

THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES

Potential Allophonic Transfers in Indonesians' EFL Acquisition: Unaspiration and Final Devoicing

Ignatius Tri Endarto

Lecturer, English Education Department, Duta Wacana Christian University, Indonesia

Abstract:

Unlike allophonic features between L1 and L2 often cause language learners to utter sounds differently from native speakers. This is due to language learners' inclination to transfer their L1's features to their L2 production. The objective of this paper is to contrast certain allophonic behaviors, namely consonant unaspiration and final obstruent devoicing, of stop phonemes (/p/, /t/, /k/, /b/, /d/, /g/) in English and Indonesian with the aim of identifying the potential negative transfer performed by Indonesian EFL learners. The findings predict that: (1) learners might tend to substitute the English allophones [p^h], [t^h], and [k^h], with the Indonesian [p^ˀ]/[p^ˀ], [t^ˀ]/[t^ˀ], and [k^ˀ]/[k^ˀ] respectively due to the transfer of consonant unaspiration rules; and (2) they might also tend to replace the final voiced-obstruents [b], [d], and [g] in English with the final devoiced [p^ˀ], [t^ˀ], and [k^ˀ] in Indonesian by reason of transferring final devoicing features. With regard to the phonemic contrasts and intelligibility of those allophones in the English, only the transfer of final devoicing can be seen as negative transfer.

1. Introduction

English is taught in Indonesia as a foreign language. Most of the people speak Indonesian as either their first or second language. Different linguistic features between Indonesian and English often make Indonesians' English pronunciation deviate from that of native speakers. This kind of pronunciation "deviation" has long been thought to be caused by the transfer of phonological aspects from L1 to L2. Odlin (1997) states that native language phonological rules can exert a strong influence on second language pronunciation. A study by Scholes (1968) of the perception of vowels by non-native speakers of English shows that they tend to perceive English sounds chiefly based on the phonemic inventory of their native language.

When a language learner tries to produce an L2 sound, their success in pronouncing it depends on their ability to disassociate their L2 utterance from their repertoire of L1's phonological system. Disassociation is often necessary because two languages might have different ways of categorizing sounds. Therefore, two sounds which are considered the same (allophones of one phoneme) by speakers of some languages might be perceived to be two distinct sounds (two phonemes) by those of other languages.

Contrastive analyses are in this case important in order to identify cross-linguistic differences between the phonological system of L1 and that of L2. The findings of those analyses can be used to help language learners overcome their difficulties in production which result in linguistic forms that diverge from those found in the target language.

A number of linguists have tried to compare and contrast various features of Indonesian language with those of English. Lubis (2013), for example, explores collocation patterns of both languages and finds out that translation errors made by EFL learners in Indonesia is attributable to collocation differences between the two languages. Endarto (2015) analyzes the phonological and morphological adaptation of English loanwords in Indonesian and concludes that the adaptation is triggered by differences in phonological and morphological systems of Indonesian and English. Fadloeli (2008) identifies some problematic English sounds to EFL learners, especially beginners, in Indonesia by conducting a contrastive analysis of distinctive phonological features in the two languages. Yuliati (2014) states that for Indonesians, English consonant clusters are, among other things, difficult to produce since English and Indonesian have different phonological rules for the use of consonant clusters. Last but not least, Andi-Pallawa (2013) in his analysis finds some similarities and differences in terms of phonemic oppositions and phonetic features between Indonesian and English.

Considering the importance of conducting contrastive analyses for language learning, the researcher feels enticed to contrast the allophonic processes (how the phonemes behave in the pronunciation systems) of English and Indonesian with the aim of identifying potential allophonic transfers done by Indonesian EFL learners. The main focus of this paper is to understand how Indonesian consonants differ from the English counterparts in terms of their aspiration and voicing, and to see how the two aspects might cause Indonesian speakers of English to enunciate words differently from the native speakers.

2. Discussion

More than a hundred years ago, in around 1881, the term "transfer" had already been used by Whitney to refer to cross-linguistic influences (Odlin, 1997). It usually occurs in bilingual or multilingual settings, where linguistic patterns of a previously learned language shape the target language performance. Native language transfer is predicted by many linguists to be the basis for learners'

initial difficulties in learning a second or foreign language, but these difficulties can be overcome as the learners get better to know the linguistic features of the target language.

When language learners do transfer, they apply certain rules in their L1 to the production of L2. There are two major types of transfers that can take place in language learning. There are those having facilitation effects and those which have inhibition effects (Isurin, 2005). The first type is commonly called positive transfer—when an L1 structure or rule is used in an L2 utterance and that use is appropriate or correct in the L2. The next type is usually referred to as negative transfer (or interference). It is when an L1 structure or rule is used in an L2 utterance and that use is inappropriate and thus considered an error.

McGregor (2009) posits that negative transfer often occurs phonetically and phonologically, particularly in early stages of L2 acquisition. In this case, the phonetic and phonological systems of learners' L1 may be carried over into the production of L2 which results in some pronunciation errors of L2. This problem is clearly encountered by Indonesian students who learn English as their second or foreign language as Indonesian language displays characteristics which are different from those of English.

The study of Andi-Pallawa (2013) shows that most Indonesian students involved in the research were subject to performing negative transfer in pronouncing English words. The research participants were 20 Indonesian students who had already been taught the phonological systems of English. According to the findings of his study, it was acknowledged that most of those 20 students faced difficulties in pronouncing English phonemes. Some of the difficulties were related to consonant “unaspiration” and “final obstruent devoicing”. Consonant “unaspiration” and “final obstruent devoicing” are two predominant allophonic processes in the Indonesian phonological system.

Katamba (1989) claims that some phonological features, including allophonic processes such as consonant unaspiration and final obstruent devoicing, are very “natural” and have a high level of cross-linguistic frequency. The term “natural” here means that those features are commonly found in many languages in the world. The more common a feature is, the more difficult it is to be suppressed from use.

Ominously speaking, consonant unaspiration and final obstruent devoicing are two ubiquitous rules of Indonesian language which can seldom be found in the phonological system of English. As a result, Indonesians who want to learn English will likely have considerable difficulty in avoiding transferring those rules from L1 to L2. How those two rules work in Indonesian language and how they differ from those in English will be scrutinized further in the following subsections.

2.1. Unaspiration

According to Ashby & Maidment (2003, p. 190), aspiration is the feeble friction noise which is heard on the release of a stop sound. The air which moves at a high speed through the vocal tract causes the aspiration to occur. This phonological parameter is often associated with stop consonants having a long voice onset time. Ladefoged & Johnson (2011, p. 57) defines aspiration as a voiceless period after the articulation of a plosive consonant and before the voicing of the subsequent vowel. It can be identified through placing our palm in front of our mouth and feeling the burst of air that comes out after the release of a stop.

When we produce voiced consonants, our vocal chords are fractionally closed. On the other hand, the vocal cords are open when we articulate voiceless consonants. Vocal cords are a pair of folds located at the upper end of the throat whose edges move rapidly and create sound when air from the lungs moves over them. When the vocal cords remain open after a consonant is released, voiceless aspiration occurs. An easy way to measure this is by paying attention to the consonant's voice onset time, because the voicing of a subsequent vowel cannot start until the vocal cords close.

In English, some consonants can be either aspirated or unaspirated depending on their positions. Those consonants are aspirated when they are in the word-initial position or at the beginning of a stressed syllable. On the other hand, they are unaspirated when immediately following other word-initial consonants or situated in onset clusters. In word-final positions, voiceless stops are optionally aspirated. Unlike in English, there is no aspiration in Indonesian language. That is to say, all the consonants are basically unaspirated.

The International Phonetic Alphabet (IPA) symbolizes aspiration with the superscript “h”, and thus the absence of the symbol indicates unaspiration. This section focuses on comparing the allophonic behavior of three plosive phonemes (/p/, /t/, and /k/) in Indonesian and English on the basis of their aspiration.

2.1.1. Phoneme /p/

The phoneme /p/ in both Indonesian and English can take place in the word initial, middle and final positions. The Indonesian phoneme /p/ is always unaspirated regardless its positions. It goes unreleased—the lips stay in a closed position—when occurring in the final position or before a pause. On the other hand, the English /p/ is unaspirated when it appears after the phoneme /s/, but becomes aspirated when it takes place in the initial position of a stressed syllable, like in the words “park” [p^hɑ:rk] and “past” [p^hɑ:st]. This phoneme also undergoes a little aspiration when it appears in word middle and final positions. As a result, in many cases, Indonesian students often face difficulties in pronouncing English words containing the sound [p^h]. Instead of producing this aspirated sound, alternatively, they tend to substitute it for an unaspirated [p], the one they are already at ease with in their first language. The differences of the Indonesian and English /p/ can be seen in the phonotactic comparison table below.

Position	Indonesian	English
Initial	“paling” [paɭɪŋ]	“parking” [ˈp ^h ɑ:rkɪŋ]
Middle of word	“empat” [ɛmpat]	“apart” [əˈp ^h ɑ:t]
Final	“lap” [lap ^h]	“lap” [læp ^h]

Table 1: Phonotactic Comparison of Phoneme /p/

Phoneme	English Allophone	Substituting Indonesian Allophone
/p/ Voiceless bilabial stop	[p ^h] Aspirated	[p] [p [̚]] Unaspirated

Table 2: Potential Allophonic Transfer of Unaspirated /p/

Considering the aspiration differences of the phoneme /p/ in word initial, middle, and final positions between Indonesian and English, it is very likely that most Indonesian beginners learning English will transfer their L1's allophonic features to their L2 production. Therefore, they will tend to pronounce the words “park”, “apart”, and “lap” with unaspirated [p]–or [p[̚]] if it is a coda–instead of [p^h].

2.1.2. Phoneme /t/

In both Indonesian and English, the phoneme /t/ can occur in the word initial, middle and final positions. However, regarding the place of articulation, in Indonesian it is an apico dental sound, while in English it is an alveolar sound. The Indonesian /t/ is unaspirated in all positions, and when taking place in the final position, before a pause or another consonant, it is usually unreleased. On the contrary, the English /t/ is usually aspirated when functioning as an onset of a stressed syllable. When it comes after the phoneme /s/ as in the word “sting” [stɪŋ], it becomes unreleased, unaspirated sound. In other conditions, this phoneme undergoes relatively weak aspiration.

Position	Indonesian	English
Initial	“tempat” [təmpat]	“template” [ˈt ^h emplet]
Middle of Word	“atap” [atap]	“attend” [əˈt ^h end]
Final	“cat” [cat [̚]]	“chat” [tʃæt ^h]

Table 3: Phonotactic Comparison of Phoneme /t/

Phoneme	English Allophone	Substituting Indonesian Allophone
/t/ Voiceless alveolar stop	[t ^h] Aspirated alveolar	[t] [t [̚]] Unaspirated apico-dental

Table 4: Potential Allophonic Transfer of Unaspirated /t/

Due to different places of articulation and aspiration between the Indonesian /t/ and English /t/, Indonesian learners might find it challenging to pronounce the latter sound like the native speakers do. In uttering some English words such as “template”, “attend” and “chat”, they might substitute the aspirated alveolar plosive [t^h] for the unaspirated counterpart, either released [t] or unreleased [t[̚]], as that found in the Indonesian words “tempat”, “atap”, and “cat”.

2.1.3. Phoneme /k/

Similar to the phonemes /p/ and /t/, the Indonesian /k/ is always unaspirated. This sound is constantly unreleased when it occurs in the final position before a pause or another consonant. Unlike the Indonesian one, the English /k/ turns out to be unaspirated only when it appears after the phoneme /s/, as in “sky” [skaɪ]. It always undergoes aspiration when situated in the initial position of a word, i.e. “kitty” [k^hi.ti], or of a stressed syllable, i.e. “accord” [əˈk^hɔːrd]. It is also slightly aspirated when appearing in word middle and final positions. As a consequence, Indonesian students are prone to have difficulties in pronouncing English words having the sound [k^h]. They will tend to pronounce it as the unspirated sound [k].

Position	Indonesian	English
Initial	“kita” [kita]	“kitty” [k ^h i.ti]
Middle of Word	“akut” [akut]	“accord” [əˈk ^h ɔːrd]
Final	“petak” [petak [̚]]	“attack” [əˈtæk ^h]

Table 5: Phonotactic Comparison of Phoneme /k/

Phoneme	English Allophone	Substituting Indonesian Allophone
/k/ Voiceless velar stop	[k ^h] Aspirated	[k] [k [̚]] Unaspirated

Table 6: Potential Allophonic Transfer of Unaspirated /k/

Another noteworthy point is that the unreleased final [k[̚]], as in the Indonesian word “petak” [petak[̚]], might be employed by Indonesian EFL learners to substitute the final released [k^h], as in the English word “attack” [əˈtæk^h]. Thus, Indonesians will tend to pronounce /k/-ending words such as “attack” and “book” with the back of the tongue remaining at the soft palate and keeping

obstructing airflow in the vocal tract. Though this kind of transfer is not phonemically contrastive in the English phonology, but it is surely at variance with most native speakers' articulation which usually includes a release of air followed by a slight aspiration.

2.2. Final Obstruent Devoicing

Final obstruent devoicing, also known as terminal devoicing, is the process in which a voiced obstruent in the syllable coda or at the end of a word becomes voiceless. This phenomenon is very common in some languages, such as Dutch, German, Turkish, and Russian. Indonesian is also one of the languages that has final obstruent devoicing as one of its features. In contrast, final obstruent devoicing is much less prominent in English (there are only few devoicing cases occurring under certain conditions). This is due to the fact that voiced and voiceless consonants in word-final positions are phonemically contrastive in English but not in Indonesian. To illustrate this, /bæt/ and /bæd/ are identified as two different words in English, but in Indonesian [jilit^ɾ] and [jilid^ɾ] are perceived as the same word (the former is the typical one because the Indonesian phonological system in general does not allow voiced codas, and so to speak, [t^ɾ] is the Indonesian allophone of the phoneme /d/ in the final positions). This behavioral difference of final voiced versus voiceless obstruents in the two languages is something that merits deliberation in order to better understand the possible challenges faced by Indonesian EFL learners in their effort to attain near-native proficiency. The final obstruents existing in both Indonesian and English are listed as follows.

2.2.1. Phoneme /b/

The phoneme /b/ can be found in both English and Indonesian. Albeit the fact that the two languages recognize this sound in their phonological systems, it should not be transferred so readily from L1's phonology into the production of L2. This is due to the differences of the phoneme's allophonic behavior between the two languages. In English, this phoneme is found in word initial, middle, and final positions but in Indonesian it can only take place in initial and middle positions. The final obstruent /b/ in English—which is phonemically contrastive with its voiceless counterpart—might somehow make Indonesian speakers face difficulty in pronouncing it in words for when the Indonesian phoneme /b/ occurs in the final position, it is devoiced into the voiceless [p^ɾ]. This is why Indonesians who learn English as a Foreign Language might find it hard to distinguish between the final English /p/ and /b/ (such as in the words “lap” and “lab”). Indonesian EFL learners, especially beginners, are inclined to pronounce the English word “lab” as /læp/ and this might cause a misunderstanding given that final /p/ and /b/ are contrastive in the target language. The table below shows the devoicing of the final obstruent /b/ in Indonesian.

Morphemes	Writing	Pronunciation
per- + adab + -an	“peradaban”	[pəradaban]
adab	“adab”	[adap ^ɾ] (<i>final-devoiced</i>)

Table 7: Indonesian Final Obstruent Devoicing of Phoneme /b/

Based on the abovementioned example, it can be inferred that when functioning as a word-final consonant, the typical allophone of the phoneme /b/ in Indonesian is the voiceless [p^ɾ]. The indicators that [p^ɾ] in the word “adab” [adap^ɾ] is a devoiced form of the phoneme /b/ are: (1) the use of the letter “b” in the writing of the word which might signify that the basic form of the sound is actually /b/, considering that most of the Indonesian letters consistently resembles the sounds they represent; and (2) the affixation which turns the devoiced form into its fully-voiced phoneme as in “per-adab-an” [pəradab-an]. Some other examples of the phoneme /b/ devoicing can be found in words such as “bab” [bap^ɾ], “lembab” [ləmbap^ɾ], and “sebab” [səbap^ɾ].

If an Indonesian learner transfers this /b/ devoicing rule to his/her production of English, he/she might have problems particularly in oral communication because phonemically, there is a voiced-voiceless distinction between final pair consonants in English. In listening, the minimal pair “cab” /kæb/ and “cap” /kæp/, for example, might be perceived as the same word by Indonesian EFL learners. When speaking, they might mispronounce “cab” /kæb/ as “cap” /kæp/—since their L1's phonology does not allow voiced consonants to function as word codas. Hence, the allophonic transfer that might be done by Indonesian EFL learners can be described as follows:

Phoneme	English Allophone	Substituting Indonesian Allophone
/b/ Voiced bilabial stop	[b] Voiced	[p ^ɾ] Devoiced

Table 8: Potential Allophonic Transfer of Final /b/

2.2.2. Phoneme /d/

Another obstruent phoneme that exists in both English and Indonesian is /d/. In English, it can be situated in all positions: word-initial, middle and final. Most of the time the phoneme retains its voiced feature in the coda positions. The English /d/ undergoes final obstruent devoicing to create past forms of regular verbs only when it follows voiceless consonants, namely /p/, /k/, /s/, /f/, /tʃ/, and /ʃ/ as in “hopped” /hɑ:pʰt/, “baked” /beɪkt/, “kissed” /kɪst/, “laughed” /læft/, “touched” /tʌtʃt/, and “pushed” /pʊʃt/ respectively.

The phoneme /d/ in Indonesian remains voiced only in initial and middle positions. When occurring in the word-final positions, it is always devoiced into the sound [t^ɾ]. It is essential to state here that the Indonesian /d/ is made through putting the tongue tip a

littlefurtherback than it is when producing the phoneme /t/. For that reason, pronouncing the English coda /d/ might be a slightly difficult job for Indonesian EFL learners. Alternatively, they might tend to pronounce the the voiced-alveolar coda /d/ in Englishastheir typical devoiced-alveolar allophone [t̚] in Indonesian.

Morphemes	Writing	Pronunciation
abad + -i	“abadi”	[abadi]
abad	“abad”	[abat̚] (final-devoiced)

Table 9: Indonesian Final Obstruent Devoicing of Phoneme /d/

The table above describes how the Indonesian phoneme /d/ in the word “abadi” [abadi] undergoes devoicing when the suffix [-i] is removed, leaving the final devoiced allophone [t̚] as in “abad” [abat̚]. Some other examples of the phoneme /d/ devoicing are found in words such as “tekad” [tekat̚] and “murtad” [murtat̚]. If this rule is employed by learners, it will become a negative transfer which can be further described by the following table.

Phoneme	English Allophone	Substituting Indonesian Allophone
/d/ Voiced alveolar stop	[d] Voiced	[t̚] Devoiced

Table 10: Potential Allophonic Transfer of Final /t/

To be able to communicate effectively in English, Indonesian EFL learners thus should be taught not to transfer this final [d] devoicing into their L2 production due to the voiced-voiceless contrast between English codas /d/ and /t/, as exemplified by the minimal pairs: “led” /led/ - “let” /let/ and “rod” /ra:d/ - “rot” /ra:t/.

2.2.3. Phoneme /g/

The last phoneme to be discussed in this section is the obstruent /g/. Similar to the previous two phonemes, this consonant is also problematic for Indonesian EFL learners because of the difference in its allophonic variations in the two languages. Occurring in word initial, middle, and final positions makes the English phoneme /g/ differs from its Indonesian counterpart. In Indonesian, the /g/ can only be phonologically located in initial and middle positions. Like the Indonesian /b/ and /d/ when functioning as word final-sound, the stop consonant /g/ also loses its voiced feature.

Morphemes	Writing	Pronunciation
ke- + ajeg + -an	“keajegan”	[kə.ajəgan]
Ajeg	“ajeg”	[ajək̚] (final-devoiced)

Table 11: Indonesian Final Obstruent Devoicing of Phoneme /g/

The aforementioned table elucidates how the Indonesian phoneme /g/ is devoiced into the voiceless velar [k̚] at the end of the word. Consequently, many Indonesian speakers tend to do negative transfer by pronouncing English words ending with /g/, i.e. “tag” /tæg/, as words ending with /k/, i.e. /tæk/ (like the pronunciation of the word “tack”). This potential negative transfer of final /g/ devoicing in the production of English by Indonesian EFL learners can be described further as follows.

Phoneme	English Allophone	Substituting Indonesian Allophone
/g/ Voiced velar stop	[g] Voiced	[k̚] Devoiced

Table 12: Potential Allophonic Transfer of Final /g/

3. Conclusion

The different features between Indonesian language and English play an important role in the acquisition of English phonetics and phonology. When Indonesians learn English pronunciation, they are inclined to transfer certain phonological rules of their L1 to the production of L2. In relation to those matters, certain main features of Indonesian language and English need to be contrasted to alleviate the potential negative transfer performed by learners.

There are two groups of phonemes analyzed in this paper. In spite of the fact that those phonemes exist in both English and Indonesian, they function differently in each language. The behavioral differences of those phonemes in the two languages might cause Indonesians EFL learners to transfer certain allophonic features from L1 to L2. With the aim of identifying potential allophonic transfer from Indonesian to English that might be done by learners, this paper lays much emphasis on consonant unaspiration and final obstruent devoicing. Here is a brief summarizing table for both types of transfer:

Phoneme	English Allophone	Substituting Indonesian Allophone	Type of Transfer
/p/	[p ^h]	[p] [p ^ˀ]	Unaspiration
/t/	[t ^h]	[t] [t ^ˀ]	Unaspiration
/k/	[k ^h]	[k] [k ^ˀ]	Unaspiration
/b/	[b]	[p ^ˀ]	Final devoicing
/d/	[d]	[t ^ˀ]	Final devoicing
/g/	[g]	[k ^ˀ]	Final devoicing

Table 13: Summary of Potential Allophonic Transfer

The first group consists of phonemes /p/, /t/, and /k/. In Indonesian, all of those phonemes are always unaspirated because phonologically this language has no aspirated consonants. In contrast, the English /p/, /t/, and /k/ can have either aspirated or unaspirated allophones depending on their positions in syllables or words. It can thus be suggested that learners might tend to substitute the aspirated English allophones [p^h], [t^h], and [k^h], with the unaspirated Indonesian [p]/ [p^ˀ], [t]/[t^ˀ], and [k]/[k^ˀ] respectively. However, it cannot be considered negative transfer since consonant aspiration does not really affect meaning in English. The second group comprises final voiced-obstruents /b/, /d/, and /g/. In Indonesian those sounds always turn into their voiceless allophones when functioning as word-final consonants, because this language has final obstruent devoicing as one of its features. English, on the other hand, rarely employs this rule, except for the final /d/ which is devoiced when following voiceless consonants in the past forms of irregular verbs and for some other final consonants which do not have any equivalents in Indonesian language. This final devoicing rule might often be transferred by Indonesian EFL learners in their L2 production. Unlike unaspiration which cannot be a cause of errors, the transfer of final devoicing might indeed hamper learners' success in using the target language effectively knowing that voiced-voiceless coda distinction is phonemically contrastive in English.

4. References

- i. Andi-Pallawa, B. 2013. A Comparative Analysis between English and Indonesian Phonological Systems. Palu, Middle Sulawesi, East Indonesia: Tadulako University. International Journal of English Language Education. MacrothinkInstitute.ISSN 2325-0887, Vol. 1, No. 3
- ii. Ashby, M. & Maidment, J. 2003. *Introducing Phonetic Science*. New York: Cambridge University Press.
- iii. Brown, D. 2000. *Principles of Language Learning and Teaching* (4th Ed.). London: Longman.
- iv. Eckman, F. 1977. Markedness and the Contrastive Analysis Hypothesis. *Language Learning* 27:315-30.
- v. Endarto, I. T. 2015. Comparison between English Loanwords in Thai and Indonesian: A Comparative Study in Phonology and Morphology. In 3rd AASIC: Sustainable Development of Asian Community. Bangkok.
- vi. Fadloeli, O. (2008). The Teaching of Problematic English Sounds to the Indonesian Beginners Through Contrastive Analysis on Distinctive Phonological Features. In SEAMEO Regional Language Centre Conference. Singapore.
- vii. Isurin, L. (2005). Cross Linguistic Transfer in Word Order: Evidence from L1 Forgetting and L2 Acquisition. In J. M. James Cohen, Kara T. McAlister, Kellie Rolstad (Ed.), *Proceedings of the 4th International Symposium on Bilingualism* (pp. 1115–1130). Somerville, MA: Cascadilla Press.
- viii. Katamba, F. 1989. *An Introduction to Phonology*. New York: Longman.
- ix. Keshavarz, M. H. 2012. *Contrastive Analysis & Error Analysis*. Tahran: Rahnama Press.
- x. Ladefoged, P. & Johnson, K. 2011. *A course in Phonetics* (6thed.). Boston: Wadsworth, Cengage Learning.
- xi. Lubis, S. (2013). Collocation as Source of Translation Unacceptability: Indonesian Students' Experiences. *International Journal of English Linguistics*, 3(5), 20–28. <https://doi.org/10.5539/ijel.v3n5p20>
- xii. McGregor, W. B. 2009. *Linguistics: An Introduction*. London: Continuum International Publishing Group.
- xiii. Odlin, T. 1997. *Language Transfer: Cross-linguistic influence in language learning* (Sixth Printing ed.). Cambridge: Cambridge University Press.
- xiv. Saville-Troike, M. 2006. *Introducing Second Language Acquisition*. Cambridge: Cambridge University Press.
- xv. Scholes, R. 1968. Phonemic Interference as a Perceptual Phenomenon. *Language and Speech* 11: 86-103
- xvi. Yuliaty. (2014). Final Consonant Clusters Simplification by Indonesian Learners of English and Its Intelligibility in International Context. *International Journal of Social Science and Humanity*, 4(6), 513–517. <https://doi.org/10.7763/IJSSH.2014.V4.409>