

**L1 INFLUENCE ON THE PRODUCTION OF L2 SOUNDS:
A CASE STUDY AT THE ENGLISH DIPLOMA PROGRAM, AIRLANGGA
UNIVERSITY, INDONESIA**

Prananingrum¹ and Kwary²

Abstract

The main question to be answered in this study is what English consonant and vowel sounds which are pronounced incorrectly by the students of the English Diploma program, Airlangga University, Indonesia. An elicitation paragraph was given to be read by six respondents from the diploma students who participate in this study. Then, the phonetic transcription in terms of broad transcription was used to identify and determine the sounds that were pronounced incorrectly by the respondents. The results obtained from this study show that there were seven English consonants and ten English vowels that are difficult to be pronounced by the respondents. Those difficulties emerged mostly due to the interference of their native language and also the influence of rapid speech.

Keywords: Interlanguage, Interference, IPA, L1, L2, Transfer, Negative Transfer, Positive Transfer, and Speech Sounds

1. Introduction

Several studies done by linguistic researchers show 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). This background can be illustrated by the characteristics of L1 especially the structures which influence the L2. For instance, when adults, who typically have an accent, learn to pronounce or speak L2, their accent will sound as foreign accented (Ueyama, 2000, p. 1). Therefore, people consider that the sound patterns or structures of the L1 influence the production of their L2.

The influence from the L1 is perceived in *language transfer*. The main claim with regard to transfer is that the learning of task A will affect the following learning of task B (Gass & Selinker 1994, p. 54). While Lado (1957, p. 2) states that individuals tend to transfer

¹ Kartika D. Prananingrum completed her B.A in English Linguistics at the Faculty of Letters of Airlangga University, Indonesia. This article is based on the thesis she wrote upon the completion of her degree.

² Deny A. Kwary is a lecturer of English Language and Linguistics at Airlangga University. He was the thesis adviser of Prananingrum. He is listed in the Directory of Linguists (www.linguistlist.org). His personal website is www.kwary.net.

the forms and meanings, and the distribution of forms and meanings of their native language and culture to the foreign language and culture. There are two kinds of transfer that occurs in the process of learning L2, the first is learners make more mistakes or errors because of the interference of their L1 to the L2 as a result of *negative transfer*, and the second is learners have less or no errors in learning L2, as a result of *positive transfer*.

To observe whether the transfer result is positive or negative, a researcher can conduct a study by means of the pronunciation test. The writers perceive that it will be easy to observe the errors or the interference of the L1 toward the L2 by focusing on the learner's pronunciation, since the writers notice that pronunciation comes from the sounds which become the first stage of the learner to study a language. For example, when an Indonesian learner of English pronounce the word *is*; the influence of positive transfer will produce [ɪz] while the negative will produce [ɪs] on his pronunciation.

Linguistically, sounds are called *phones* or *speech sounds*. The basic source of power in producing speech sounds is when the respiratory system pushes air out of the lungs into the larynx, passing the vocal cords. If the vocal cords are apart, the air from the lungs will have a relatively free passage into the pharynx and the mouth (Ladefoged, 1993, p. 1). The sounds which are produced through the mouth could be studied from two features, segmental and suprasegmental. A brief introduction to both Indonesian and English segmental and suprasegmental features are explained below.

The segmental features of language are the sounds that consist of vowel and consonantal sounds. In the Indonesian vowel system, there are ten different vowels identified, [a], [i], [u], [e], [ə], and [o] and also include several diphthongs, such as [ai], [au], [oi], and [ei] (Alwi et al., 1998/2003, pp.56-58). On the other hand, English has twenty vowels including several diphthongs: [i], [u], [e] or [eɪ], [ɛ], [æ], [ə], [ɔ], [u], [ɑ], [o] or [oʊ], [ɒ], [ʊ], [ʌ], [aʊ], [aɪ], and [ɔɪ],

[ɾ], [aʊ], [ju] and [ɛr]. There are also noticeable differences in consonantal distributions between Indonesian and English. Indonesian has twenty-two consonants: [p], [b], [t], [d], [k], [g], [c], [j], [f], [s], [z], [ʃ], [x], [h], [m], [n], [ɲ], [r], [l], [w], [y] (Alwi et al., 1998/2003, p. 66). On the other hand, English has twenty-four consonants which are almost the same as Indonesian consonants except for the phonemes [x] and [ɲ], other consonants that occur in English are [v], [ʒ], [ʃ], [θ], [ð]. In the IPA, the phonemes [c], [j] and [y] are written [tʃ], [dʒ], and [j] respectively (Ladefoged, 1993, p. 24).

For the suprasegmental features, in Indonesian, the place of the stress pattern is always penultimate (it is placed at the second syllable from the last), for example *bela* [béla]; whereas in English, the stress is not always penultimate. The stress pattern of a word can convey different meanings, for example **record** ['rekɔ:d] and **record** [ri'kɔ:d]. The placement of the stress in the first word of record conveys that it is a noun, and the second word of record conveys that it is a verb (Crystal, 1995/2003, p. 248).

According to the previous study of Bada (2001, p.1), the influence of native language in learning a foreign language is certainly essential. His study describes the phonological analysis through the English phonemic production of Japanese speakers who learned English. He concluded that some sounds were found to pose some difficulties of production that attributable to the L1; whereas, others were produced with much less difficulty because the already present L1 system of phonology. 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].

Bada's study interests the writers to carry out a similar study. The writers would like to know whether Indonesian language also influences the production of English sounds or not. The writers' study is conducted by analyzing the English consonant and vowel sounds which

are pronounced by the students of English language diploma of Airlangga University who speak Indonesian as their L1 and have learned English as their L2.

By conducting this study, the writers expect that it can provide a meaningful contribution to the linguistics study especially in analyzing the study of native language influence on the production of English sounds. In addition, the writers hope that this study can also provide information for the lecturers especially in teaching pronunciation and phonetics. This article might be a way out for the lecturers to find out their students' weaknesses in terms of pronouncing English sounds.

2. Method

The method which was applied in this study is qualitative. The writers chose six respondents for this study. The respondents satisfy the following criteria: (1) They are students of English Language Diploma of Airlangga University, batch 2005, (2) They have never been to an English Speaking country, (3) They have passed the class of Pronunciation I, and (4) They have learned and used Indonesian since their childhood.

The writers limited the study only on segmental features of English. In collecting the data, the writers asked each respondent to read the elicitation paragraph taken from the *Speech Accent Archive* (<http://accent.gmu.edu>) and record it. The elicitation paragraph was written in English with common English words, but it contained a variety of English sounds and sound sequences that consisted of vowels, consonants, and clusters. After recording the pronunciations, the writers transcribed the recordings by using broad transcription which follows the 1996 version of the IPA. After that, the writers determined the consonant sounds and the vowel sounds that were pronounced incorrectly by each respondent.

3. Result

3.1. Segmental Transfer of English Consonants

3.1.1. Addition or Epenthesis

One addition case that occurs is the addition of the sound [d] in word-medial position of *Wednesday*, which is done by Respondent 4. The Respondent pronounced it [wednesdei] instead of [wenzdei]. The sound [d] occurs because the respondent may consider that the first letter “d” in *Wednesday* should be pronounced.

3.1.2. Deletion

The sounds such as [k] in word-final position of *ask* is omitted by all respondents. According to the standard pronunciation, the sound [k] in *ask* should be produced softly. However, all respondents omit the sound [k] in word-final position of *ask* because they consider that the sound [k] is deleted in the pronunciation, especially in a rapid speed. In addition, the deletion of the sound [k] in word-final of *ask* occurs in order to make the pronunciation simple.

Another case for deletion is the omission of the –s suffix in the words *things*, *spoons* and *slabs*. There are two main causes for this, i.e. the influence of rapid speech and the fact that in Indonesian language, the plural form of a noun is not formed by suffixation.

3.1.3. Metathesis

Metathesis means reorders a sequence of sounds. This process is done by Respondent 3. He reorders the sound [n] and [d] in word-medial position of *Wednesday*. He pronounced it [wedsnei], instead of [wenzdei]. The metathesis occurs because the respondent might experience slip of the tongue when he pronounced the word *Wednesday* in a rapid speech.

3.1.4. Substitution

From the data, the writers find there are some English consonant sounds that are substituted with another English consonant by the respondents. They are the substitution of [s] for [z], [f] for [v], [s] for [ʃ], [t] for [θ], and [t] for [d].

The substitution occurs for the sound [z] in both word-medial and word-final position. Note that, the –s suffix in English can be pronounced in three ways. First, it is pronounced as [s] when the final phoneme of the base form is preceded by a voiceless sound and not a sibilant. Second, it is pronounced as [z] when the final phoneme of the base form is preceded by a voiced sound and not a sibilant. Third, it is pronounced as [ɪz] when the final phoneme of the base form is one of the sibilant sounds. Most of the –s suffixes occur in the paragraph are pronounced as [z] since the preceding sound is a voiced and not a sibilant. However, from the data transcription, the writers find that the respondents experience a great difficulty in pronouncing the sound correctly.

The voiced alveolar fricative [z] that occurs in word-final of *please, these, things, spoons, peas, cheese, kids* and *bags*; and in word-medial of *Wednesday* are pronounced incorrectly by all respondents. This sound is substituted with the closest sound, which is a voiceless alveolar fricative [s]. Both of the sounds exist in Indonesian sound system, however, since the sound [z] never occurs in word-final position in Indonesian, the respondents get difficulty to pronounce the sound [z] that occurs in word-final position in English. In addition, the incorrect pronunciation of the sound [z] in word-medial position of *Wednesday* with the sound [s] occurs in order to make the pronunciation simple.

Another substitution if the sound [v] that occurs in word-final position in English is replaced with the sound [f] by all respondents. The examples are the words *of* and *five* which are pronounced [ɒf] and [faɪf], instead of [əv] and [faɪv]. All respondents pronounce a voiceless labiodental fricative [f] instead of a voiced labiodental fricative [v] in word-final position. The incorrect pronunciation of those words occurs because the sound [v] never exists in Indonesian sound system. Therefore, Indonesian people tend to pronounce all of the words that consist of the sound [v] with its closest sound, which is the sound [f]. It is described by all respondents of this study who pronounce [f] for [v].

Another sound which also poses difficulty is the sound [ʃ]. They pronounced the words *she* and *fresh* as [si:] and [fres], instead of [ʃi:] and [freʃ]. The incorrect pronunciation happens because the place of articulation of the sound [ʃ] between English and Indonesian are different. In English sound system, the sound [ʃ] is articulated in postalveolar, while in Indonesian sound system the [ʃ] or [ʃ̌] is articulated in palatal (Alwi, et al. 1998/2003. p. 66). As a result, by using the nearest sound, the [ʃ] in English is pronounced through the way it is pronounced in Indonesian articulation which is the alveolar sound [s].

Another case of substitution is for the sounds [θ] which is substituted with [t] by most of the respondents except for Respondents 5 and 6. The words *things*, *thick*, and *three* are pronounced [tɪŋs], [tɪk], and [tri:], instead of [θɪŋz], [θɪk], and [θri:]. Overall, the respondents substitute the voiceless dental fricative [θ] with a voiceless alveolar stop [t] because the sound [θ] never exists in Indonesian consonant system and therefore Indonesian learners somehow get difficulty for articulating the [θ] correctly. This reason may be applied to explain why the respondents tend to change or substitute the [θ] with the closest sound [t].

Similar to voiceless dental fricative [θ], the voiced dental fricative [ð] is also pronounced incorrectly and substituted with [d] or [t]. The examples are the words *these*, *the*, and *with*, which are pronounced [dɪs], [də], and [wɪt], instead of [ðɪ:z], [ðə], and [wɪð]. The voiced dental fricative [ð] is replaced by a voiced alveolar stop [d] in word-initial position of *these* and *the*, and it is also replaced by a voiceless alveolar fricative [t] in word-final position of *with*. There is no sound [ð] in Indonesian consonant system, so it is difficult for Indonesian learners to pronounce it correctly. Therefore, the respondents pronounce the sound [ð], which can be produced by the tongue tip and upper teeth, with the closest sound [d] or [t] that is produced by the tongue tip and the alveolar ridge.

The sound [d] itself is also pronounced incorrectly by three respondents (Respondents 1, 5, and 6). The words *need* and *kids* are pronounced [nɪt] and [kɪts], instead of [nɪd] and [kɪdz]. The voiced alveolar stop [d] is changed by a voiceless alveolar fricative [t]. As a result, *need* and *kids* are pronounced as [nɪt] and [kɪts] respectively. This incorrect pronunciation can also be attributed to the native language influence in which the sound [d] never occurs in word-final in Indonesian. For example, in Indonesian word *tekad*, the sound [d] in word-final is never pronounced as [d] but [t] instead, so it becomes [tekat].

3.2. Segmental Transfer of English Vowels

3.2.1. Addition

The Addition of a vowel occurs in the production of English sound in this study. A vowel sound [e] is added in word-medial position of *Wednesday* by Respondent 4. This word is pronounced [wednesdeɪ], instead of [wenzdeɪ]. The sound [e] is inserted in the respondent's pronunciation because he may consider that the letter 'e' in the medial of *Wednesday* should be pronounced. Therefore, the influence of this addition comes from the spelling word itself.

3.2.2. Deletion

The vowel [ɪ] is deleted in the pronunciation of *station* by Respondent 3 and the vowel [æ] which is dropped in the pronunciation of *and* by Respondents 2 and 5. Respondent 3 deletes the short, lax, and unrounded vowel [ɪ] in word-medial position of *station*. In fact, the sound [ɪ] in *station* cannot be separated from the preceding sound [e] since they are diphthongs. However, the incorrect pronunciation does happen because this word is pronounced in a fast speech. Furthermore, about the second analysis of Respondents 2 and 5, actually, *and* can be weakened as [ən] or [n] in its pronunciation especially in a rapid speech; nevertheless, most of native speakers of English tend to pronounce it with [æn] instead of

[ən]. The writers find that the respondents do the deletion. They pronounce the word *and* [æn] with a weak form and it becomes [n] so the [æ] is not articulated.

3.2.3. Vowel Change

A common transfer that is made by the respondents in this study is changing the vowel sounds of the words in the paragraph with another vowel sound. There are cases of vowel shortening and vowel substitution.

There are four cases of vowel shortening found in this study. The first one in the sound [i:] which is shortened to [ɪ] in word-medial and word-final positions. This case is shown by all respondents, as illustrated in Table 3.1.

Table 3.1: Shortening [ɪ] for [i:]

Respondents #	Words	American Phonetic Transcription	British Phonetic Transcription	Respondent Phonetic Transcription
1	Please These Peas Cheese She We Need Meet	[pli:z] [ði:z] [pi:z] [tʃi:z] [ʃi:] [wi:] [ni:d] [mi:t]	[pli:z] [ði:z] [pi:z] [tʃi:z] [ʃi:] [wi:] [ni:d] [mi:t]	[plɪs] [dɪs] [pɪs] [tʃɪs] [sɪ] [wɪ] [nɪt] [mɪt]
2 and 4	Please These Cheese We Need Meet	[pli:z] [ði:z] [tʃi:z] [wi:] [ni:d] [mi:t]	[pli:z] [ði:z] [tʃi:z] [wi:] [ni:d] [mi:t]	[plɪs] [dɪs] [tʃɪs] [wɪ] [nɪt] [mɪt]
3, 5, and 6	Please These We Need Meet	[pli:z] [ði:z] [wi:] [ni:d] [mi:t]	[pli:z] [ði:z] [wi:] [ni:d] [mi:t]	[plɪs] [dɪs] [wɪ] [nɪt] [mɪt]

From the table above, it can be seen that all respondents produce the English long, tense, and unrounded vowel [i:] short with [ɪ] in certain words, such as *please, these, peas,*

cheese, she, we, need, and meet either in word-medial and word-final positions. Furthermore, it can be seen as well that Respondent 1 produces the incorrect pronunciation more than other respondents with eight errors, while Respondents 2 and 4 produce six errors and Respondents 3, 5, and 6 produce five errors in pronouncing the sound [i:]. Most of the observed substitutions are attributed to native language influence, considering that tense and lax never occur in Indonesian vowel system and Indonesian only has one high-front vowel [i] in which the length is not as same as English vowel sound [i:]. Therefore, it is difficult for the respondents to pronounce the tense vowel [i:], especially that occurs in a fast speech.

The second case in the shortening from the sound [ɜ:] to the sound [ə]. Almost all respondents produce the sound [ɜ:] with a short [ə] in word-medial position. The central, mid, long, tense vowel [ɜ:] in word-medial position of *her* is shortened by a mid, lax, unrounded vowel [ə] by Respondents 1, 2, 3, 5, and 6. The incorrect pronunciation can occur because there is only one central-mid sound [ə] in Indonesian, whereas the sound [ɜ:] never exists in Indonesian vowel system, so the word *her* is pronounced as [hər] instead of [hɜ:r].

The third case is the shortening to [ɒ] for the sound [ɔ:]. All respondents replace the long vowel [ɔ:] in *for* with the short vowel [ɒ]. The long, tense, and rounded vowel [ɔ:] is produced short with a short, lax, and rounded vowel [ɒ]. The observed substitution is attributed to a native language influence, considering that tense and lax never occur in Indonesian vowel system and Indonesian only has one mid-back vowel [o] in which the length is not as same as English vowel sound [ɔ:]. In fact, it is difficult for the respondents to pronounce the tense vowel [ɔ:] in English especially that occurs in a fast speech. Therefore, *for* is pronounce as [fɒr] rather than [fɔ:] or [fɔə].

The last case of vowel shortening is the sound [u:] which is shortened to [ʊ] in word-final position by Respondents 1 and 5. The long, tense, and rounded vowel [u:] is produced short with a short, lax, and rounded vowel [ʊ] by Respondents 1 and 5 in the word *blue*. The observed substitution is attributed to a native language influence, considering that tense and lax never occur in Indonesian vowel system and Indonesian only has one high-back vowel [u] in which the length is not as same as English vowel sound [u:]. Therefore, it is difficult for the respondents to pronounce the tense vowel [u:] in English especially that occurs in a fast speech. Therefore, blue is pronounced with [blʊ] instead of [blu:].

There are also four cases related to the vowel substitutions. The first one is the sound [ɑ:] which is substituted with [e] by four respondents (Respondents 1, 2, 3, and 6) in word-initial position, i.e. the word *ask*, pronounced [es], instead of [ɑ:sk] or [æsk]. The production of [e] instead of [ɑ:] occurs because most of them consider that *ask* is pronounced as [æsk] rather than [ɑ:sk]. Since the sound [æ] does not exist in Indonesian vowel system, the closest sound of the front vowel [æ] is the sound [e] which is produced by most of the respondents.

The second case is the substitution of the sound [ə] by all respondents in this study. This sound is substituted with four different vowels in English, such as [ʌ], [ɒ], [e], and [u:]. The illustration of the analysis is given in Table 3.2.

Table 3.2: Substitutions for [ə]

Respondents #	Words	American Phonetic Transcription	British Phonetic Transcription	Respondent Phonetic Transcription
All	Stella	[stelə]	[stelə]	[stelʌ]
	From	[frəm]	[frəm]	[frɒm]
	Of	[əv]	[əv]	[ɒf]
	For	[fər]	[fər]	[fɒr]
	Can	[kən]	[kən]	[ken]

1	For Into	[fər] [ɪntə]	[fər] [ɪntə]	[fɔ:r] [ɪntu:]
2	Into To	[ɪntə] [tə, tu]	[ɪntə] [tə, tu]	[ɪntu:] [tu:]
3	To	[tə, tu]	[tə, tu]	[tu:]

From the table above, it can be seen that the strong forms of the words *Stella*, *from*, *of*, *for*, *can*, *into* and *to* are changed into the weak form [ə]. Therefore, in the transcription either American or British, the writers use the weak form to explain the pronunciation of those words. However, apparently all respondents still pronounce the words in the strong forms instead of the weak form [ə]. They pronounce [ɒ] in word-medial of *from* and *for* and in word-initial of the word *of*. In addition, they pronounce [e] for [æ] in word-medial of *can*. The writers find that somehow Respondent 1 pronounce the weak form [ə] with the strong form [ɔ:] in word-medial of *for*, though in another word of *for* exists in the paragraph is pronounced with [fɒr]. Moreover, Respondents 1 and 2 pronounce [u:] in word-final of *into* and Respondents 2 and 3 pronounce [u:] in word-final of *to*. In addition, it can be seen as well that the sound [ə] is transferred into [ʌ] in the final position of *Stella* by all respondents. The produced sound [ʌ] is incorrect because [ʌ] never occurs in word or syllable final position. The word *Stella* is pronounced as [stɛlə] by native speakers of English. Overall, all those incorrect pronunciations emerge because of the respondents do not know exactly how to pronounce the words correctly in connected speech.

The third case in the sound [æ] which is substituted with the sound [e] by all respondents in initial and medial positions. The illustration is given in Table 3.3.

Table 3.3: Substitution of [e] for [æ]

Respondents #	Words	American Phonetic Transcription	British Phonetic Transcription	Respondent Phonetic Transcription
All	Ask	[æsk]	[ɑ:sk]	[es]
	Slabs	[slæbz]	[slæbz]	[sleb]
	And	[ænd]	[ænd]	[en]
	Snack	[snæk]	[snæk]	[snek]
	Plastic	[plæstɪk]	[plæstɪk]	[plestɪk]
	Bags	[bægz]	[bægz]	[begs]
	At	[æt]	[æt]	[et]

From the table above, it shows that all of the respondent change the sound [æ] with [e] due to the non-existence of the sound [æ] in Indonesian vowel system. Therefore, the closest sound of the front vowel [æ] that is the sound [e] is produced by all respondents in word-initial position of *ask*, *and* and *at*, then in word-medial position of *slabs*, *snack*, *plastic*, and *bags*.

The last example of vowel substitution is the substitution of [ɒ] for [əʊ]. The diphthong [əʊ] is replaced with a monophthong vowel [ɒ] by Respondents 1 and 2. The example is the word *also* which is pronounced [ɒlsɒ], instead of [ɒlsəʊ]. The diphthong [əʊ] is considered as one vowel [ɒ]. The produced sound [ɒ] is incorrect because [ɒ] never occurs in word or syllable final position. In addition, there is no diphthong [əʊ] in Indonesian vowel system; in fact, Indonesian only has one back-mid vowel [o]. Therefore, sometimes it is difficult to pronounce English word that consists of this diphthong correctly.

4. Discussion

The segmental transfer of English consonants and vowels does occur in the production of English sounds by six respondents from the English language diploma program of Airlangga University. The writers find there are seven English consonants that are transferred

incorrectly by the respondents, i.e. [k], [z], [v], [ʃ], [θ], [ð], [n] and [d]. However, the English consonant sounds that pose major difficulties for the respondents are only for the sound [z], [v], and [k]. The sound [z] in the word-final position is considered difficult since all of the respondents pronounce the sound incorrectly. In addition, unlike English which has the sound [z] in word-final position, Indonesian only has the sound [z] in word-initial and medial and never occurs in word-final, therefore they tend to produce [s] for [z]. Furthermore, the non-existence of the sound [v] in Indonesian sound system apparently influences the production of English sound [v]; as a result, the respondents produce [f] for [v]. Since it is hard to hear the sound [k] in word-final of *ask* especially when it is produced in a fast speech; it is not pronounced by all of the respondents in this study.

Subsequently, the writers find the English vowels that pose great difficulties toward the respondents are [i:], [ə], and [æ]. All respondents produce a long tense vowel [i:] short with the counterpart sound which is a short lax vowel [ɪ]. Other tense English vowels, such as [ɜ:], [ɔ:], and [u:] are also pronounced as lax; however, they are insignificantly substituted by all respondents. The difficulty in pronouncing the tense vowels and substituting it with the lax vowels occur because there are no tense and lax vowels to differentiate the pronunciation of vowels in Indonesian. In fact, the vowel length of [i], [u], [e], [o], [ə], and [a] in Indonesian are different from the vowel length in English. The shortening of the tense vowels in this study also happen since the sounds are produced in a fast speech. Moreover, the writers find that all of the respondents mispronounce the sound [æ] and they replace the sound with [e]. They may consider that [e] is easier to pronounce than [æ] because the sound [æ] never exists in Indonesian vowel system. Therefore, almost all sounds [æ] that occur in word-initial and word-medial positions in the paragraph are pronounced with [e] instead of [æ] by all respondents. In addition to the sound [i:] and [æ], all respondents also pose a great

difficulty in producing the weak form [ə]. Instead of pronouncing the words in the weak form sound [ə], the respondents tend to pronounce the words with the strong form, such as they produce [ʌ] and [u:] instead of [ə] in word-final positions and produce [p] and [e] instead of [ə] in word-medial positions. It may happen because the respondents do not know exactly how to pronounce the words correctly in the connected speech.

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