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# ANALYZING THE PATTERN OF L1 SOUNDS ON L2 SOUNDS PRODUCED BY JAVANESE STUDENTS OF STKIP PGRI JOMBANG

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**Abstract:**The studyconcerns on an analysis on the tendency of first language (L1) sound patterning on second language (L2) sounds done by Javanese students.Focusing on the consonant sounds, the data were collected by recording students' pronunciationof English words during the pronunciation test. The data then analysed through three activities: data reduction, data display, and conclusion drawing/ verification. Theresult showedthatthe patterning of L1 sounds happened on L2 sounds especially on eleven consonant sounds: the fricatives [v, θ, ð, ʃ, ʒ], the voiceless stops [p, t, k], and the voiced stops [b, d, g].Thosepatterning case emergedmostlyduetothe difference in the existence of consonant sounds and rules of consonant distribution. Besides, one of the cases was caused by the difference in consonant clusters between L1 and L2.

*Keywords*: sound pattern, L1 sound, L2 sound, sound production

## Introduction

During the teaching-learning process in her class, the writer found that her students tended to produce their second or foreign language which has typical accent to their first language that is Javanese.When the writer paid more attention to her students' pronunciation, she found that the Javanese accent occurred clearly in some particular sounds especially consonantal sounds. For example, some of the students tended to pronounce[b, d, g] in English words such as because, don't, or good with heavier accent as in Javanese words *bapa, dada,* and *gaga*.

Dulay (1982, p.97) stated that the first language has been considered the villain in second language learning as the major cause of a learner's problem in mastery the new language. Contrastive analysis (CA) took the position that a learner's first language "interferes" with his or her acquisition of a second language. The major claim of the Contrastive Analysis Hypothesis is that all L2 errors can be predicted by identifying

differences between L1 and L2 forms and patterns. The CA hypothesis held that where structures in the L1 differed from those in L2, errors that reflected the structure of the L1 would be produced.

The previous study by Bada (2001, p.1) described the phonological analysis through the English phonemic production of Japanese speakers who learned English. It concluded that some learners found difficulties in producing some sounds that attributable to the L1. For example, Japanese learners tend to use voiceless alveolar stop [t] to replace voiceless dental fricative [θ] and substitute the voiced dental fricative [ð] with the voiced alveolar stop [d].

Similar study conducted by Prananingrum andKwary (2006, p.1) proved that Indonesian learners also faced difficulties in producing English soundssince English and Indonesian have different sounds distribution. They found seven English consonants pronounced incorrectly by the learners. They are [k], [z], [v], [ʃ], [θ], [ð], [n] and [d]. The study shows that the interference of L1 to L2 does exist. The interference indicates that there is the first language (L1) background that is involved in learning a second language (L2).

Sounds, linguistically, are called phones or speech sounds. Most of sounds occur as the result of movements of the tongue and lips. They are audible since involving pushing air out of the lungs while producing a noise in the throat or mouth. The noises are changed by the actions of the tongue and lips (Ladefoged and Johnson, 2011, p.2). Sounds could be studied from segmental features and suprasegmental features. Segmental features are the sounds that consist of vowel and consonantal sounds. English has twenty one vowels including several diphthongs. They are: [i:], [i] or [ɪ], [e], [æ], [ə], [ʌ], [ə:], [a:], [u:], [u], [ɔ], [ɔ:], [ei], [ai], [ɔi], [au], [ɔə], [iə], [uə], [eə], and [ɔu]. On the other hand, there are only ten vowel sounds identified in Javanese vowel system, [i], [ɪ], [u], [U], [e], [ɛ], [ə], [o], [ɔ], and [a] (Wedhawati et al., 2006, p. 65-96) and eight diphthongs, [ay], [ai], [au], [oi], [uɛ], [uə], [ua], and [uɔ]. There are also noticeable differences in consonantal distribution between English and Javanese. English has twenty four consonants: [p], [b], [t], [d], [k], [g], [m], [n], [f], [v], [θ], [ð], [s], [z], [ʃ], [ʒ], [ʧ], [ʤ], [h], [ŋ], [l], [r], [w], and [j]. On the other hand, Javanese has twenty three consonants. They are: [p], [b], [m], [f], [w], [t], [d], [n], [l], [r], [ṭ], [ḍ], [s], [z], [c], [j], [ñ], [y], [k], [g], [ŋ], [h], and [ɔ] where the [f] and [z] sounds only found in the words adopted from other languages. It means that Javanese origin words do not have the [f] and [z] sounds.

For the suprasegmental features, in English, degrees of stress, intonation and pitch, and also pause determine the meaning of the word or sentence. However, in Javanese, the

segmental features play more important role in determining the meaning than the suprasegmental. There are only intonation and pause which determine the meaning of the sentence.

The finding and the studies above interest the writer to carry out a similar research to know the tendency of first language (L1) sound patterning on second language (L2) sounds done by Javanese students of STKIP PGRI Jombang especially the students of English Department. The study focuses on the oral production of sounds especially consonant sounds.

## METHODS

This studyemployed aqualitative design as it concerned with the process rather than simply with outcomes or products (Bogdan and Biklen in Sugiyono, 2008, p.21). The primary phenomenon observed was the oral production of consonant sounds of English Department students, STKIP PGRI Jombang.The recordings of five students' oral production during pronunciation test become the data. The students were selected as respondents of the study since they satisfy the following criteria:1. Theyare English Department students of STKIP PGRI Jombang, batch 2012; 2. Their first language is Javanese; 3. They have Javanese accent on the production of English sounds. The data were collected through three phases: 1. Description; 2. Reduction; 3. Selection (Spradley in Sugiyono, 2011, p.230). The writer then analyzed the data by selecting and transcribing students' oral production of consonant sounds which patterned their first language. The procedures of data analysis in this study included some activities. They are: data reduction, data display, and conclusion drawing/ verification (Miles and Huberman in Sugiyono, 2011, p.246).

## FINDINGS AND DISCUSSIONS

### Findings

#### *Substitution*

The first patterning cases found by the writer was the tendency of students to substitute some English consonant sounds with Javanese consonant sounds. This case occurred especially on the sounds which do not exist in their first language. The substitutions found are: the substitution of [f] for [v], the substitution of [d] for [ð], the substitution of [t] for [θ], the substitution of [s] for [z], [ʃ], and [ʒ], and the substitution of [t] for [d].

The substitution occurred for the sound [v] in the beginning of the word, word-medial, and word-final position replaced by the sound [f]. For example, respondents 1 and 3 pronounced the words *various* and *very*as [feriʊs], [feri] instead of [veriəs] and [very]. Respondents 2, 4, and 5 pronounced [v] in the word *various* and *very* correctly, but they tended to pronounce the words *believe, developed, beloved,*and*everything* with [f] sound instead of [v] sound as [bəlif], [dɪfələp], [bɪlɔf], and [efritɪŋ]. It was also done by respondents 1 and 3.

The next case was the substitution of [d] for [ð] sound in the beginning or middle position of words. The examplesare the words *those, these, they* which pronounced as [doʊs], [diːs], and [deɪ] by respondents 1, 2, and 3; and the word *brother*which was pronounced as [brʌdər] by all respondents.

The writer also found substitution of [t] for [θ] sound which was done by respondent 1 in pronouncing the words *thank* and *think*. Respondent 1 pronounced them as [teŋ] and [tɪŋ] instead of [θæŋk] and [θɪŋk]. All of respondents also did the same substitution when they pronounced *something, everything,*and *nothing* as [sʌmtɪŋ], [efritɪŋ], and [nʌtɪŋ], instead of [sʌmθɪŋ], [evriθɪŋ], and [nʌθɪŋ].

Besides the substitution of [t] for [θ] sound, the writer also found substitution of [s] for [z], [ʃ], and [ʒ]. The substitution of [s] for [z] especially happened when [z] occur in word-final position as in the words *those,*and *these*. The rules of English consonant distribution stated that S letter at the end of the words is pronounced as [z] after voiced sounds. It means that the words *those*and *these* should be pronounced as [ðoʊz] and [ðiːz], yet the respondents felt difficult to pronounced [z] sound at the end of the words and tended to pronounce them as [doʊs] and [diːs]. The substitution of [s] for [ʃ] happened in the pronunciation of *mission*[mɪʃən]and *nation*[neɪʃən]while the substitution of [s] for [ʒ] happened in the pronunciation of the words *vision*[vɪʒən] and*decision*[dɪsɪʒən]. Since the sounds [ʃ] and [ʒ] do not exist in Javanese, all of respondents felt difficult to pronounce the sounds. They substituted the sounds with the fricative sound which is closest to [ʃ] and [ʒ] that is [s] and pronounced the words as [mɪsən], [neɪsən], [vɪsən], and [dɪsɪsən].

The last substitution is substitution of [t] for [d] sound especially when it occurs in word-final position. The examples are [d] sound in the words *read, afraid,* and *need*which were pronounced as [riːt], [əfrɛɪt], and [niːt] by all of respondents.

***Aspiration***

The writer found two kinds of tendencies related with aspiration. The first was the tendency to pronounce the aspirated voiceless stops [$p^h$], [$t^h$], [$k^h$] un-aspirated,and the

second was the tendency of pronouncing the un-aspirated voiced stops [b], [d], [g] aspirated.

Based on the rules for English consonant allophones by Ladefoged, the English voiceless stops [p], [t], [k] are aspirated when they are syllable initial. But based on the data, the researcher found that all respondents tend to pronounce those voiceless stops un-aspirated. For example when respondents pronounced [$p^h$] sound in the words*peeople, point, impossible,*and *planned*; [$t^h$] sound in the words *time, team, turning,* and *sometimes*; and [$k^h$] sound in the words *country, culture, networking,* and *cancel*, they pronounced them un-aspirated [p] as [pipl], [pɔɪm], [ɪmpɒsɪbəl], [plen]; un-aspirated [t] as [taɪm], [tiːm], [tɜːnɪŋ], and [sʌmtaɪms]; and un-aspirated [k] as [kʌntri], [kʌltʃər], [netwɜːkɪŋ], and [kensəl].

Different from the English voiceless stops [p], [t], [k] which are pronounced aspirated as [$p^h$], [$t^h$], [$k^h$] when they are initial syllable, the English voiced stops [b], [d], and [g] should be pronounced un-aspirated. But the rules of respondents' first language are the other way around. The Javanese voiced stops [b], [d], [g] are pronounced aspirated as [$b^h$], [$d^h$], and [$g^h$] when they are distributed in the beginning of word or syllable. The rules of respondents' first language influence them in pronouncing some words which the syllables are started with the voiced stop [b], [d], and [g]. The respondents tend to pronounce the sounds aspirated. The example is the [b] sound in the words *believe*and *best* which pronounced aspirated by respondent 1 as [$b^h$əlif] and [$b^h$es]. The [d] sound in the words *dream* and *directly*was pronounced aspirated by respondents 1 and 3 as [$d^h$riːm] and [$d^h$aɪrekli]. Respondents 1, 3, and 4 also tended to pronounce [g] sound in the words *great* and *agree* aspirated as [$g^h$ret] and [ə$g^h$riː].

***Deletion***

There were three English consonant sounds that tended to be omitted by the respondents. The sounds were [d], [t], and [k], especially when they were in clusters.

The first deletion was the sound [d] in cluster-final position.The [d] sound in the end of words should be pronounced more like a plosive sound than a clear [d] sound. Since consonant clusters never exist in Javanese, the respondents found it hard to produce the plosive sound or [d] sound at the end of words and they tended to omit it. All of respondents omitted [d] sound in the words *friend, trend,*and *beloved* which should be pronounced as [frend], [trend], and [bɪlʌvd] and pronounced them as[fren], [tren], and [bɪlʌf].

The next deletion was the deletion of sound [t]. The words *thirst, most, point, best,* and *developed* contain [t] sound in the words final position, but all respondents tend to delete it. They pronounced those words as [tɜ˞ːs], [mos], [pɔɪn], [bes], and [dɪfelɔp]. From the data analysis the researcher figured out that, similar to the case of deletion of [d] sound, the respondents tend to omit [t] sound because they found difficulties in pronouncing it and they wanted to make the pronunciation simple.

Another deletion case was the omission of [k] sound in the words *thank* and *think* where the respondents pronounced them as [teŋ] and [tɪŋ] instead of [θæŋk] and [θɪŋk].

**Discussions**

From the findings displayed it can be seen that first language sounds patterning on the production of second language sounds does occur. Dulay (1982, p. 96) said that the first language has long been considered as the major cause of a learner's problems with the new language. And the results of the study suggest that the major impact of first language may have to do with accent, not with grammar or syntax.

Dulay (1982, p. 97) also said that the Contrastive analysis (CA) took the position that a learner's first language interferes his or her acquisition of a new language. This hypothesis is in accordance with the findings which show that the respondent's first language, Javanese, tend to interfere their production of English sounds. The term interference is used by psychological to refer to the influence of old habits when new ones are being learned. This process is labelled as negative transfer (Dulay, 1982, p. 97-98). The writer figured out that actually the phenomena happened as there are some differences in Javanese and English consonant rules. This situation, of course, affects the students' pronunciation of English consonantal sounds. The differences are in the existence of consonant sounds, the rules of consonant distribution, and the difference in consonant clusters.

***The Difference in the Existence of Consonant Sounds***

English has twenty four consonant sounds: [p], [b], [t], [d], [k], [g], [m], [n], [f], [v], [θ], [ð], [s], [z], [ʃ], [ʒ], [ʧ], [ʤ], [h], [ŋ], [l], [r], [w], and [j] or [y] (Yule, 2010:28-30). Whereas Javanese has twenty three consonant sounds. They are: [p], [b], [m], [f], [w], [t], [d], [n], [l], [r], [ṭ], [ḍ], [s], [z], [c] or [tʃ], [j] or [dʒ], [ñ], [y] or [j], [k], [g], [ŋ], [h], and [ɔ] (Wedhawati et al., 2006:73). Even though English and Javanese have almost the same amount of consonant sounds, if we pay more attention to the sounds, actually English has some consonant sounds which do not exist in Javanese and Javanese itself also has some consonant sounds which do not exist in English.

English has five consonant sounds which do not exist in Javanese. The first sound is voiced labiodental fricative [v]. For example the [v] sound in the words *van* [væn] and *five* [faɪv]. The second and third sounds are the dental fricatives [θ], which is voiceless, and [ð], which is voiced. The example of the words containing those sounds are *thin* [θɪn], *think* [θɪŋk], *that* [ðæt], and *those* [ðoʊz]. And the last sounds which exist in English but not in Javanese are the voiceless palatal fricative [ʃ], and the voiced palatal fricative [ʒ]. The example of the use are the words *she* [ʃi:], *shoe* [ʃu:], *treasure* [treʒər], and *pleasure* [pleʒər].

The consonant sounds that exist in Javanese but not English are: [ṭ], [ḍ], and [ñ]. The sounds [ṭ], [ḍ] and the sounds [t], [d] in Javanese are different since the organ of speech used to produce the sounds are different too. In producing [ṭ] and [ḍ] sounds the tip of our tongue touches the hard palate (Apico-palatal stop) results thicker sounds while in producing [t] and [d] sounds the tip of our tongue touches the back part of the upper teeth (Apiko-dental stop) and the sounds arise are slight (Wedhawati et al., 2006:58). The examples of use are the words *thukul* [ṭukʊl] and *dhadha* [ḍɔḍɔ] for sounds [ṭ], [ḍ] and the words *tali* [tali] and *dino* [dinɔ] for [t], [d] sounds. The next sound is the medio-palatal nasal [ñ]. The sound [ñ] only exists in Javanese words, such as *nyata* [ñɔtɔ] and *banyu* [bañu], but not in English words. As the addition, the sounds [f] and [z] are actually not exist in Javanese original words, but since some of Javanese words are adopted from English and Arabic those sounds then appeared. For example, the words *foto* [foto] is adopted from English and *tafsir* [tafsɪr] and *zakat* [zakat] are adopted from Arabic.

The condition where some consonant sounds exist in one language but not in the other language is the cause of substitution doneby the respondents in which they tended to replace the English sounds with the closest sounds from their first language, Javanese. For example, the respondents substituted [f] for [v] in the words *vine, vest,* and *veil*. Since the voiced labiodental fricative [v] never exists in Javanese vocabularies, they found difficulty to pronounce it and tend to substitute the sound with the other labiodental fricative sound which exist in Javanese, that is the voiceless labiodental fricative [f].

Another case found was the substitution for the English dental fricatives [θ] and [ð]. Both of the sounds do not exist in Javanese. The condition makes the respondents felt difficult to pronounce [θ] sound in the words *thick* and *thanks*, and [ð] sound in the words *they, than,* and *these*. Since Javanese does not have any dental fricatives sounds, respondents tended to replace the sounds with their closest sound, they are [t] and [d] sounds. The tendency of replacing the [θ] and [ð] sounds with [t] and [d] sounds is caused

by the similarity in the place of articulation. It means the organs of speech used to produce the sounds [θ], [ð], [t], and [d] are the same. The English consonants [θ] and [ð] are dental sounds which are formed by touching the tongue tip behind the upper front teeth (Yule, 2010:28) while the Javanese consonants [t] and [d] are apico-dental sounds which happen when the active articulator is the tip of the tongue and the passive articulator is the upper teeth (Wedhawati et al., 2006:58).

Javanese does not have either [ʃ] or [ʒ] in it consonant sounds list. This condition became the cause of respondents' difficulty in pronouncing the words *mission* and *nation* which contain [ʃ] sound and the words *vision* and *decision* which contain [ʒ] sound. The respondents substituted those sounds with another fricative sound exists in their first language that is [s] sound.

***The difference in the Rules of Consonant Distribution***

Besides the difference in the existence of consonant sounds, the other cause is the difference in the rules of consonant distribution. This kind of difference is the main cause of substitution for final [z] sound, un-aspirated [p], [t], [k], and aspirated [$b^h$], [$d^h$], [$g^h$].

The first case caused by the difference in the rules of consonant distribution is the substitution of [s] for final [z]. There are three different ways in pronouncing S letter at the end of English words. It can be pronounced as [s],[z], or [ɪz]. The ending S is pronounced [s] after voiceless sounds as in the words *helps* and *looks*; it is pronounced [z] after voiced sounds as in *words* and *gloves*; and it is pronounced [ɪz] after sibilant sounds as in *buses* and *bridges*. While S in Javanese phonological rules is pronounced in the same way whether it is occur in the beginning, middle, or at the end of the words. On the contrary, the sound [z] in Javanese does not occur at the end of words. The condition causes problem for the respondents in pronouncing the final [z] in the words *those* and *these*.

The next cases are the aspirated stop [$p^h$], [$t^h$], [$k^h$] which were pronounced un-aspirated as [p], [t], [k] and the un-aspirated stop [b], [d], [g] which were pronounced as [$b^h$], [$d^h$], [$g^h$] by both of respondents. According to Ladefoged and Johnson (2011, p.73) the English voiceless stops [p], [t], [k] are aspirated when they are in the initial syllable, but the voiced stops [b], [d], [g] are un-aspirated. Let us see the set of examples given by Ladefoged. They are *pie, tie, kye*, which are pronounced as [$p^h$aɪ], [$t^h$aɪ], [$k^h$aɪ], and *buy, die, guy,* which are pronounced as [baɪ], [daɪ], and [gaɪ]. If we put our hand in front of our lips while saying the first set of example (*pie, tie, kye*) we will feel the burst of air comes out from our mouth. But in pronouncing the second set (*buy, dye, guy*)we cannot feel any burst of air. The burst of air is called aspiration. On the other hand Javanese has the opposite rules for the voiceless stops and the voiced stops. Different from English whose

voiceless stops are aspirated, the aspiration in Javanese accompanies the pronunciation of voiced stops [b], [d], [g] in the initial position of words or syllables (Wedhawati et. al., 2006, p.77, 83, 92). For example the sounds [b], [d], [g] in the words *bapa, dada,* and *gaga* are pronounced as [bʰɔpɔ], [dʰɔdʰɔ], and [gʰɔ gʰɔ]. If we put our hand in front of our lips while pronouncing those words, we will feel the burst of air hits our hand. But the burst of air, or we call it as aspiration, will not exist when we pronounce the [p], [t], [k] sounds (Wedhawati et. al., 2006, p.75, 81, 91). The example of the words are *palu, tatu*, and *kaku* which are pronounced as [palu], [tatu], and [kaku]. Since Javanese is respondents' first language, its pronunciation rules of voiced and voiceless stops which contradicts the English influence their pronunciation of English words containing those sounds. The respondents tended to pronounce the English voiceless stops [p], [t], [k] in the words *people, point, impossible,planned,time, team, turning,sometimes,country, culture, networking,* and *cancel,*un-aspirated, and on the other hand tended to pronounce English voiced stops [b], [d], [g] in the words *believe, best, dream,directly, great,*and *agree*aspirated.

***The Difference in the Consonant Clusters***

A consonant cluster is a combination of two or more consonants pronounced in close succession (Syaefi, 1988, p.19) without any vowels occur among them (Wedhawati et. al., 2006, p.97). The cluster can be a combination of two consonants (CC), three consonants (CCC), and even four consonants (CCCC). English and Javanese have different rules in the consonant cluster.

The English consonant clusters consist of combination of two consonants, three consonants, and four consonants. According to Syaefi (1988, p.19-20), the clusters may occur at the beginning of words (i.e: cluster /pr/ in the word *prefer*, /tr/ in the word *true*, /skw/ in the word *square*, and /spr/ in the word *spring*), in the middle of words (i.e: cluster /ft/ in the word *lifting*, /ts/ in the word *itself*, /mpl/ in the word *complete*, and /str/ in the word *administration*), and at the end of words (i.e: cluster /ps/ in the word *perhaps*, /kst/ in the word *next*, and /mpts/ in the word *attempts*). Different from English consonant clusters, based on Wedhawatiet. al (2006, p.97-101), Javanese only has two kinds of clusters: combination of two consonants (i.e: /br/, /cl/, /gy/, /dw/ etc.) and combination of three consonants (i.e: /spr/, / skr/, and /str/). The examples are the words *driji, sprei, dluwang, kyambak, kwaci, abrit, ajrih, anjlog, kesliyo,* and *wanodya*. Accordingly the examples above, Javanese clusters appear only in the initial and medial position and never in the final position. This condition affects the respondents' pronunciation very much, especially

in pronouncing the English words containing consonant cluster at the end of the words. The examples are the words *friend, trend, beloved, thirst, most, point, best,developed, thank* and *think.* The consonant clusters at the end of those words are /nd/, /vd/, /st/, /nt/, /pd/, and /ŋk/. As the consonant clusters at the end of the words never exist in respondents' first language, the respondents found difficulties in pronouncing the clusters and tended to omit or delete one of consonant sounds in the clusters.

## CONCLUSIONS AND SUGGESTIONS

### Conclusions

Referring to the findings and discussion it can be concluded that the patterning of first language (L1) sounds on second language (L2) sounds happened especially on eleven consonant sounds. They are the fricatives [v, θ, ð, ʃ, ʒ] which tend to be substitute with [f, t, d, s]; the voiceless stops [p, t, k] which should be pronounced aspirated in the words initial position tend to be pronounced un-aspirated; and the voiced stops [b, d, g] which should be pronounced un-aspirated tend to be pronounced aspirated; the alveolar stops [t,d] and voiceless velar stop [k] at the end of clusters located at the end of words tend to be omitted; and the voiced alveolar stop [d] at the end of words tends to be substituted with voiceless alveolar stop [t].Thosepatterning case emergedmostlyduetothe difference in the existence of consonant sounds and rules of consonant distribution and the difference in consonant clusters between English and Javanese as their first language.

### Suggestions

The writer realizes that there are weaknesses and incomplete information and data in the research. It is because of the limitation of the time, the writer's knowledge and perspective. However, this research is expected to encourage teachers and lecturers to help students to pronounce English words with appropriate sounds by doing more practice and drill especially for English consonantal sounds which have different way of production from Javanese and for English consonantal sounds which do not exist in Javanese. It is necessary for teachers to pay a great deal of attention to students in learning English as foreign language and share their knowledge to their students.

This study is also expected to encourage students to be aware of their pronunciation of English words. It is necessary for students to be more aware of their production of English words since, in English words, different sound can make different meaning. A continuous practice and drill in pronouncing English sounds is needed in order to reach an appropriate pronunciation.

Finally, this study is expected to provide a valuable reference particularly for those who are interested in conducting research in the same field.

## REFERENCES

Bada,E.2001).*NativeLanguageInfluenceontheProductionofEnglishSoundsby Japanese Learners*.

Dulay, H., Burt, M., Krashen, S. 1982. *Language Two*. New York: Oxford University Press.

Ladefoged, P. & Johnson, K. 2011.*A Course in Phonetics Sixth Edition*. USA: Wadsworth.

Prananingrum, K. D. &Kwary, D. A. 2006.*L1 Influence on the Production of L2 Sounds: A Case Study at the English Diploma Program, Airlangga University, Indonesia*, (Online), (http://www.kwary.net/about/Prananingrum_Kwary_2006.pdf, accessed on 24 May 2011).

Sugiyono. 2008. *MetodePenelitianPendidikan (PendekatanKuantitatif, Kualitatifdan R&D)*. Bandung: C.V. Alfabeta.

Sugiyono. 2011. *MetodePenelitianKuantitatif, Kualitatif, dan R&D*. Bandung: C.V. Alfabeta.

Syaefi, A. (1988). *English Pronunciation: Theory and Practice*. Jakarta: DepartemenPendidikandanKebudayaan, DirektoratJendralPendidikanTinggi, ProyekPengembanganLembagaPendidikanTenagaKependidikan
.

Wedhawati, et. al. (2006).*Tata BahasaJawaMutakhirEdisiRevisi*. Yogyakarta: Kanisius.

Yule, G. (2010). *The Study of Language Fourth Edition*. New York: Cambridge University Press.