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Native Language Influence on the Production of English Sounds by Indonesian Students

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ABSTRACT: EFL contexts with different L1 background learners of English cause the learners' errors in learning pronunciation of English. Hence, this present study set out to investigation the pronunciation problems of Indonesian speakers. To achieve the goals of the study, 30 native speakers of Indonesian studying at Senior High School participated in the study. Their aged ranged from 15 to 22 years old. It must be emphasized that English as the participants'required subject in the school. The participants'pronunciation problems of English were elicited by mean of a pronunciation test that considered of a word list, short conversation, and reading aloud. All the items contained English consonants and vowels with potential pronunciation difficulties for Indonesian speakers of English. The data collection were transcribed and analyzed, and percentages and frequencies of pronunciation errors were computed. The results revealed that native speakers face problems in pronouncing certain English consonants, namely fricatives consonants /ʃ/, /ʒ/, /θ/ and /ð/ and tense English vowels /i:/ /ɜ:/, /ɑ:/, /ɔ:/, and /u:/. Theoretically, the findings give support to the idea of negative transfer as all of the errors. The findings are interpreted to have professional and pedagogical competences for EFL teachers and syllabus designers in general and for speakers of Indonesian, in particular.
KEYWORDS: Native language influence, production of English sounds, Indonesian students of English

I. INTRODUCTION

Language activities cannot be separated from competence and performance. Competence is the knowledge possessed by speaker of the language, while performance is a reflection of competence that is the use of language in real situation (Chomsky, 1999). Linguistics, not only examines the aspects of language in microlinguistics, either from the point of view of phonology (sound system), morphology (word formation), or syntax (sentence structure), but also macro, that is connecting language with social environment (sociolinguistics) , language with human development (psycholinguistics), language in everyday life (pragmatics), and language in teaching-learning (applied linguistics). Linguistics which used in teaching-learning is as the main discussion in this article.

Actual language activity refers to communicative interaction and not to set of language rules, so that language learning should be directed to the use of language in everyday contexts. Language learning is essentially an attempt to acquire oral communication skill with an emphasis on acquiring speaking skill and habituation in using language to communicate. Only by having good communication skill, speakers can express themselves and learn to follow the prevailing social and cultural rules (Kayi,2006). Relation to language discussion as a tool for communication,there are two methods for mastering the language. Both methods are (1) languageacquition and (2) language learning. Language acquisition is related to the naturalistic type and occurs in the child's subconsciousness, whereas language learning is related to the formal type or the learning process in the classroom (Krashen, 2009; Odisho et al, 2008; Fernandez et al, 2011). Learning process that takes place in the classroom deals with components, such as curriculum, syllabus, teachers, students, materials, and media, and learning resources that are prepared.Referring to the explanation above, the discussion in this article is to master the language through teaching-learning in the formal classroom. The language learning chosen is English pronunciation.English is one of the most used languages in the world. It is used in communication both in oral and written form to share ideas and to connect politically and culturally across nations. Because of its importance, in Indonesia, English becomes a local content subject in elementary school and as a compulsory subject for junior and senior high schools students.

In Indonesia curriculum, the goal of the teaching and learning as a foreign language (EFL) is to enable the students to master the four language skills, namely, listening, speaking, reading, and writing. While, vocabulary, pronunciation (sub-skill of speaking), discourse, and grammar are as linguistic elements to support the four skills. More specifically, the goal for senior high school level students is to enable them to use English for communication both in oral and written forms which are used widely in daily communication by focusing on

transactional, interpersonal, and functional text as well as short and simple texts in narrative, spoof, and exposition. To achieve the goal, the teaching of English in Indonesia, adopts Curriculum 2013 with its scientific approach teaching, and school-based curriculum, known Unit Level Curriculum(KTSP). Discussing about the four skills, it is important to give more attenttion on teaching learning pronunciation.

Pronunciation

Pronunciation plays important role in communication since serious mispronunciation can hold up intelligibility. In English, pronunciation is primarily to determine the success of communicating. Pronunciation is a way of producing sound, which includes sounds, words, phrases, sentences, and paragraphs (dialogue) (Fraser, 2011; Richard & Schmidt, 2008). Study of pronunciation is included into two fields. They are phonetics and phonology (Ladefoged, 2011; Kelly, 2006). Phonetics refers to the study of speech sounds produced by human speech organ and phonology refers to the system and pattern of the sounds which exist in particular language (Kelly, 2006; Davenport and Hannahs, 2005; Roach, 2008; Rugg, 2010).

Phonetics is distinguished into three types(1) articulation phonetics (physiological), studying the position and vibration of the lips, tongue, and other human's organs for producing sounds of language. (2) Acoustic phonetics studies the sound waves and how they are heard or perceived by the human's ear and how they are structured. (3) Auditory phonetics, this phonetic studies the perception of sound, especially how the brain processes sounds that enter as sound (Ladefoged, 2011).

Phonology is the science that examines the sounds of language and formulates it regularly and systematically (Odden, 2007; Richards and Schmidt, 2008). Thus, the discussion in phonology is a phoneme. The sound is distinguished from the phoneme. The English referred to in this study is which belongs to the Anglo-Frisian subgroup of the West German branch and a group of Indo-European languages (Roach1998). The Englishdiscussed in this study is English British, a standard language called Received Production (RP) and has 44 phonemes, consisting of 24 consonants and 20 vowels. RP is a standard dialect used as a language in private schools in England (Przedlacka, 2008) and as language of introduction to radio broadcasts such as the BBC, Queen's English or Oxford English (Mestrie et al, 2005).

The goals of learning pronunciation are (1) able to communicate in English clearly and intelligibly, (2) able to get the meaning of information conveyed in real life situations, (3) able to improve self-confidence while communicating oral English, and (4) able to monitor the use of English (able to listen, understand, and produce) (Morley, 1999). Therefore, EFL teachers should not rule out the pronunciation problems of their students. They can do without advanced vocabulary, i.e., they can use simple words instead of difficult ones to express themselves. They can also avoid using complex grammatical structures when they do not feel comfortable with them and use simple ones, instead (Schacter, 1977).

Contrastive Analysis

One of the main factors in the field of second language acquisition (SLA) is the role played by the difference of sound system among languages. Contrastive analysis is an approach in SLA studies that is used to predict and explain the problem of language systems based on comparisons between two or more languages (Saville-Troike, 2006). This analysis also emerged as an answer to the demands of improved second language teaching (Johansson, 2008; Saville-Troike, 2006).

Contrastive analysis as a structural linguistic application on language teaching based on the following assumptions (a) the difficulty in learning a new language is due to first language interference. These difficulties canbe predicted by contrastive analysis; (b) materials or teaching materials may utilize contrastive analysis to reduce interference effects.Furthermore, the purpose of the contrastive analysis itself is to (a) look for aspects of difference and similarities between languages; (b) predict difficulties arising when learning a foreign language; and (c) contribute to the determination of foreign language teaching strategies. The differences in sounds become the nagative transfer for EFL speakers. In fact, a large body of research has demonstrated that the structure of the learners'L1 has an impact on L2 acquistion. The learners'mother tongue is most noticeable and long-lasting in the area of pronunciation, as compared to grammar and vocabulary.

For more details the position of the pronunciation study can be seen in the structure of the pronunciation features below.

Figure 1.*The Structure of Pronunciation Features*
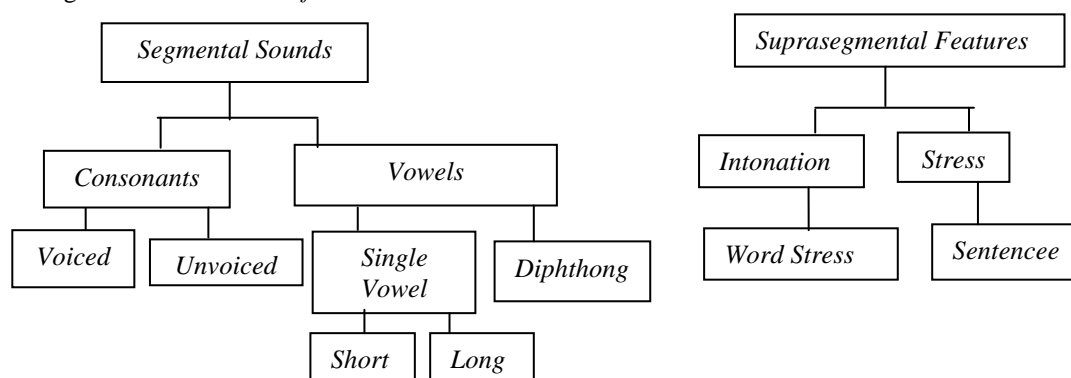
The structure above explains that segmental sounds are divided into two parts, namely consonants and vowels. Consonant sounds are sound voiced and unvoiced. The vowels consist of single vowels and diphthongs (double vowels). In B3, in addition to short vowels, there are long vowels, and diphthongs. While, the characteristics of suprasegmental features consist of intonation and stress. Stress is in words and sentences. At the level of the word stress is in syllables and at the level of sentence, stress is in the word (Kelly, 2006).

Some research studies have been done on the pronunciation problems of EFL learners with diverse langauge backgrounds, all pointing to the influence of the mother tongue. Some of these studies are reviewed below.Kwary and Prananingrum (2006) who investigated the influence of L1 on the production of L2 sound among Indonesian university students. The finding showed the participants faced problems in pronouncing a number of English vowels and consonants due to negative transfer. Along the same line, the results of Norahmi's (2011) study showed that Indonesian university students face difficulties in pronouncing consonants which are absent in Indonesian. Hakim (2012) also found that among a few sounds he investigated, the pronunciation of English stop consonant /d/ and interdental /ð/ was the most difficult in Java EFL learners. Chan (2009) investigated the pronunciation problems of advanced Cantonese ESL learners in Hong Kong. The results showed that despite the fact that the participants were English majors and had studied English for at least thirteen years they still had problems with pronouncing English sounds that did not exist in their native language. Another study on the influence of mother tongue was conducted by Baloch (2013). The findings of the study showed that Arabic learners of English replace voiced bilabial stop consonant /b/ with voiceless bilabial stop consonant /p/ as a result of mother tongue interference. Since Arabic lacks the consonant /p/, speakers of this language replace it with the closest sound in their native language sound system, in terms of place and manner of articulation, namely voiced bilabial stop consonant /b/.Based on the previous discussion, this study sought to answer the following research questions.

Research Questions
1. To what extant do the Indonesian speakers of English have problems with the pronunciation of English fricative consonants /ʃ/, /ʒ/, /θ/ and /ð/?
2. To what extant do the Indonesian speakers of English have problems with the pronunciation of English tense vowels /iː/, /ɜː/, /ɑː/, /ɔː/ and /uː/?

II. RESEARCH METHODS

Thirty female Indonesian students were randomly selected as the sample from two senior high schools in Central Kalimantan, Indonesia. According to the information obtained through a questionnaire, the participants were all raised in Indonesian-speaking communities in Central Kalimantan where there is not much interaction with native speakers of English in society. The participants had not travelled to any English-speaking country. Their aged ranged from 15 to 22 years old. It must be emphasized that English as the participants'required subject in the school.

Questionnaire and pronunciation test were used as the instruments for collecting data. The objective of the background questionnaire was to obtain information about participants including age, gender, ethnicity, and place of residence, and more importantly native language background and amount of exposure to English. The participants were also asked if they had travelled to English-speaking country.The purpose of the pronunciation test was to elicit pronunciation errors of Indonesian learners of English. The test considered of a word list and short conversation in pairs. All test items containing problematic consonants and vowels for the Indonesian speakers of English. The content and form of the pronunciation test and questionnaire items were revised a few times to improve their validity and reliability. For example, complicated words and confusing were replaced by simple and familiar words. The participants were asked to read aloud words and make short conversation in pairs work while being audio recorded. Each recording lasted in 10 minutes for the each participants. The recorded data were transcribed and analyzed after listening to each participant's pronunciation a few minutes.

Next, participants' mispronunciation were categorized and frequencies and percentages of both errors and correct pronunciation were computed.

The participants were informed about the goal of the study and were assured that their identity would remain confidential. They were also informed that the data collected from them would only be used for research purposes.

III. RESULTS AND DISCUSSION

Problems of Indonesian speakers in Pronouncing the English consonants /ʃ/, /ʒ/, /θ/ and/ð/

The first problematic consonant investigated was alveolar fricative /ʃ/. As Table 1 shows, most of the participants (66,7%) mispronounced /ʃ/ as /s/, as in words such as *ship*[ʃɪp], which was pronounced as [sɪp], *show* [ʃəʊ] as [səʊ], *dash* [dæʃ] as [dæs], *washing* [wɒʃɪŋ] as [wɒsɪŋ]. This is due to the fact that the phonetic features of Indonesian /ʃ/ differs drastically from English /ʃ/. In English, /ʃ/ is always palato-alveolar. It is produced by tongue blade makes light contact with the alveolar ridge, and the front of the tongue is raised. The soft palate is also raised. /ʃ/ is voiceless and lenis (Kelly, 2000).

With regard to the second consonant, the participants (83,3%) mispronounced the English voiced palato-alveolar /ʒ/ as /s/, as in *garage* [gærɑːʒ] as [gærɑːs] and *measure* [meʒəɹ] as [mesəɹ]. The voiced palato-alveolar consonant does not occur as an initial sound in English, and is rare as a final sound (Kelly, 2000). The next problematic consonant was the voiceless interdental fricative /θ/. As Table 1 illustrates, in the majority of cases (86,7%), the participants mispronounced the English consonant /θ/ as /t/ in words, such as *think* [θɪŋk] as [tɪŋk], *bath* [bɑːθ] as [bɑːt], *thick* [θɪk] as [tɪk]. This sound is produced by the tongue tip makes light contact with the back of the top, front teeth. It is voiceless and fortis sound (Ladefoged, 2011). The replacement of /θ/ for /t/ has been observed in the pronunciation of the EFL learners with different native language background.

The last English consonant investigated in the present study was the voiced interdental fricative /ð/. As shown in Table 1, the most frequent substitution for this sound was /d/ (80%). Key words for this pronunciation include *mother* [mʌðəɹ] as [mʌdəɹ] and *there* [ðeəɹ] as [deəɹ]. This is due to the fact that this consonant does not exist in Indonesian, as a result Indonesian speakers replace this sound with /d/, which serves as the closest sound to /ð/ in term of manner of articulation and voicing. The same result has been found in studies dealing with pronunciation problems of other L1 speakers of English. For example Keshavarz and Abubakar (2017) reported that Hausa-speaking learners of English have difficulties in pronouncing /ð/, i.e., being under the influence of mother tongue, they replace /ð/ with a sound similar to /d/. Table 1 belowshows the frequency of Indonesian speakers'mispronunciation of English problematic consonants.

Table 1.*Frequency of Indonesian Speakers' Mispronunciation of English Consonants*

Problematic Consonant	Participants' Mispronunciation	Frequency and Percentage of Mispronunciation	
		No.	%
/ʃ/	/s/	20	66,7%
/ʒ/	/s/	25	83,3%
/θ/	/t/	26	86,7%
/ð/	/d/	24	80%

Table 1 displays the numbar and percentage errors made by the participants in the pronunciation of English consonants. As illustrated, errors in the pronunciation of all four English consonants (i.e., /ʃ/, /ʒ/, /θ/, and /ð/) have a high percentage of occurrence. As mentioned before, the reason for such mispronunciation is learners' first language interference since these English consonants do not exist in Indonesian language.Next, the figure 2 shows the percentage level of errors in pronunciation English consonants.

2. Figure 2. *Percentage Level of Errors in Pronunciation of English Consonants*
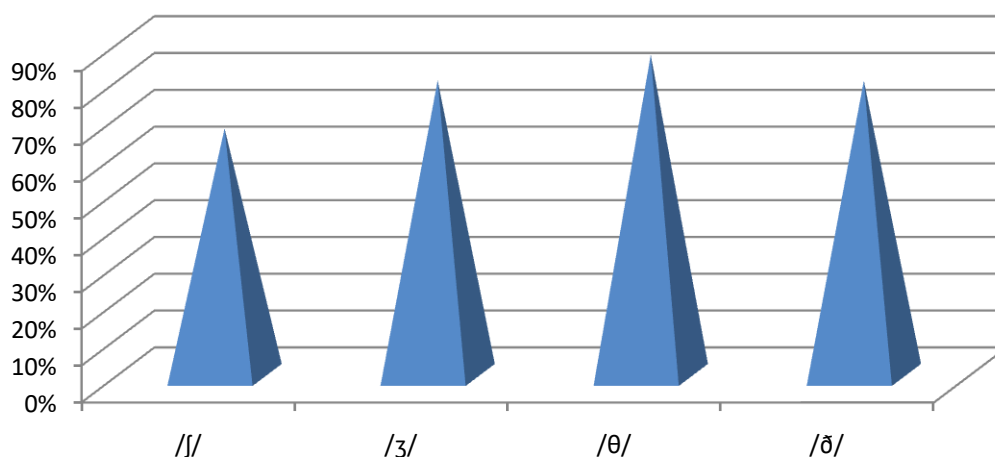
Problems of Indonesian speakers in pronouncing the English vowels /i:/, /ɜ:/, /ɑ:/, /ɔ:/, and /u:/

As Table 2 shows, the phonetic representation of participants' mispronunciation of the English vowel /i:/ is /i/, with 63,3% frequency, mispronounced in *bead* [bi:d] as [bid], *bee* [bi:] as [bi] and *cheese* [ʧi:z]. this seems to be due to the fact that the vowel /i:/ does not exist in Indonesian, hence they replace it with the existing Indonesian vowel /i/. This tense high vowel /i/ is as the problematic vowel for the Indonesian speakers of English.

The second problem of vowel pronunciation was tense middle vowel /ɜ:/. As illustrated in Table 2, the majority of participants substituted the English vowel /ɜ:/ with /e/ (86,7%) in words such as *shirt* /ʃɜ:t/ which mispronounced as /ʃet/, *word* /wɜ:d/ as /wed/, and *pearl* /pɜ:l/ as /pel/. The reason for this mispronunciation seems to be the fact that this vowel is non-existent in Indonesian. Therefore, Indonesian speakers have the tendency to replace it with /e/ which is shorter than the English vowel /ɜ:/. Keshavarz and Abubakar (2017) also found that Hausa-speaking learners of English replace /ɜ:/ with /e/, as in *girl* /gel/.

The third problematic vowel was /ɑ:/. As Table 2 shows, this vowel was pronounced as /a/, with 76,7% frequency in words such as *far* /fɑ:/ which mispronounced as /far/, *class* /klɑ:s/ as /klas/, and *heart* /hɑ:t/ as /hat/. The reason for this mispronunciation seems to be negative transfer as Indonesian lacks the English vowel /ɑ:/.

The fourth problematic vowel was /ɔ:/. As Table 2 shows, this vowel was pronounced as /ɔ/, with 73,3% frequency in words such as *call* /kɔ:l/ which mispronounced as /kɔl/, *all* /ɔ:l/ as /ɔl/, and *snore* /snɔ:/ as /snɔ/. The reason for this mispronunciation seems to be negative transfer as Indonesian is absent the English vowel /ɔ:/.

The fifth problematic vowel was /u:/. As Table 2 shows, this vowel was pronounced as /u/, with 70% frequency in words such as *food* /fu:d/ which mispronounced as /fud/, *who* /hu:/ as /hu/, and *soup* /su:p/ as /sup/. The reason for this mispronunciation seems to be negative transfer as Indonesian is absent the English vowel /u:/.

Table 2. *Frequency of mispronunciation of problematic English vowel by Indonesian Speakers*

Problematic Vowels	Participants'Mispronunciation	Frequency and Percentage of Mispronunciation	
		No.	%
/i:/	/i/	19	63,3%
/ɜ:/	/ɜ/	26	87,7%
/ɑ:/	/ɑ/	23	76,7%
/ɔ:/	/ɔ/	22	73,3%
/u:/	/u/	21	70%

Figure 2 below illustates the percentage of errors made by the participants in the pronunciation of English vowels. As can be observed, the vowel /ɜ:/ has the highest percentage of occurrence (87,7%). It is as the first problem. The second problem is vowel /ɑ:/ with 76,7%, the third one is /ɔ:/ with 73,3%, the fourth is /u:/ with 70%, and the last is vowel /i:/ with 63,3%.

Figure 3. *Percentage of errors in the pronunciation of English vowels*

Percentage Level of Errors in the Pronunciation of English Tense Vowels
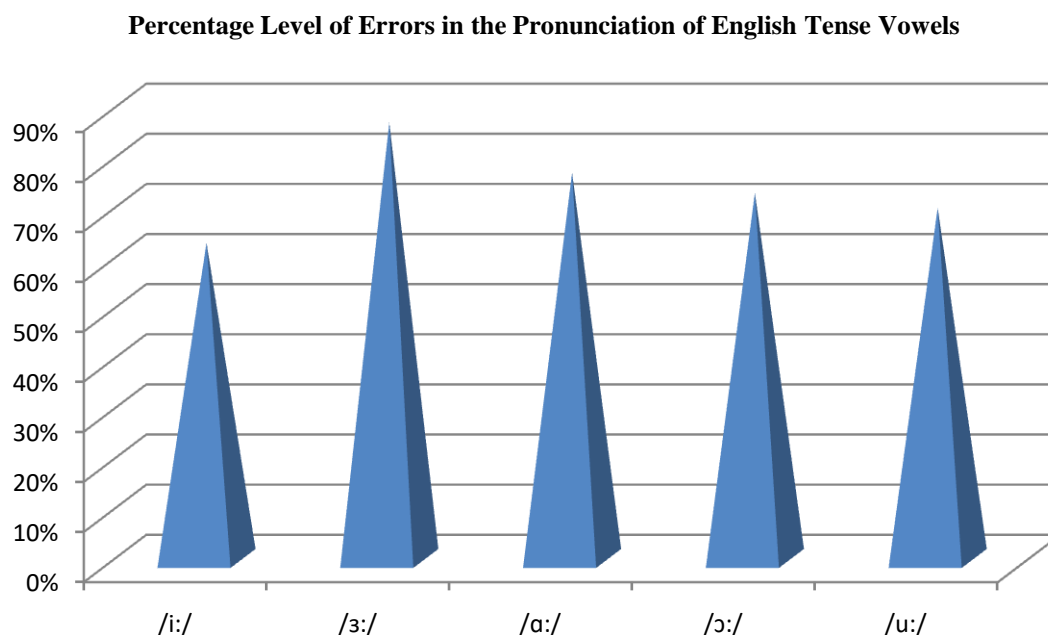
IV. CONCLUSION

The results of the present study give support to the theory of negative transfer that comes from contrastive analysis in the area of pronunciation. As explained above, all of the errors made by Indonesian-speaking learners of English were due to the fact that the consonants and vowels under investigation do not exist in Indonesian. Empirical studies conducted in other EFL contexts, with different L1 background students of English, have reached the same or similar conclusion. See, for examples, Kwary and Prananingrum (2006); Keshavarz and Abubakar (2017); Chan (2009); and Baloch (2013). Consequently, the contrastive analysis hypothesis can be as the acknowledgement for the validity of the theory with reference to the role of L1 interference in L2 pronunciation.

This research has limitation and suggestion for further research since the participants of the study were all students of senior high school, learning pronunciation might have been hard for them. Therefore, selecting samples from lower level of education may give to different results due to the age factor.

In this study, gender was not considered as a variable due to lack of availability of sufficient number of male participants. Thus, future researchers may consider the role of the gender in pronunciation problems.The participants of this study came from different disciplines (social, science, and language). Future studies may consider comparing the performance of students from among disciplines.

V. ACKNOWLEDGEMENT

REFERENCES

[1].   Bloch, S.S. (2013). *L1 (Arabic) Interference in Learning L2 (English): An Analysis of English Spelling Used by Arabic Speakers at Undergraduate Level*. European Scientific Journal, 9(10), 226-232.

[2].   Chan, A.Y. (2009). *Does Mother Tongue Influence have a greater Effect on L2 Speech Perception or Production?* A Study of the Learning by Cantonese ESL Learners in Hong Kong. Retrieved December15, 2016 from: www:ucl.ac.uk/psychlangsci/ptlc/proceedings_2009_CHAN_001_ed.

[3].   Chomsky, Noam. (1999). *Aspects of the Theory of Syntax*. Cambridge: MTT Press.

[4].   Davenport, Mike and Hannahs. (2005). *Articulatory Phonetics*. London: Hodder Arnold.

[5].   Fernandez, D.M. and Huges. (2009). *Student Teacher Perceptions of Pronunciation Tasks in Andalucia*. Buckingham Journal of Language and Linguistics, vol.2. Retrieved 27th November, 2017 from http://ubplj.org/index.php/bjll/article/view/12/18.

[6].   Fraser, Helen. 2001. *Teaching Pronunciation: A Handbook for Teachers and Learners*. New South Wales: DETYA (Department ofEducation Training and Youth Affairs).

[7].   Hakim, R.A. (2012). *An Analysis of Phonetics /b/, /d/, /g/, /j/, /dz/, and /ð/ into English Pronunciation for Java Students*. International Journal of Humanities and Social Sciences, 2(20), 244-256.

[8].   Johansson, Stig. 2008. *Contrative Analysis and Learner Language*: A Corpus-based Approach. Oslo: University of Aslo.

[9].   Kayi, Hayriye. (2006). *Teaching Speaking: Activities to Promote Speaking in Second Language.* The Internet Journal, Vol. XII, No. 11, November 2006. Retrieved 13rd April, 2014 from http://iteslj.org/.

[10].   Keshavarz, M.H., and Abubakar, M. (2017). *An Investigation into Pronunciation Problems of Hausa-Speaking Learners of English*. IOJET Journal 4(1). 61-72. Retrieved   December 16, 2017 from: http://iojet.org/index.php/IOJET/article/view/152/150.

[11].   Krashen, Stephen D. (2009). *Principles and Practice in Second Language Acquisition*. California: University of Souther California.Internet Edition.

[12].   Kwary, D.A., and Prananingrum, K.D. (2006). *L1 Influence on the Production of L2 Sounds among Indonesian   UniversityStudents.*   Retrieved   October   14,   2015   from:www.kwary.net/about/prananingrum_kwary_2006.pdf.

[13].   Kelly, Gerald. (2006) .*How to Teach Pronunciation. England:* Pearson Education Limited.

[14].   Ladefoged, Peter and Keith, Johnson. (2011). *A Course in Phonetics*. Los Angeles: University of California.

[15].   Mesthrie, R., J. Swann, A. Deumert and W.L. Leap 2005. *IntroducingSociolinguistics.* Edinburgh: Edinburgh University Press.

[16].   Morley, J. (1999). *The Pronunciation Component in Teaching English to Speakers of Other Languages.* TESOL Quarterly, 25(3), 481-520.

[17].   Norahmi, Maida. (2011). *To Improve the Pronunciation Skill of English Consonants throughthe Teaching of Phonetics Transcription*. Palangka Raya: Universitas Palangka Raya.

[18].   Odden, David. (2007). *Introducing Phonology*. UK: Cambridge University Press.

[19].   Odisho, E.Y. (2008). *Techniques of Teaching Pronunciation in ESL, Bilingual & Foreign Language Classes.* Munich: Lincom Europa.

[20].   Przedlacka, J. (2008). *English Pronunciation Models*: A Changing Scene (Dziubalska Kolaczyk & Przedlacka, Editor). Cambridge: Cambridge University Press.

[21].   Richards, Jack C. and Schmidt. (2008). *Longman Dictionary of Language Teaching and Applied Linguistics.* UK: Longman Group.

[22].   Roach, P. (2000). *English Phonetics and Phonology*. Cambridge: Cambridge University Press.

[23].   Rugg, N.M. (2010). *Comprehensive Articulatory Phonetics*. New York: Audacity, GMP.

[24].   Schacter, J. (1994). *An Error Analysis in Error Analysis*. Language Learning, 24, 205-214.

[25].   Saville-Troike, Muriel. (2006). *Introduction Second Language Acquisition*. Cambridge: Cambridge University Press.