ENGLISH SPEECH SOUNDS $[, \delta]$, [,], [t, d]:

HOW ARE THEY REALIZED?

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Abstract:

Languages vary considerably in the types of consonants which occur. Certain types of consonants are easier to produce than the others. Most students have difficulty in pronouncing [, \delta], [,], [t, d] since these sounds are not found in neither Indonesian nor Javanese. They tend to realize these sounds in other sounds. This article reports the realization of [, ð], [,], [t, d] by the Indonesian students learning English. The data were obtained by means of recording 20 students reading words, phrases, and sentences containing $[, \delta], [,], [t, d].$ The unit of analysis of the study is words containing [, ð], [,], [t, d]. Every word containing [, ð], [,], [t, d] is transcribed. The correct pronunciations (for every research subject) for each pair of [, \delta], [,], [t, d] are counted to find out which one is more difficult for the student. The incorrect pronunciations for each pair of [, ð], [,], [t, d] are analyzed in terms of the strategies (with what speech sound the student replaces). The research results show that [[, , t] are easier for the students to pronounce than [ð, , d]. This is as what said by Hecht and Mulford (1982) that learners acquire voiceless consonants before the voiced consonants. The students employ transfer strategies when they find difficulties in pronouncing $[, \delta]$, [,], [t, d]. They replace: [] with [t], [s]; [ð] with [d], [], [nd]; [] with [s]; [] with [z], []; [t] with [c]; [d] with [j]. Based on the findings, some suggestions can be put forward as follows: 1)The students should be taught the manner and the point of articulation of $[, \delta]$, [,], [t, d] so that they can produce those sounds correctly, 2) The students should be reminded mispronunciation may cause that misunderstanding.

Key words

Realization, transfer strategy, place of articulation, manner of articulation, adoption strategy, interlanguage

A. BACKGROUND

Languages vary considerably in the types of consonants which occur and because universal linguistic principles predict that certain types of consonants are easier to produce than others, the acquisition of consonants in a target language has been a focus of much research. Pronunciation plays an important role in studying language because mispronunciation may cause misunderstanding for the hearers. Most students have difficulty in pronouncing [, ð], [,], [t , d] since these sounds are not found in neither Indonesian nor Javanese. Therefore, the students should be made aware of the different pronunciation between English and Indonesian speech sounds.

Tarone(1978) summarized the processes operating to shape interlanguage phonology as negative transfer from the native language. The students tend to transfer their native language speech sounds into the target language. According to Major (1987), L2 learners pay less attention to form and more attention to content, so interference from L1 appears in the surface forms of utterances in L2.

The adoption strategy from L1 is applied for producing English speech sounds. This often causes misinterpretation for the hearers. Thus, teaching speech sounds for the students studying a foreign language is unavoidable.

Based on the previous research (Rustipa, 2003), the English speech sounds [, \eth], [,], [t , d] constitute difficult sounds to pronounce by the Indonesian students learning English. This research will further investigate which sounds are more difficult for the students, whether the voiceless [, ,t] or the voiced counterparts [\eth , ,d].

B. REVIEW OF RELATED LITERATURE



1. English Speech Sounds

Every language has its own systems of suprasegmentals and segmentals/ speech sounds. Speech sounds of a language are classified into vowels (pure vowels and diphthongs) and consonants. The classification of speech sounds into vowels and consonants is based on the differences in their function in an utterance and in their way of production.

An utterance consists of one or more than one syllable. In one syllable, there is only one vowel. Thus, a syllable typically centres around a vowel sound with or without consonants surrounding it. In other words, a vowel sound functions as a peak or centre of a syllable, whereas a consonant usually does not.

The reason why a vowel sound functions as a centre of a syllable is that because a vowel sound has inherently greater sonority than a consonant. The production of a vowel in general requires relatively larger amount of air than that of a consonant.

A vowel is also different from a consonant in terms of its way of production. A vowel is a voiced sound (resonant) during the production of which the air goes out through the mouth (oral) along the middle part of the tongue (central) in a continuous stream without such a narrowing in the mouth.

The speech sounds that do not have the characteristics mentioned above are consonants. The way of producing a consonant is characterized mainly by some obstruction of the air in the mouth cavity. The wide variety of consonants that may be produced by a speaker is dependent upon the place and manner of obstructing the air by the vocal organs.

2. Place and Manner of Articulation of English Consonants

Consonants are produced when the air is obstructed above the larynx, especially

in the mouth cavity. The air is obstructed by vocal / speech organs. Speech organs are organs that are used to produce speech sounds. The examples of speech organs are lips, teeth, teeth ridge, hard palate, soft palate, tongue, vocal cords.

In obstructing the air, at least two speech organs are involved, one is of the lower margin, and the other is of the upper margin. The two speech organs are normally closely situated to each other so that they can be easily be moved for the obstruction of the air. The speech organs may be moved in such a way that they are touching or almost touching each other. The point where the speech organs are touching or almost touching each other for the obstruction of the air is called place of obstruction or point of articulation. The wide variety of consonants that may be produced by a speaker is dependent upon the place and manner of obstructing the air.

A student of language should master the general mechanism of moving his speech organs in order that he can pronounce the intended sounds correctly. The production of English consonants will be easily learned if he is familiar with their ways of production and has much practice in moving his speech organs.

Consonants are commonly classified on the basis of the place of obstruction (for instance the obstruction may be formed by the two lips or by the tip of the tongue and the upper teeth); the manner of obstruction (the air may be partially or completely obstructed by the organs of speech, or it is completely obstructed in the mouth but is free to pass out through the nose); the activity of the vocal cords (whether the obstruction of the air above the larynx is accompanied by the vibration of the vocal cords or not; when it is, the consonant is said to be voiced and when it is not, it is said to be voiceless). The place and manner of obstruction / articulation of pronouncing English consonants will be discussed below.

a. Place of Articulation of English Consonants

Based on the place of articulation, English consonants are classified into: (MacCarthy, 1997: 96-97)

1) Bilabial consonants

In producing bilabial consonants, the obstruction is formed by the two lips. For examples: [p, b, m, w]

2) Labio-dental consonants

In producing labio-dental consonants, the obstruction is formed by the lower lip and the upper teeth. For examples: [f, v)

3) Dental consonants

In producing dental consonants, the air is obstructed by the tip of the tongue and the upper teeth. For examples: $[, \delta]$

4) Alveolar consonants

In producing alveolar consonants, the air is obstructed by some part of the tongue and the teeth ridge. For examples: [t, d, n, l, s, z, , r]

5) Palatal Consonant

In producing palatal consonant, the air is obstructed by raising the front of to tongue in the direction of the hard palate. For example: [y]

6) Velar consonants

In producing velar consonants, the obstruction is formed by raising the back of the tongue against the soft palate. For examples: [k, g,]

7) Glottal consonant

In producing glottal consonant, the obstruction of the air is formed in the glottis, between two vocal cords. For example; [h]

b. Manner of Articulation of English Consonants

Based on the manner of articulation English consonants are classified into: (Ladefoged, 1982: (151-157)

1) Stops

In producing stop or plosive consonants, the air passage is completely closed, the soft palate is in its raised position. The closure is then suddenly released so that the air escapes with explosive sound. For examples: [p, b, t, d, k, g]

2) Nasals

In producing nasal consonants, the mouth is completely closed at some point, but the soft palate is lowered so that the air is free to stream out through the nose. For examples: [m, n,]

3) Fricatives

In producing fricative consonants, the air is partially obstructed. The air being forced to go through a small opening causes a frictional sound. For examples: $[\ ,\check{\delta},\ ,\ ,f,v,r,h]$

4) Laterals

In producing lateral consonant, the centre of the mouth passage is obstructed by the tongue but the air is free to pass round one or both sides. The soft palate is raised. For example: [1]

5) Semi vowels

Semi-vowel is basically a gliding vowel sound, but its lack of stress and its weak force make it more-consonantal rather than vowel-like. For examples: [y, w]

6) Affricate consonants

The way of production of affricate consonants is the same as that for stop consonants in that there is a complete closure in the mouth. The difference is only in the release of the stoppage. For affricates, the stoppage is gradually released.

3. English $[, \delta]$, [,], [t, d] in details

[ð] is a voiced dental fricative. In the production of [ð], the tip of the tongue is put very close to the upper teeth or the tongue is put between the lower and upper teeth, and the vocal cords are vibrated.

[] is a voiceless dental fricative. In the production of [], the tip of the tongue is put very close to the upper teeth or the tongue is put between the upper and lower teeth, and the vocal cords are not vibrated.

[] is a voiceless palate-alveolar fricative. In the production of [], the blade of the tongue is raised towards a point midway between the teeth ridge and the hard palate. The lips are rounded. The vocal cords are not vibrating.

[] is a voiced blade-alveolar fricative. In the production of [], the blade of the tongue is raised toward a point midway between the teeth ridge and the hard palate. The lips are rounded. The vocal cords are vibrating.

[t] is a voiceless palato-alveolar affricate. In the production of [t], the air passage is completely blocked up by the tip of the tongue touching the back part of the teeth ridge. The stoppage is gradually released. The lips are rounded. The vocal cords are not vibrating.

[d] is a voiced palato-alveolar affricate. In the production of [d], the air passage is completely blocked up by the tip of the tongue touching the back part of the teeth ridge. The stoppage is gradually released. The lips are rounded. The vocal cords are vibrating.

4. Interlanguage

Interlanguage is continuum between the first language and the target language along which all learners traverse (Larsen, et. al., 1992:60). The term 'interlanguage' was firstly used by John Reinecke in 1935. He always used 'interlanguage' to refer to a non standard variety of a first or second language, used as a means of intergroup communication.

Many of the utterances produced by language learners are perceived as ungrammatical. They contain a lot of mistakes in lexis, pronunciation, and grammar. Ellis (1989: 135) mentions the characteristics of learners' talk as follows: interlanguage is dynamic (constantly adapting to new information) and influenced by the learners. Ellis (1994: 351) quoting Selinker's idea about the characteristics of interlanguage as follows:

- (1) Language transfer (some, but certainly not all, items, rules, and subsystems of a learner's interlanguage may be transferred from the first language)
- (2) Transfer of training (some interlanguage elements may derive from the way in which the learners were taught)
- (3) Strategies of second language learning (Selinker talks about an 'identifiable approach by the learner to the material to be learned)
- (4) Strategies of second language communication (an identifiable approach by the learner to communication with native speakers of the target language)
- (5) Overgeneralization of the target language material (some interlanguage elements are the result of a 'clear overgeneralization' of target language rules and semantic features)

Good language learners will always make attempts to practice the target language they learn, and, then, their target language mastery will approach the standard one. Ellis (1989: 122) mentions a list of characteristics of good learners as the following:

- (1) Be able to respond to the group dynamics of the learning situation so as not to develop negative anxiety and inhabitations
- (2) Seek out all opportunities to use the target language
- (3) Make maximum use of the opportunities afforded to practice listening to and responding to speech to meaning rather than to form
- (4) Supplement the learning that derives from direct contact with speakers of the L2 with learning derived from the use of study technique (such as making vocabulary lists)- this is likely to involve attention to form
- (5) Be an adolescent or an adult rather than a young child at least as far as the early stages of grammatical development are concerned
- (6) Possess sufficient analytic skills to perceive, categorize, and store the linguistic feature of the L2, and also to monitor errors.
- (7) Posses a strong reason for learning the L2 which may reflect an integrative or an instrumental motivation) and also develop a strong 'task motivation' (i.e. respond positively to the learning tasks chosen of provided)
- (8) Be prepared to experiment by taking risks, even if this makes the learner appear foolish
- (9) Be capable of adapting to different learning conditions.

Transfer is a strategy available to compensate for lack of skill or knowledge to produce the L2. A learner's proficiency level seems also a factor in determining when transfer will occur. The role of L1 is considerably complex, but fortunately not as negative as was first thought by proponents. (Larsen, et.al., 1992: 105-106)

A language learner's knowledge develops over time, and the strategies used by the learner are considered an important factor contributing to the development. Strategies are certainly needed by individuals.

When the learners find difficulties in producing the target language speech sounds, they are likely to replace the difficult sounds by similar sounds picked up from their own stock (L1 sounds). For examples: they say [t] or [s] instead of [ð].

C. Research Method

The study belongs to a descriptive, qualitative and exploratory type of research. It is descriptive because it only describes the existing phenomena as naturally as possible. It is qualitative because it does not employ complicated statistical calculation. If it turns out that percentage (%) or frequency distribution is used, its main aim is to facilitate qualitative description. It is also exploratory in nature because it does not have any hypothesis to prove.

The data were obtained by means of recording 20 students reading words, phrases, and sentences containing $[, \delta], [,], [t , d]$. The use of tape-recorder in collecting the data was introduced by Labov (1963 [1972]) as stated in Agustien (1997:143). In the study, the recording was made as naturally as possible without any particular conditioning.

D. Findings and Discussion

This section provides answers to the problems stated in chapter I, i.e. (1) Which sound from each pair is more difficult for the Indonesian students learning English? (2) What strategies do the learners employ to realize the speech sounds under the study?

The number of words containing $[\ ,\delta],[\ ,\],[t\ ,d\]$ read by the students are as follows:

- 1. a. Words containing []: 21 words
 - b. Words containing [ð]: 21 words
- 2. a. Words containing []: 18 words
 - b. Words containing []: 18 words
- 3. a. Words containing [t]: 21 words
 - b. Words containing [d]: 21 words

After transcribing the students' pronunciation, the correct pronunciation of each student in pronouncing the words containing $[\ ,\delta],[\ ,\],[t\ ,d\]$ can be counted as follows:

		Т	The correct pronunciation				
Student	[]	[ð]	[]	[]	[t]	[d]	

I	10 1	7 1	11 1	_ ,	0 1	. 1
1	10 words	7 words	11 words	5 words	9 words	6 words
2	11 words	7 words	10 words	6 words	10 words	7 words
3	5 words	3 words	5 words	2 words	7 words	4 words
4	9 words	5 words	9 words	5 words	8 words	7 words
5	6 words	3 words	7 words	3 words	7 words	6 words
6	7 words	8 words	9 words	6 words	9 words	9 words
7	9 words	5 words	8 words	8 words	7 words	5 words
8	3 words	1 word	4 words	3 words	5 words	6 words
9	5 words	3 words	5 words	5 words	6 words	4 words
10	8 words	6 words	7 words	7 words	7 words	4 words
11	10 words	6 words	8 words	5 words	9 words	9 words
12	7 words	5 words	8 words	3 words	8 words	5 words
13	8 words	5 words	9 words	4 words	10 words	7 words
14	6 words	7 words	8 words	5 words	7 words	6 words
15	12 words	9 words	10 words	7 words	9 words	7 words
16	9 words	7 words	10 words	6 words	10 words	8 words
17	4 words	2 words	4 words	2 words	4 words	3 words
18	14 words	9 words	11 words	7 words	11 words	7 words
19	8 words	5 words	7 words	4 words	8 words	6 words
20	4 words	2 words	5 words	3 words	6 words	4 words

The data above can be interpreted as follows:

1.	a. Two students find [] more difficult than [ð].	
	b. Eighteen students find $[\ \eth]$ more difficult than $[\]$.	[] is easier than [ð]
2.	a. Three students find [] as difficult as [].	
	b. Seventeen students find [] more difficult than [].	[] is easier than []



- 3. a. Two students find [t] as difficult as [d].
 - b. Eighteen students find [d] more difficult than [t]. [t] is easier than [d]

So, it is clear that for most students [[, ,t] are easier to pronounce than [ð, ,d]. This is as what said by Hecht and Mulford (1982) that learners acquire voiceless consonants before the voiced consonants.

The transfer strategies (with what speech sounds the students replace the intended sounds) realized by the students are as follows:

	Transfer strategies						
Student	[]	[ð]	[]	[]	[t]	[d]	

1	[t]	[d],[]	[s]	[z], [s]	[c]	[j]
2	[t]	[d]	[s]	[z]	[c]	[j]
3	[t]	[d]	[s]	[z]	[c]	[j]
4	[t]	[d]	[s]	[z],[]	[c]	[j]
5	[t], [s]	[d], []	[s]	[z]	[c]	[j]
6	[t]	[d]	[s]	[z]	[c]	[j]
7	[t]	[d]	[s]	[z]	[c]	[j]
8	[t]	[d], [nd]	[s]	[z],[]	[c]	[j]
9	[t], [s]	[d]	[s]	[z]	[c]	[j]
10	[t]	[d], []	[s]	[z]	[c]	[j]
11	[t]	[d]	[s]	[z], [s]	[c]	[j]
12	[t], [s]	[d]	[s]	[z]	[c]	[j]
13	[t]	[d], [nd]	[s]	[z],[]	[c]	[j]
14	[t]	[d]	[s]	[z]	[c]	[j]
15	[t], [s]	[d], [nd]	[s]	[z]	[c]	[j]
16	[t]	[d]	[s]	[z], [s]	[c]	[j]
17	[t]	[d]	[s]	[z]	[c]	[j]
18	[t]	[d]	[s]	[z],[]	[c]	[j]
19	[t]	[d], [nd]	[s]	[z]	[c]	[j]



20	[t]	[d]	[s]	[z]	[c]	[j]

From the data above, it is clear that the students replace (a) [] with [t], [s]; (b)

- a. [ð] with [d], [], [nd]
- b. [] with [s]
- c. [] with [z], []
- d. [t] with [c]
- e. [d] with [j]

The reasons why the students use the transfer strategies will be analyzed below by comparing the point and manner of articulation of the target sounds with those of the transferred sounds.

In producing [], the tip of the tongue is put very close to the upper teeth forming a narrow passage through which the air stream escapes. The soft palate is raised to close off the nasal passage. The vocal cords are not vibrating.

In trying to pronounce [], most Javanese students will usually sounds of their own stock, [t], [s]. The mistake in pronouncing [s] instead of the English [] is caused by too back point of articulation, since [s] is an alveolar sound produced by putting the blade of the tongue very close to the teeth ridge. In order to correct this type of mistake, the students should take care to put the tip of the tongue near the upper teeth.

The mistake in pronouncing Javanese [t] instead of [] is a mistake in manner of articulation, because the outgoing air is completely obstructed instead of partially obstructed. In order to correct this kind of mistake, the students should hold the tongue loose so that the air can escape freely through the narrow opening between the tip of the tongue and the upper teeth.

[ð] is the counterpart of [], but with the vocal cords vibrating. Most students with Javanese or Indonesian linguistic background replace it with [d], i.e. voiced alveolar stop. They make a complete obstruction instead of a partial obstruction. They should hold the tip of the tongue so loose near the upper teeth, not raise the tip of the tongue toward the teeth ridge.

Students with Javanese linguistic background replace [ð] with [nd], [n] plus [d] voiced dental stop. In this case they are influenced by Javanese language such as 'ndesa' (village), 'ndemok' (touch). If such is the case, the students should be reminded not to raise the tip of the tongue toward the upper teeth. For those who pronounce [] instead of [ð] should be reminded to vibrate the vocal cords.

c. [] with [s]

In producing [], the blade of the tongue is raised towards a point midway between the teeth ridge and the hard palate. At the same time, the main body of the tongue is raised in the direction of the hard palate. The lips are rounded. The vocal cords are not vibrating.

Most students have difficulty in pronouncing this English fricative [] since this sound is not found in neither Indonesian nor Javanese. They always substitute [s] for []. There is likely to be misunderstanding for their English speech for failure in making a distinction between the two sounds. They will pronounce such a pair of words as 'sell' and 'shell' in the same way, namely[s 1], which will be interpreted by



the hearer as a repetition of the same word 'sell'. The students should be made aware that for the pronunciation of [], the lips are rounded.

d. [] with [z], []

[] is the voiced counterpart of []. The pronunciation of [] constitutes a problem for Indonesian students since this sound doesn't exist in the students' language. They tend to replace it by [z]. The students should be reminded to round the lips so as to produce the English [] correctly. For those who pronounce [] instead of [] should be reminded to vibrate the vocal cords.

e. [t] with [c]

In producing [t], the air passage is completely blocked up by the tip of the tongue touching the back part of the teeth ridge. At the same time, the main body of the tongue is raised towards the hard palate. The tongue is removed from the teeth ridge and the air escapes through the mouth while producing a plosive sound followed by a frictional sound due to the gradual release. The lips are rounded. The soft palate is raised. The vocal cords are not vibrating.

Indonesian students tend to replace English [t] with their own sound [c] such as found in the word 'mencari' (search). This is, of course not right, because the Indonesian or Javanese [c], though also an affricate, is more fronted (alveolar) and not accompanied with lip rounding.

f. [d] with [j]

The way of producing [d] is the same as the way of producing [t] above except that the vocal cords are in vibration. Indonesian students tend to pronounce [j] such as found in the word 'menjual' (sell) for the English affricate [d]. To pronounce [d] correctly, the students should take care: not to pronounce the



affricate with a too fronted point of articulation, to round the lips, to raise the back part of the tongue.

E. Conclusions and Suggestions

1. Conclusions

From the results of the sudy, some conclusions can be drawn as follows:

- a. [, , t] are easier for the students to pronounce than [ð, , d]. This is as what said by Hecht and Mulford (1982) that learners acquire voiceless consonants before the voiced consonants.
- b. The students employ transfer strategies when they find difficulties in pronouncing [, ð], [,], [t, d]. They replace: [] with [t], [s]; [ð] with [d], [], [nd]; [] with [s]; [] with [z], []; [t] with [c]; [d] with [j].

The difficulties in pronouncing the target sounds are caused by the fact that those sounds do not exist in their native language. Therefore, they are influenced by their native language, Indonesian or Javanese. They transfer the Indonesian or Javanese speech sounds into English which is of course not correct. And this may cause misunderstanding to the hearers.

2. Suggestions

Based on the conclusions above, some suggestions can be put forward as follows: 1) The students should be taught the manner and the point of articulation of $[, \delta], [,], [t, d]$ so that they can produce those sounds correctly; 2) The students should be reminded that mispronunciation may cause misunderstanding.

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