makes a narrow opening for the production of the sound  $[\text{̃}\theta_7]$ . Therefore, the sound  $[\text{̃}\theta_7]$  is alveolarized. Because the next sound  $[\text{̃}\theta_7]$  is voiceless, the voiced sound  $[\text{̃}n_7]$  becomes voiceless (Jones, 1958: 84). Here are some examples of words or phrases containing the adjacent sounds  $[\text{̃}n_7]$  and  $[\text{̃}\theta_7]$ :

nineth	$[\text{̃}nain\theta_7]$
tenth	$[\text{̃}ten\theta_7]$
eleventh	$[\text{̃}i'levn\theta_7]$
seventh	$[\text{̃}sevn\theta_7]$
month	$[\text{̃}m\Lambda n\theta_7]$
thirteenth	$[\text{̃}\theta_3:'ti:n\theta_7]$
fourteenth	$[\text{̃}fo:'ti:n\theta_7]$
sixteenth	$[\text{̃}siksti:n\theta_7]$

The examples above are examples of the adjacent sounds  $[\text{̃}n_7]$  and  $[\text{̃}\theta_7]$  within a word. The next examples are examples of the adjacent sounds  $[\text{̃}n_7]$  and  $[\text{̃}\theta_7]$  in syllable boundary:

anthology	/ˈænˈθɒlədʒi_7
synthetic	/ˈsɪnˈθetɪk_7
menthol	/ˈmenθəl_7
anthropology	/ˈænθrəˈpɒlədʒi_7
unthinkable	/ˈʌnθɪŋkəbl_7
unthought-of	/ˈʌnθɔ:t əv_7
enthusiastic	/ˈɪnθju:ziˈæstɪk_7

The adjacent sounds /n\_7 and /θ\_7 in intersyllabic boundary:

win through	/ˈwɪn θru: _7
Children thrive on food	/ˈtʃɪldrən θraɪv ɒn fu:d_7
He ran through the money	/ˈhi: ræn θru: ðə mʌni_7
They are the main things	/ˈðei a: ð meɪn θɪŋz_7

The substitution of the sounds /t\_7 and /s\_7 for the sound /θ\_7 may make Indonesian learners of English say:

/ˈnaɪnt_7	or	/ˈnaɪns_7
/ˈtent_7	or	/ˈtens_7
/iˈlevnt_7	or	/iˈlevns_7
/ˈsevnt_7	or	/ˈsevns_7
/ˈmʌnt_7	or	/ˈmʌns_7
/ˈθɜ:ˈti:nt_7	or	/ˈθɜ:ˈti:ns_7
/ˈfɜ:ˈti:nt_7	or	/ˈfɜ:ˈti:ns_7
/ˈsɪksˈti:nt_7	or	/ˈsɪksˈti:ns_7
/ˈænˈtɒlədʒi_7		
/ˈsɪnˈtɛtɪk_7		
/ˈmentəl_7		
/ˈænrəˈpɒlədʒi_7		
/ˈɪntju:ziˈæstɪk_7		

/ʌn'tɪŋkəbl̩\_7            or        /ʌn'sɪŋkəbl̩\_7  
 /ʌn'tɔ:təv\_7            or        /ʌn'sɔ:t əv\_7  
 /win tru:\_7            or        /win sru:\_7  
 /tʃɪldrən traɪv ɔn fu:d\_7    or    /tʃɪldrən sraɪv ɔn fu:d\_7  
 /hi: ræn tru: ðə mʌni\_7    or    /hi: ræn sru: ðə mʌni\_7  
 /ðei a: ðə mein tɪŋz\_7    or    /ðei a: ðə mein sɪŋz\_7

In the examples from Indonesian there are both /t\_7 and /s\_7 which substitute the sound /θ\_7 (see 5.1 for the reasons of the substitution). However, there is possibility that the sound /t\_7 is the only substitute for the sound /θ\_7, for examples:

/æn'tɒlədʒi\_7  
 /sɪn'tetik\_7  
 /mentɒl\_7  
 /æntɾə'pələdʒi\_7  
 /ɪntju:zi'aestik\_7

That is because Indonesian has the cognates for those words. Here are the words:

antologi        /ʌntɒləgi\_7  
 sintesis        /sɪntesɪs\_7  
 mentol          /mentɒl\_7  
 antropologi    /ʌntɾɒpɒləgi\_7  
 antusias        /ʌntusɪəs\_7

In the examples of the cognates the sound following the sound /n\_7 is /t\_7. The sequence of the sounds /n\_7 and /t\_7 is already familiar to Indonesian learners of English. Moreover, the sounds /n\_7 and /t\_7 are homorganic.

## 5.6 The influence of the adjacent sound /n/ on /ð/

Unlike in 5.5 here both of the adjacent sounds /n/ and /ð/ are voiced. The way the adjacent sounds /n/ and /d/ influence each other is the same as that of the adjacent sounds /n/ and /θ/. In slower pronunciation, the quality of both of them can be maintained as in 5.5. In normal conversation both of the sounds /n/ and /ð/ also influence each other. It means that the points of articulation of both /n/ and /ð/ are the same as those in 5.5. Because they are both voiced, there will not be any changing in voicing. Here are some examples of words or phrases containing the adjacent sounds /n/ and /ð/:

The adjacent sounds /n/ and /ð/ in syllable boundary:

nonetheless /nʌnðəles/

The adjacent sounds /n/ and /ð/ in intersyllabic boundary:

in the air /ɪn ði: eə/

on the ground /ɒn ðə graʊnd/

between them /bi'twi:n ðəm/

even though /i:vən ðəv/

than the last one /ðæn ðə la:st wʌn/

often they are difficult /'ɒfn ðei a: difɪkəlt/

to lay down their arms /tʊ lei daʊn ðeə a:mz/

Because of the substitution of the dental /ð/ for the sound /ð/, Indonesian learners of English may say:

/nʌn ðəles/

/bi'twi:n ðəm/

/i:vn ðəʊ\_7  
 /ðæn ðə la:st wʌn\_7  
 /'ɒfn ðei a: difikəlt\_7  
 /tv lei daʊn ðeər a:mz\_7

And because the movements of the organs of speech for the production of the sound /n\_7 is anticipated for the production of the dental sound /ɲ\_7, the alveolar nasal sound /n\_7 becomes dental accordingly. So the learners may say:

/nʌŋðəles\_7  
 /bi'twi:n ðəm\_7  
 /i:vn ðəʊ\_7  
 /ðæn ðə la:st wʌn\_7  
 /'ɒfn ðei a: difikəlt\_7  
 /tv lei daʊn ðeər a:mz\_7

### 5.7 The influence of the adjacent sound /s\_7 on /θ\_7

The alveolar consonants that have been discussed are alveolar stop consonants and alveolar nasal consonant. Now the preceding alveolar consonant is the voiceless alveolar fricative consonant /s\_7 followed by the voiceless interdental fricative /θ\_7. Both of the adjacent consonants are voiceless. So there will not be any changing in voicing.

In slower pronunciation the quality of the adjacent sounds /s\_7 and /θ\_7 can be maintained. After moving for the preceding sounds, the organs of speech come to the moment of producing /s\_7. The tip and

blade of the tongue then approach the alveolar ridge, but not touching it. The surface of the tongue is made grooved. Then the lung air comes out through the narrow opening between the tongue and alveolar ridge. The sound /s/. From this position the tip of the tongue makes a forward movement to make another narrow opening with the edges of the upper teeth. At the same time the lung air comes out through the opening. The surface of the tongue is flattened. The sound /θ/ is then produced. The organs of speech are again to make the other following sound. In normal conversation, the narrow opening for the sound /s/ is not in the alveolar ridge but in front of the alveolar ridge, because the movement of the tip of the tongue is anticipated for the production of the next /θ/ whose point of articulation is in the upper teeth. To produce the next /θ/, the tip of the tongue does not make a narrow opening with the edges of the upper teeth but with the point in which the tip of the tongue stands for the production of /s/. Here are some examples of words or phrases containing the adjacent sounds /s/ and /θ/:

The adjacent sounds /s/ and /θ/ within a word:

sixth            /siksθ/

The adjacent sounds /s/ and /θ/ in syllable boundary:

aesthetic        /i:s'tetik/

anaesthesia     /ænis'θi:ziə/

neurasthenia    /nju:ərəs'θi:niə/

As it has been mentioned in 5.1, Indonesian learners of English tend to substitute the sound /θ/ with the

sound /t/ or /s/. In 5.7 the /θ/ is only substituted with the sound /t/, for the preceding consonant is already /s/. Thus Indonesian learners of English may say:

/sɪkst/                     
 /twenti sɪkst/             
 /i:s'tetik/                 
 /ænis'ti:ziə/               
 /nju:ərəs'ti:niə/

The substitution of the sound /t/ for the sound /θ/ makes the pronunciation easier, because in quick action the tip of the tongue does not work in two places but in one place. Moreover, Indonesian learners of English have been familiar with the succession of the sounds /s/ and /t/. The succession of the sounds /s/ and /t/ above can be compared with the existing succession of the sounds /s/ and /t/ in Indonesian words such as:

istana	/ɪstʌnʌ/	"palace"
istirahat	/ɪstɪrʌhʌt/	"break (interval of time)"
istri	/ɪstri/	"wife"
astronot	/ʌstronɒt/	"astronaut"
pasti	/pʌsti/	"certain"

The succession of the sounds /s/ and /t/ in Indonesian is easy to pronounce, for the sounds /s/ and /t/ are homorganic.

### 5.3 The influence of the adjacent sound [s] on [ð]

Like in 5.7, the adjacent sounds [s] and [ð] can be maintained in slower pronunciation. Now the following interdental fricative is voiced.

After moving for the production of the preceding sound or sounds, the organs of speech continue moving for the production of the sound [s]. The tip of the tongue approaches the alveolar ridge, while the sides of the tongue make a close contact with the upper side teeth. At the same time the lung air comes out through the narrow opening between the tip of the tongue and the alveolar ridge. The sound [s] is produced. After that the tip of the tongue approaches the edges of the upper teeth to make another narrow opening. When the tip of the tongue is almost in touch with the edges of the upper teeth the vocal cords vibrate. The sound [ð] is produced.

As in 5.7, in normal conversation the movements of the organs of speech for the production of the sound [s] are anticipated for the production of the next sound [ð]. Thus the places of articulation of the sounds [s] and [ð] are made the same. Accordingly, the sound [ð] becomes partially voiced. Moreover, the sound [ð] is already partially voiced when it occurs in initial or final position (Jones, 1958: 101). Here are some examples of phrases containing the adjacent sounds [s] and [ð] in intersyllabic boundary:

That's the man [ðæt̪s ðə mæn]

Put the box there [pʊt ðə bɒks ðeə]



Its nothing else than that    [ʔits nʌθin els ðæn ðæt\_7  
 To pronounce these            [ʔtv prənʌvns ði:z\_7  
 He sets them free             [ʔhi: sets ðəm fri:\_7

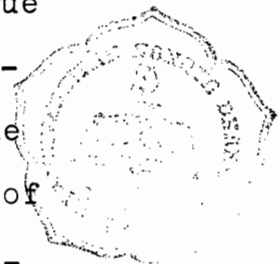
Because the sound [ʔð\_7 is often substituted with dental  
 [ʔð\_7, Indonesian learners of English may say:

[ʔdæʔs ðə məen\_7  
 [ʔpʊʔ ðə bɒks ðəə\_7  
 [ʔits nʌθin els ðæʔ ðæt\_7  
 [ʔtv prənʌvns ðəm\_7

### 5.9 The influence of the adjacent sound [ʔz\_7 on [ʔð\_7

In normal conversation the way the adjacent sounds  
 [ʔz\_7 and [ʔð\_7 influence each other is the same as the  
 way the adjacent sounds [ʔs\_7 and [ʔð\_7 do (see 5.7 and  
 5.8). Because the sounds [ʔz\_7 and [ʔð\_7 are    voiced,  
 there will not be any changing in voicing.

After moving to produce the preceding sound    or  
 sounds, the organs of speech come to the moment of    the  
 production of the sound [ʔz\_7. Because there is an anti-  
 cipation of the movements of the organs of speech,    the  
 tip of the tongue does not approach the alveolar    ridge  
 but the point in front of it. The surface of the tongue  
 is made grooved. At the same time the vocal cords vi-  
 brate. The sound [ʔz\_7 is produced. Immediately, the  
 surface of the tongue is made flat for the production of  
 the sound [ʔð\_7. The lung air continues coming out ac-  
 companied by the vibration of the vocal cords. Here are  
 some examples of phrases containing the adjacent sounds



/ z / and / ð / in intersyllabic boundary:

He considers that he is welcome /hi: kənsɪdəz ðæt hi:  
iz welkəm\_7

This is the book /ðɪs ɪz ðə bʊk\_7

Is this a pen /ɪz ðɪs ə pen\_7

The dog is theirs /ðə dɒg ɪz ðeəz\_7

As the air comes in, the light is out /æz oɪ e k m z  
ɪn, o laɪt ɪz a t\_7

Yet Indonesian learners of English find it difficult to pronounce the sound /z\_7, because the sound /z\_7 is not common in Indonesian. It is used primarily in loan words such as:

zinaħ /zɪnəħ\_7 "adultery"  
zaman /zəməŋ\_7 "era"  
ziarəħ /ziərəħ\_7 "pilgrimage"  
marzuki /məɾzuki\_7 "name of a person"

The sound /z\_7 above is often substituted with the sound /d\_7. So the loan words are often said:

/dzɪnəħ\_7  
/dzəməŋ\_7  
/dzɪərəħ\_7  
/məɾdzuki\_7

Indonesian learners of English, however, do not change the sound /z\_7 into the sound /d\_7. They will say it as the sound /s\_7. Accordingly, the following sound /ð\_7 is then changed into dental stop /t̪\_7 as in 5.1. Therefore, they may say:

/t̪ɪs ɪs t̪ə bʊk\_7

ʌ̃is ðis ə pen\_7

ʌ̃ðə ðɒg is ðeəz\_7

ʌ̃æs ði eə kʌmz in ðə laɪt is avt\_7

#### 5.10 The influence of the adjacent sound ʌ̃z\_7 on ʌ̃θ\_7

The way the adjacent sounds ʌ̃z\_7 and ʌ̃θ\_7 influence each other is the same as the way the adjacent sounds ʌ̃z\_7 and ʌ̃o\_7 do, because the following interdental fricative is voiceless interdental fricative.

After moving for the production of the preceding sound or sounds, the organs of speech come to the production of the sound ʌ̃z\_7. Because of the anticipation for the production of the next sound ʌ̃θ\_7, the tip of the tongue articulates with point in front of the alveolar ridge. The tip of the tongue does not make contact but makes narrow opening for the sound ʌ̃z\_7. The surface of the tongue is grooved. At the same time the lung air comes out through the opening accompanied by the vibration of the vocal cords. Because the following consonant is voiceless, the quality of the voicing of the sound ʌ̃z\_7 is also influenced. The sound ʌ̃z\_7 is then becoming partially voiced. From that position the surface of the tongue is made flat. The lung air still comes out, but the vocal cords do not vibrate. The sound ʌ̃θ\_7 is produced. The following examples contain the adjacent sounds ʌ̃z\_7 and ʌ̃θ\_7:

This is phthisis      ʌ̃ðis iz θaɪsɪs\_7

- As thick as thieves      ʌ̃æz θɪk æz θi:vz\_7

It is thawing      /-it iz θɔ:wiŋ\_7

The corn was thick      /-ðə kɔ:n wəz θik\_7

And because of the reasons cited in 5.9 and 5.1, the sound /-z\_7 is substituted with the sound /-s\_7 and the sound with the sound /-t\_7 or /-s\_7. Thus Indonesian learners of English may say:

/-ðis is taisis\_7      or      /-ðis is saisis\_7

/-æstik æstɪ:vs\_7      or      /-æstik æssi:vs\_7

/-it is tɔ:wiŋ\_7      or      /-it is sɔ:wiŋ\_7

/-ðə kɔ:n wəstik\_7      or      /-ðə kɔ:n wəstik\_7

The substitution can be compared with the following examples of the successions of the sounds /-s\_7 and /-t\_7 or /-s\_7 in Indonesian words such as:

/-pʌstʌ\_7      pasta      "paste"

/-hʌstʌ\_7      hasta      "hand"

/-mæsti\_7      mesti      "certain"

/-nʌsi\_7      nasi      "rice"

/-dʌsi\_7      dasi      "tie"

In the above examples, the adjacent consonants are the sounds /-s\_7 and /-t\_7. Indonesian learners of English do not find it to move the organs of speech from the sound /-s\_7 to the next sound /-t\_7, because this sound succession is common in Indonesian and both sounds are homorganic sounds.

#### 5.11 The influence of the adjacent sound /-l\_7 on /-θ\_7

In slower pronunciation the quality of the adjacent sounds /-l\_7 and /-θ\_7 can also be maintained as in 5.1 -

## 5.10.

In slower pronunciation both the sounds  $[\text{ɹ}]$  and  $[\text{θ}]$  will influence each other. The usual point of articulation for the sound  $[\text{ɹ}]$  is in the alveolar ridge. But because of the influence of the next sound  $[\text{θ}]$ , the position of the point of articulation is in front of the alveolar ridge.

After moving for the production of the preceding sound or sounds, the organs of speech come to the production of the sound  $[\text{ɹ}]$ . However, the movements of the organs of speech are anticipated for the production of the following sound  $[\text{θ}]$ , which is dental. So the tip of the tongue does not make a contact with the alveolar ridge but with the point in front of it. At the same time of the contact, the sides of the tongue are lowered and the lung air comes out through the lowered sides of the tongue. The vocal cords vibrate. The sound  $[\text{ɹ}]$  is produced. From that place of articulation the tip of the tongue is a bit lowered to make a narrow opening. At the same time the lung air comes out through the narrow opening. The friction is heard. The vocal cords do not vibrate. The sound  $[\text{θ}]$  is produced. And because the next  $[\text{θ}]$  is voiceless, the sound  $[\text{ɹ}]$  is influenced to be partially voiced. The following examples are containing the adjacent sound  $[\text{ɹ}]$  and  $[\text{θ}]$ :

The adjacent sounds  $[\text{ɹ}]$  and  $[\text{θ}]$  within a word:

health             $[\text{helθ}]$

stealth            $[\text{stelθ}]$

wealth            /ˈwelθ\_7

filth             /ˈfɪlθ\_7

The adjacent sounds /ˈl\_7 and /ˈθ\_7 at syllable boundary:

healthy           /ˈhelθi\_7

wealthy           /ˈwelθi\_7

filthy            /ˈfɪlθi\_7

filthily          /ˈfɪlθɪli\_7

The adjacent sounds /ˈl\_7 and /ˈθ\_7 in intersyllabic boundary:

pull through     /ˈpʊl θruː\_7

I will thank you /ˈaɪ wɪl θæŋk yuː\_7

the whale thrashed the water /ðə weɪl θræʃt ðə wɔːtə\_7

And because of the substitution of the sound /ˈt\_7 or /ˈs\_7 for the sound /ˈθ\_7, Indonesian learners of English may say:

/ˈhelt\_7           or     /ˈhels\_7

/ˈstelt\_7          or     /ˈstels\_7

/ˈwelt\_7           or     /ˈwels\_7

/ˈfilt\_7           or     /ˈfils\_7

/ˈhelti\_7          or     /ˈhelsi\_7

/ˈwelti\_7          or     /ˈwelsi\_7

/ˈfilti\_7          or     /ˈfils\_i\_7

/ˈpʊl truː\_7 or     /ˈpʊl sruː\_7

/ðə weɪl træʃt ðə wɔːtə\_7 or /ðə weɪl sræʃt ðə wɔːtə\_7

/ˈaɪ wɪl tæŋk yuː\_7 or /ˈaɪ wɪl sæŋk yuː\_7

The substitution of the sounds /ˈt\_7 or /ˈs\_7 for the sound /ˈθ\_7 can be compared with the existing succession of the sounds /ˈl\_7 and /ˈt\_7 or /ˈs\_7 in Indonesian words

such as:

/kʌltɪm/	kaltim	"acronym of Kalimantan Timur"
/mʌlti/	multi	"multi"
/fɪlsʌfʌt/	filsafat	"phylosophy"
/ʌltʌ/	alto	"alto"
/pʌlsʌ/	pulsa	"pulse"
/kʌlsɪʊm/	kalsium	"calsium"

In the examples from Indonesian, Indonesian learners of English do not find any difficulty in pronouncing the succession of the sounds /l/ and /t/ or /s/, because the sounds /l/ and /t/ or /s/ are the pairs of homorganic sounds. Moreover, Indonesian learners of English have been familiar with the succession of the sounds /l/ and /t/ or /s/.

#### 5.12 The influence of the adjacent sound /l/ on /ð/

Like the adjacent sounds /l/ and /θ/, the adjacent sounds /l/ and /ð/ also have the same place of articulation in normal conversation. Here the following interdental fricative is voiced.

After moving for the production of the preceding sounds, the organs of speech have to continue moving for the production of the sound /l/. And because the movement is anticipated, the tip of the tongue makes a contact with the point between the alveolar ridge and the edges of the upper teeth. The sides of the tongue are lowered. Thus the lung air comes out through the lowered sides of the tongue and the vocal cords vibrate.

The sound  $[\text{ɹ}]$  is produced. From that point the tip of the tongue is a bit lowered to make a narrow opening for the production of the next sound  $[\text{ð}]$ . The vocal cords still vibrate. In this context of the adjacent sounds  $[\text{ɹ}]$  and  $[\text{ð}]$ , the sound  $[\text{ɹ}]$  is dentally produced, and the sound  $[\text{ð}]$  is alveolarized. Here are some examples containing the adjacent sounds  $[\text{ɹ}]$  and  $[\text{ð}]$  at syllable boundary:

although  $[\text{ɔ:lðəv}]$

The adjacent sounds  $[\text{ɹ}]$  and  $[\text{ð}]$  at intersyllabic boundary:

will the man go ?  $[\text{wɪl ðə maen gəv}]$

can you spell the word  $[\text{kæn yu: spel ðə wɜ:d}]$

to handle the subject  $[\text{tv hændl ðə sʌbdʒɪkt}]$

all this  $[\text{ɔ:l ðɪs}]$

while the door is closed  $[\text{waɪl ðə dɔ:r ɪs kləvzd}]$

Like in 5.11, in 5.12 the voiced interdental fricative  $[\text{ð}]$  is substituted with the dental sound  $[\text{ɸ}]$  or alveolar  $[\text{d}]$ . So Indonesian learners of English may say:

$[\text{ɔ:lðəv}]$  or  $[\text{ɔ:lɸəv}]$

$[\text{wɪl ðə maen gəv}]$  or  $[\text{wɪl ɸə məen gəv}]$

$[\text{tv hændl ðə sʌbdʒɪkt}]$  or  $[\text{tv hændl ɸə sʌbdʒɪkt}]$

$[\text{ɔ:lðɪs}]$  or  $[\text{ɔ:lɸɪs}]$

The substitution of the dental sound  $[\text{ɸ}]$  and alveolar  $[\text{d}]$  can be compared with the existence of the succession of the sounds  $[\text{ɹ}]$  and  $[\text{d}]$  in Indonesian:



/ˈkʌlduː/ kaldu "broth"  
/ˈimeldə/ Imelda "name of a girl"

## C H A P T E R 6

### PROBLEMS AND HOW TO OVERCOME THEM

This chapter will be divided into three parts. Part A will be the first part. In this part problems concerning the adjacent alveolar consonants and interdental fricatives will be described. The second part will be part B. In This part there will be some principle of teaching pronunciation. Part C will discuss some techniques for teaching interdental fricatives preceded by alveolar consonants.

#### A. Problems

The main problems that can be cited here is the absence of the equivalent sounds for both  $[\theta]$  and  $[\delta]$  in Indonesian . Because of that Indonesian learners of English find difficulty in pronouncing them in any position.

The second problem is about the place and manner of articulation for both  $[\theta]$  and  $[\delta]$ . This problem of place and manner of articulation is applicable to Indonesian learners of English who have understood how to pronounce both  $[\theta]$  and  $[\delta]$ . It means that they still fail to insert the very tip of the tongue between the upper and lower teeth. Moreover thealso fail to produce friction noise.

Apart from the absence of the equivalent sounds for  $[\theta]$  and  $[\delta]$  and the problem of place and manner of articulation, another condition that produces problem

for Indonesian learners of English is the adjacent position of both the interdental fricatives and the alveolar consonants. Because the tip of the tongue is the active articulator for both groups of sounds, it will be hard for it to move in quick successive actions.

## B. Principles of teaching pronunciation

In learning a language, a learner has to use the sound system of the target language in utterances for communication (Lado, 1964: 70). But the sound system of the target language is different from the learner's native language. Thus the learner has to learn the new sound system of the target language, because by merely hearing the target language the students can not automatically master good pronunciation (Lado, 1964: 70).

To help Indonesian learners of English master good pronunciation of English here are some principles that can be used as a basic consideration in teaching pronunciation.

### 1. Learning pronunciation is a matter of practice

In learning the target language a learner will find a new sound system different from that of his native language. The learner has to adjust his organs of speech to the new ways of moving. For example, for both English interdental fricatives  $[\theta]$  and  $[ð]$  Indonesian learners of English have to be able to insert the tip of the tongue between the upper and lower teeth,

and to make friction as well. The ways the organs of speech move for the production of both the English interdental fricatives are new to them. The learners have to have the new habit (Lado, 1964: 70). This habit can only be gained through practice.

## 2. Teaching the problem

Teaching all about the sound system of the target language will not help much in teaching pronunciation. Teacher has to know where the problems lie. This is the point in which teacher puts a basis in teaching pronunciation.

## 3. Learning pronunciation is a matter of recognition and production of sounds (Lado and Fries Charles C., 1960: iii).

Teaching pronunciation of a language is not only teaching students how to produce the sounds of the target language. Teaching pronunciation also involves teaching how to recognize the sounds of the target language (Mason, 1981: 16). It means that the learner is exposed to the sounds of language first before he learn to produce them.

## 4. Good model will be a good source for both imitation and response (Lado, 1964:50).

Based on principle 3, a good teacher in pronunciation class is necessary. He will be a good model for his students to imitate before they able to produce the sounds of the target language. A good model will arouse students' admiration to him. Accordingly, this

will also produce good response from the students.

5. Classroom atmosphere (Suprihartanta, 1979: 84)

Learning a new language is learning how to speak using a new sound system. The newness of the sound system of the target language often brings difficult and strange sounds. The students have to try to practice the difficult and strange sounds. This often makes students embarrassed. The students' embarrassment can be overcome by familiar classroom atmosphere. The familiar classroom atmosphere can be warm relationship between the teacher and his students or even among the students themselves. With this kind of situation the students will feel at home and are encouraged to study together. Students who are afraid of making mistakes will feel encouraged to try more. This is the task of the teacher to create such a situation.

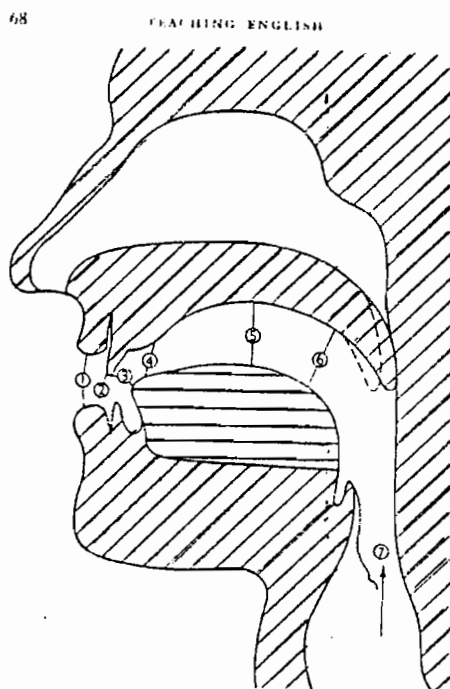
C. Some techniques for teaching interdental fricatives preceded by alveolar consonants

Here are some techniques that can be used to teach interdental fricatives preceded by alveolar consonants. Because the place of articulation is primary problem for learners of English, the emphasis is upon the articulation of the adjacent interdental fricatives and alveolar consonants. For the sake of the place of articulation a figure showing the organs of speech is provided for the students before they are trained to produce the adjacent interdental fricatives and alveolar consonants

in words or phrases. After they can recognize them, they are trained to produce the words or phrases.

1. Showing the students the figure of the organs of speech

The students are asked to look at the figure. The teacher points to the places of articulation of both the interdental fricatives and alveolar consonants. The teacher can ask the students to feel their own organs of speech using their tongues.



THE PLACES OF THE NUMBERED OBSTRUCTIONS WHICH FORM THE "CONSONANTS"

2. Listening to the teacher

The teacher utters each of the interdental fricatives and alveolar consonants: [ʔ\_t\_ʔ, [ʔ\_d\_ʔ, [ʔ\_n\_ʔ, [ʔ\_s\_ʔ, [ʔ\_z\_ʔ, [ʔ\_l\_ʔ, [ʔ\_θ\_ʔ, and [ʔ\_ð\_ʔ. After that the teacher can continue uttering words having alveolar consonants in final position and interdental fricatives in initial position. Here are some examples of words:

at  
in  
good  
books  
pens  
fill  
the  
then  
that  
thing  
theory

Finally, words or phrases having the adjacent alveolar consonants and interdental fricatives are uttered by the teacher. Here are some examples of the words and phrases:

eight  
at the beginning  
month  
in the air  
the bad things  
to add them  
sixth  
that's the man  
it is thawing  
health  
although

While the teacher is uttering the alveolar consonants and interdental fricatives and the words or phrases,

the students are asked to listen to him and to watch his mouth carefully.

### 3. Production

This is the step where the students will be trained to produce the words or phrases having the adjacent alveolar consonants and interdental fricatives. To follow the first and second steps, it would be better to ask the students to imitate the teacher's utterances. First, the teacher can give the students a list of words or phrases having the adjacent alveolar and interdental fricatives. Here are some examples of the words or phrases:

eighth

get through

breadth

at the beginning

shut the window

not this afternoon

the hard theme

the bad theory

the old thermometer

thousandth

we heard the noise

when did the man go ?

eleventh

tenth



the main things

nonetheless

on the ground

between them

sixth

aesthetic

anaesthetic

put the box there

that's the man

can you pronounce these ?

as thick as thieves

this is phthisis

it is thawing

this is the book

is this of any use to you ?

the dog is theirs

health

wealth

filth

although

will the man go ?

can you spell the word ?

The teacher asks the students to imitate his utterances in unison. The teacher says each word or phrase. The students listen and repeat. Finally, the teacher asks the students to repeat individually. Individual repetition

is important, for the teacher can know who find difficulty in saying the words or phrases. If a student makes a mistake, the teacher can ask the student to repeat the word or phrase until he can say the word or phrase correctly. If the student still makes the mistake, the teacher can say the word or phrase once again and ask the student to repeat. The teacher can also ask another student who does not make mistake to say the word or phrase and ask the former student to imitate the later student.

## C O N C L U S I O N

After the decription above the main problem lies in the differences between Indonesian and English sound systems. In this case, Indonesian learners of English always have a tendency to transfer the sound system of Indonesian to that of English. Specifically, I can conclude that:

1. The main problem occurs on the absence of the interdental fricatives  $[\theta]$  and  $[\delta]$  in Indonesian.
2. This makes the Indonesian learners of English substitute the interdental fricatives  $[\theta]$   $[\delta]$  with some available sounds from Indonesian such as  $[t]$  or  $[s]$  and  $[d]$  or  $[g]$ , which are nearer to the interdental fricatives  $[\theta]$  and  $[\delta]$  in respects.
3. The substitution also results from the influence of the existence of the successions of the sounds  $[t]$  and  $[t]$ ,  $[t]$  and  $[s]$ ,  $[n]$  and  $[t]$ ,  $[n]$  and  $[d]$ ,  $[s]$  and  $[t]$ ,  $[s]$  and  $[g]$ ,  $[l]$  and  $[t]$ ,  $[l]$  and  $[s]$ , and  $[l]$  and  $[d]$  in Indonesian

To make the students good at pronunciation, much practice in production of the sounds of the target language is needed. Before the students come to the production of the sounds, they need to recognize them first. Once again, since the pronunciation of a lan-

guage is a matter of habit, much practice is really needed. However, the solution cited in this thesis is not the only way to overcome the problems. The solution is one of the suggestions I can cite in this thesis.

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