

VOWEL AND DIPHTONGS ERROR ANALYSIS OF RANDOM SECONDARY STUDENTS OF SEMARANG

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Abstract

Second language acquisition can be a significant issue which leads to the study of language transfer and interference. Since there are many problems faced regarding pronunciation, then this paper is aimed at revealing and describing the errors in pronouncing English sounds made by the Javanese native speaker secondary students who learn English as their second language. Vowels and diphthongs pronunciations are examined closely in this study. Mix method was used started by the qualitative one and quantitative one to know the percentage of each data. The source of the data was some recording of students' interview and then it was transcribed into broad transcription without suprasegmental features. In analysis, the distinctive features are applied to establish phonological patterns of pronunciation errors. The results of this study revealed that Javanese Native Speaker made some errors in pronouncing English sounds, especially in diphthongs case in which all speakers experience phonetic interferences: substitution and under differentiation.

Keywords: phonology, error analysis, vowels, diphthongs, secondary students

Introduction

Nowadays, English is the world most widely studied language. It is used as both second and foreign language. There are millions of foreign students from other countries who use English in both written and oral communication. So, they need sufficient skills to use it. There are four skills which should be learned by students in learning English, namely: reading, writing, listening and speaking. All of them are important for mastering English. In reading comprehension, students must possess number of vocabularies knowledge and they should understand some reading strategies to help them in their activities. In writing skills, students should have good knowledge of grammar, and they should also have a number of vocabularies in their memories. While in speaking and listening, right pronunciation becomes crucial thing.

The pronunciation of English is influenced by differences of geographical areas where English is spoken. In this case, Trudgil (1994, p. 2) in Hakim (2012) stated that people speak different kind of English depending on where they are coming from

and what kind of social background they come from.

There are several previous studies concerning second language acquisition from phonological perspective. Hakim (2012) analyzed pronunciations of phonetics b, d, g, j, and ð in English pronunciation produced by Javanese Students in English Study Program of STAIN Bengkulu. He concluded that there are 2 phonetics that are difficult to be lost by Javanese students, such as: /d/ and /ð/.

Another study was also conducted by Nurfita (2015) which focuses on the phonological and phonetic (phonic) interference of first language (L1) by Turkish, English and Malaysian native speakers when learning Indonesian as a second language (L2). In her study, she found that Malaysian, Turkish, and English speakers produced phonic interference when learning Indonesian. There are four kinds of phonic interference produced by the learners; substitution, under-differentiation, over-differentiation, and re-interpretation. The biggest number of phonic interference is re-interpretation, followed by substitution,

over-differentiation, and the least is under-differentiation.

This study therefore focuses on pronunciations of English vowel sounds produced by Javanese native speaker, particularly secondary students in Semarang. The problems revealed in this study are: (a) what are vowel phonetics errors produced by random secondary students in Semarang? (b) How do Javanese Students utter six monophthongs vowel sounds: /ɪ/, /i:/, /e/, /ɔ:/, /æ/, and /u:/, that influence their Javanese pronunciation in English? (c) How do Javanese Students utter two diphthongs vowel sounds: /ei/ and /ou/ that influence their Javanese pronunciation in English? and (d) What are the factors which influence English phonetic errors produced by random secondary students in Semarang?

In order to increase comprehension of Javanese students' English pronunciations, two students from Semarang who use Javanese as their mother tongues are as research subjects. This paper is intended to extend comprehension in phonological study in matter of English vowels pronunciations produced by Javanese native speakers.

1. Second Language Learning

Second language is related not only with the first language, but also related to the learning any new language in a foreign language context (Dulay, Burt & Krashen, 1982, p. 11). Further, Ellis (1997, p. 3) described that second language learning is a process which is experienced by the person who studies any language other than one first language. According to Ellis, (1994, pp. 11-12) second language is the language, which plays as institutional and social role in the community. For example, Indonesian as a second language is learnt in Indonesia, English as a second language is learnt in Singapore, New Zealand, Nigeria, and South Africa.

2. Language Transfer and Interference

It has been discussed that first language (L1) is influential on second

language acquisition (L2), either through positive or negative transfer. Dickerson (1975) in Corder (1982, p. 96) described that the acquisition of the phonological system of a second language is an continual process of restructuralization of the mother tongue phonological system into phonological system of target language. Foreign accent in L2 speech production however is caused by the interference from the L1. Learners are likely to interpret sounds in an L2 through the "grid" of their L1 phonology (Trubetzkoy, Wode, in Flege 1995, p. 237).

Dulay, Burt & Krashen (1982, pp. 101) stated that positive transfer is an expected result in acquiring a new language, since the L2 pattern is similar to L1 pattern. Agreeing this statement, Brooks (1960) in Ellis (1994, p. 300) defined positive transfer as similarity between L1 and L2 pattern, so L2 acquisition could take place without difficulty. Continuing this, Wardhaugh (in Odlin, 1989, p. 130) offers simply definition of positive transfer: "where two languages were similar, positive transfer would occur".

3. Javanese and English Vowels Phonetic Systems

a. Javanese Vowel System

i	u	i	u
e	ə	o	ɔ
ɛ	a	ɔ	a

SYSTEMATIC PHONETIC REPRESENTATION UNDERLYING REPRESENTATION

Figure 1. Javanese Vowels according to Hayward (1999)

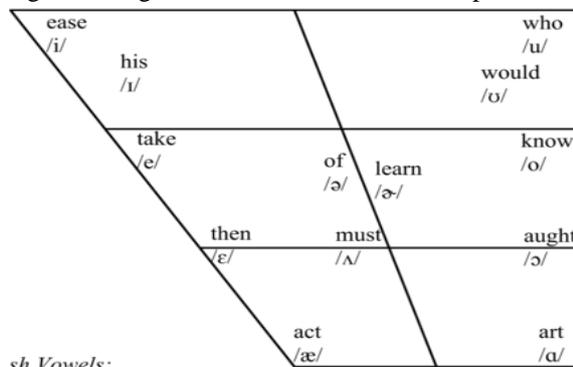
Discussing Javanese [ɪ] and [ʊ], Hayward (1999, p. 198) cites Van Zanten's (1989) study of Javanese speakers' production and perception of the Indonesian vowels [e] and [o] as support for her claim that [ɪ] and [ʊ] are identified with the vowels [e] and [o]. Van Zanten's production test showed that for Javanese speakers the vowel space for [e] was nearly identical with the vowel space for [ɪ], and similarly the vowel space for [o] was nearly identical with the

vowel space for [ʊ]. The perception test showed that the Javanese speakers often misidentified the Indonesian vowel [e] as [I], and [o] as [ʊ]. Although preliminary, Hayward's earlier study also supports this claim. It shows that [u] and [o] were the same vowel for the single subject participating in the study (Hayward 1993, p. 9). In Hayward's (1999, p. 203) analysis, the vowels [i], [e], [ɛ], [u], [o], and [ɔ] are derived from the vowels /i/, /e/, /ɔ/, and /u/ as showed in fig. 1 above.

b. English Phonetic System

The number of vowels in English varies by dialect, with most speakers of American English having eleven stressed vowel phonemes in their inventory: /i, ɪ, e, ɛ, æ, ɑ, ɔ, o, ʊ, u, ʌ/ (Hualde 2005, Bradlow 1995). Of these, two are traditionally considered to be phonetic diphthongs: /eɪ/ and /oʊ/. These vowels and diphthongs are shown with word-examples below.

Figure 2. English Vowels with Word-Examples



4. Distinctive Feature

Schane (1973, pp. 25-36) defined the appropriate features into eight features, but only five of them will be mentioned, due to its relevancy with this study: binary features, major class features, manner features, place of articulation features, and body of tongue features.

Binary features are related to opposite characteristic (plus and minus) to explain whether the attribute is present or not, such as [+voiced] for voiced and [-voiced] for voiceless. Binary system has the

purpose to show members of pairs, such as voice-voiceless, nasal-oral or rounded-unrounded.

In the vowel classification, the parameters are high, mid, low, front, back, rounded, and unrounded. The parameters relating to backness and rounding are also binary. Since, there is only two degrees, plus (+) and minus (-) to differentiate a single feature, there must be two features conjointly to specify or differentiate three degrees, such as high, mid, and low. For that reason, Schane decided *high* and *low* as the degrees of independent features.

Methodology

Both qualitative and quantitative methods were applied in this study (Creswell, 1994; Frankland Wallen, 1990). This means that this study used mix-method. The first step, the data from the recording of the interview was transcribed into broad transcription, means that it was not the narrow one, therefore, there were no suprasegmental features discussed in this study such as intonation and stressing in the words they produced. After transcribing, the data were displayed as can be seen in the findings and discussion. The next step was categorizing the data from the recording with list of vowels and diphthongs stated in research questions. Then, errors made by the students were counted into percentage. After the percentage is done, the errors were analyzed by distinctive features to produce several generative phonology rules about them.

Findings and Discussion

The findings of vowel and diphthongs errors pronunciations are presented in percentage table below.

Table 1. Productions and Percentages of Errors

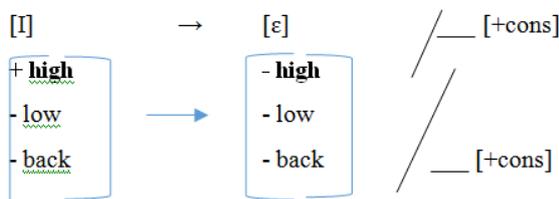
English Sounds	Phonemes	Errors	Percentage
Vowel	/I/	[e], [ɛ]	12.58%
	/i:/	[ɛ], [I]	8.86%
	/e/	[ɛ]	7.59%
	/ɔ:/	[ɔ]	5.06%

	/æ/		26.58%
	/u:/		8.86%
Diphthong	/ei/	/e/	17.72%
	/ou/	/o/	10.12%

It has been stated earlier in theoretical framework that Japanese and English vowels systems are quite different. For example, in table below sound [I] in initial and final position changes to sound [ε] by the speaker 2. In initial position, sound [I] also changes to sound [ε] by both speaker.

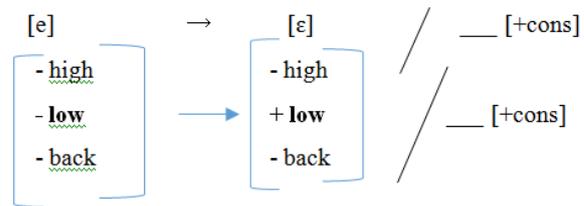
This kind of errors are examples of Substitution is the most general pattern of phonic interference that occurs when phonemes of first language are similar with the ones in second language but have different phonetic realizations or different pronunciation (Weinreich, 1979, p. 19). This is in line with the statement of Van Zaten (1989) that Javanese speakers often misidentified the Indonesian vowel [e] as [I] because the vowel space of their productions are near for Javanese speakers. Furthermore, vowel [e] in Javanese phonetic system is derived from vowel [ε]. Dudas also (1976) argues that Javanese has six phonemic vowels and ten allophonic variants by mentioning that [e/ε], [o/ɔ], [i/I], and [u/ɔ] are alternating vowels.

Two distinctive features rules of these errors above can be made as follows:



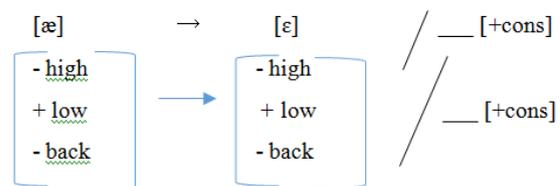
Based on the rule above, first we can see that the sound [I] will change to the sound [ε] when it is followed by consonants, so the errors happen only in initial and medial position. The second is that, the features of the sound [i] and [ε] are similar. Both of them have [- low], [- back], and [- rounded]. The only difference is that, the

sound [I] is height vowel whereas the sound [ε] is mid vowel. As for the changing of sound [I] to sound [e] which also occur, it is not made into distinctive rules considering that sound [e] is derived from sound [ε] in Javanese vowel system Van Zaten (1989). Javanese speakers tend to change [e] sound to [ε] when it occurs in initial and medial position. The only differences between [e] and [ε] is the height of the tongue. [e] is considered as high vowel, while [ε] is low vowel.



More than substitution, this study also finds another phonic interference called under-differentiation. It is a type of interference when the first language lacks a contrast that exists in second language. In this study, it occurs when the sound [æ] which exists in English as L2, is replaced by the sound [ε] and [e] by Javanese speakers, because Javanese as L1 lacks [æ] sound.

This replacement may occur because sound [æ] is really close in its articulation place with [ε] sound. They are both low, front, and unrounded vowels. But the only difference is [æ] sound is positioned lower and rounder that [ε] sound.



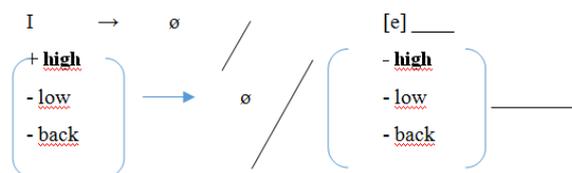
Under-differentiation also happens in production of diphthongs [eI] and [oU]. Diphtong [eI] is replaced by sound [e], while diphtong [ou] is replaced sound [o] by Javanese speakers. It can be categorized as vowel deletion which occurs because phonetic roles in Javanese language doesn't permit vowel followed by another vowel (diphthongization), and this is caused by

differences of Javanese and English phonetic roles.

[u] sound is deleted when it is preceded by [o] sound. In this deletion, [o] sound is known as lower than [u] sound, therefore [o] sound is considered as [-high] in its distinctive features, while [u] sound is considered as [+high].

The case of no vowel clusters in Javanese is also shown by the deletion of sound [I] in diphthong [eI] as shown in table below. We can see that [I] sound is deleted when it is preceded by [e] sound. In this deletion, [e] sound is known as lower than [I] sound, therefore [e] sound is considered as [-high] in its distinctive features, while [I] sound is considered as [+high].

The distinctive role is shown below.



The case of vowel deletion produced by Javanese native speakers caused from differences of phonetic rules between English and Javanese. The deletion in Javanese speaker pronunciation is more toward the vowel with higher articulation place, e.g. [I] is deleted in diphthong [eI] and [u] is deleted in diphthong [ou], which means that when vowel cluster happens, the deletion will occur toward vowel with higher place of articulation.

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Conclusion

It is evident that Javanese and English truly has different phonetic systems. Javanese

native speakers experience errors in producing English vowels, especially diphthongs, because vowel cluster is not permitted by Javanese phonetic roles. In Javanese pronunciation itself, [e] and [ɛ] sound often substitutes each other, because [e] is derived from [ɛ]. This rules then often brought up unconsciously by the speaker when pronouncing some vowel which is close to them in place of articulation, such as [I] is replaced by [ɛ] and [e] is replaced by [ɛ]. These errors can be categorized in phonetic negative interference included in substitution and underdifferentiation. In summary, the place of articulation holds important role in pronouncing certain vowel, therefore, the errors occurred caused by differences in phonetic system and the interferences which is also part of learning any new language.

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