EXAMINING THE ROLE OF EXPLICIT PHONETIC INSTRUCTION IN INTELLIGIBLE AND NATIVE-LIKE PRONUNCIATION TEACHING IN EFL SETTINGS

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ABSTRACT

This research investigates the effect of explicit phonetic instruction on L2 pronunciation adopting two outcome measurements (i.e. rubric of intelligibility and accentedness). Ten native Indonesian students from English Phonology class participated in this study. They were randomly selected and divided into two groups; the experimental group and the control group and did pre-test as their entry points. After they received three hours of instruction in a classroom based setting with target pronunciation of English segmental diphthongs [aʊ], [aɪ], and [ɔɪ], and recorded their speech samples, three Native English listeners evaluated their speeches. The results suggest that explicit phonetic instruction had significant effect on the diphthongs production and intelligibility especially on the controlled level speech (sentence reading task) however, only slight reduction of foreign accent was found in this study. It is also found that most students mispronounced the diphthongs:
a) [aɪ] as in night was pronounced [eɪ],
b) [aɪ] in time was pronounced [e],
c) [aʊ] in house, shout, brown, sounded, was pronounced as [ɔ],
d) [aʊ] in sounded was pronounced as [ɔʊ] and [ɔ] but no results were found when participants mispronouncing diphthong [ɔɪ].
Moreover, the data shown that participants still have a segmental problem in the pronunciation of [aɪ] in the spontaneous speech level (picture description task). Additionally, it is evident from the analysis that that explicit instruction outperformed the participants' intelligibility in the experimental group specifically at the controlled speech level or on sentence-reading task. It is important that although the control group gained higher score in the pre-test on sentence-reading task, the progress score shown in the posttest for the experimental group were statistically significant compared to the post-test score on the control group. Furthermore, the present study illustrated that Native English (NE) listeners rated students' speeches more strictly in the domain of intelligibility than accentedness both in sentence-reading task and picture description task. The data from findings confirmed that even accented speech can be intelligible for NE listeners and proved that segmental aspect is the major source affecting pronunciation features for communication breakdown.
Keywords: *pronunciation teaching, explicit phonetic instruction, intelligibility, accentedness, foreign language speech learning.*

INTRODUCTION

Studies of second language (L2) speech production has shown the relations between foreign accents found in L2 speech and the teaching and assessment of L2 pronunciation in that intelligible pronunciation plays an important role in L2 learner development (Munro & Derwing, 1995). Furthermore, when L2 learners do not posses intelligible pronunciation it prevents them from successful communication with L1 speakers (Saito, 2011). Given that foreign accent is a normal characteristic of L2 speech, Derwing and Munro (2005, p. 385) claimed that L2 pronunciation needs to be assessed at two different levels, they are accentedness ('a listener's perception of how different a speaker's accent from that of the L1 community, p.385) and intelligibility ('a listener's perception of how difficult it is to understand an utterance', p.385). Derwing and Munro (2005) also emphasize the importance of intelligible pronunciation for the purpose of successful L2 communication.

Levis (2005) stresses that both the intelligibility and "nativeness" principles continue to influence pronunciation teaching and research, they both relate how to communicate in context and in the relationship of pronunciation identity. Furthermore, Goodwin (2001) put forward that "L2 proficiency is most likely judged through speaker's pronunciation" (p. 117). The degree of differences between a learner's native language and the target language is a classic problem that can lead to greater difficulty in L2 speech production learning (Lightbrown and Spada, 2006). In addition, Flege (2003) stresses the difficulties in attaining native-like L2 pronunciation skills and foreign accents as a normal aspect of L2 speech. Nunan (1993) gives explanation on the difficulties in teaching pronunciation encounter in EFL setting, for instance: (1) the unavailability of native speaker of English (NS) as teacher in common classroom, (2) the teachers are usually non-native speakers of English (NNS), which is commonly known that they might not be confident or competent enough in providing feedback to the students.

In the area of second language (L2) phonology classroom teaching, several studies have been done by researchers. One of them is Saito (2011) who reports on his SLA study on L2 pronunciation of twenty native Japanese learners of English in ESL setting who received four-hour instruction of English segmental features /æ,f,v,θ,ð,w,l,ɹ/ and evaluated by four native English listeners. The results suggested that explicit phonetic instruction had significant effect in improving their accent especially in the sentence-reading task. What Saito found in his study are supported by Goodwin's (2001) idea that intelligibility is defined as spoken English in which an accent, if present, is not distracting to the listeners.

In the Indonesian context, Sari (2009) found a way to meet teachability for L2 learners besides leading the students to an intelligible phonological rules in both segmental and suprasegmental aspects. Some L2 pronunciation has reported that particular EFL learners such as Indonesian learners of English whose L1 phonetic system greatly differs from that of English tend to have salient L1-L2 transfer problems at a segmental levels (e.g. Karjo and Yunni, 2011; Sumbayak, 2010; Murtiningsih, 2012). Karjo & Yunni (2011) conducted research with thirty university students in producing three chosen diphthongs [eɪ, əʊ, ɪə], which shows that the diphthong [əʊ] is the most problematic for students. Sumbayak (2010) investigates in her study the difficulties of Indonesian learners of English in producing diphthongs [eɪ] and [oʊ]. It is shown the students were able to produce more accurate diphthongs than spouses and that the diphthong [oʊ] was more problematic than diphthong [eɪ]. Murtiningsih (2012) conducted a study on the effectiveness of Presentation, Practice and Production (PPP) and Task Based Learning (TBL) in teaching diphthongs in a university context. She compared two teaching methods, PPP in experimental group and TBL in control group and gave a post test in the form of reading aloud sentences loaded by 64 diphthongs in the text. The results show that diphthongs [eɪ, oʊ, and eə] are mostly mispronounced by students.

METHODOLOGY

The participants were 10 male and female adult English-speaking educated students pursuing their bachelor degree and having a varying degree of English speaking proficiency. All participants spoke English as foreign language. The students were equally distributed into two groups: an experimental group (Participants 1-5) and control group (Participants 6-10). The participants in control group were not given any instructional treatment, while the other participants in experimental group received instruction. I offered all instruction in a classroom setting by to one or two students as tutoring session lasting for one and half hour per week for a total of two weeks.

Three Native English (NE) listeners participated in this study. They were Rater 1 from Burnley, England, Rater 2 from England and Rater 3 from University of Colorado, USA. The NE listeners rated the participants' accentedness or how native like the speech stimuli on the basis of nine point Likert scale, rating from 1 (native-like) to 9 (heavily accented) as well as their intelligibility (1: no effort to understand – 9: very hard to understand) since they have been widely used in studies of listeners' perception of L2 accentedness and intelligibility on both pre test and post test. The use of rating judgment is believed that it has 'shown a high degree of reliability across group of listener, that some shared sense of what constitutes intelligible versus unintelligible L2 speech is possible' (Derwing and Munro, 2005). Additionally, as a controlled stimulus, I asked Rater 1 to record his voice and did the same task as participants. Later, the researcher used this controlled stimuli as an example to the two raters on how NS doing his task comparing to Indonesian learners doing the same task.

The teaching materials basically were derived from Peter Ladefoged, 2006 and John Trim, 1975. From Ladefoged, 2006, p. 27, I made a power point presentation which was taken from his explanation on words possibilities that can occur by considering the sets of words and modified its content to explain the materials. A figure of the classification of English vowels was also used in teaching processes to differentiate the part of the tongue involved in producing English diphthongs.

The explicit phonetic instruction in this study could be categorized as one type of form-focused instruction (FFI) which Spada defined it as 'any pedagogical effort which is used to draw learners' attention to language form either explicitly or implicitly' (1997, p.73). In the first meeting for each participant were given the explanation on the definition of diphthongs and their phonetic properties; tense or lax, lip rounding and position of the tongue (cf. Fromkin, 2011). They were given a clear account of English diphthongs sounds one by one in a sequence focusing on the phonetic characteristics of speech sounds (articulator organs, place of articulation and manner of articulation). In this first meeting, I started the explanation of diphthongs /aʊ, aɪ, ɔɪ/ consecutively. After that, the participants were shown a video explaining how to produce that diphthongs as well as the example of words containing diphthongs /aʊ, aɪ,

ɔɪ/. Then, the participants were asked to produce individual sounds according to what they were taught by using Trim's book English Pronunciation Illustrated (1975, p. 34-36, 41) and regularly checked Cambridge & Webster online dictionary if they had difficulties in pronouncing such words to provide objective feedback through trusted resources. In giving them feedback, I used explicit corrective feedback offered to encourage participants notice their errors, and can self repair error in phonetic forms (articulator organs, place of articulation and manner of articulation) at the end, this kind of feedback is intended to get participants' improvement on this segmental accuracy. Additionally, the use of more explicit feedback is intended to increase the amount of learners' uptake and practice. For this experimental group, the sequence was: (1) explaining the diphthongs (2) watching the video to get real picture on how to pronounce the diphthongs correctly (3) producing the output (teacher recorded their speech samples) and receiving explicit instruction/feedback (4) producing the same output again. The second meeting was a rehearsal time for participants in preparing them to do the posttest.

In this study, I used two types of recorded data in order to measure their performance at the controlled and spontaneous level, namely: (1) participant's voice on sentence reading task, in both pre test and post test; in order to measure participants' performance at the controlled level as well as (2) participants' voice on picture description task; in order to measure their performance at the spontaneous level. Since this study focuses on targeted diphthongs /aɪ, aʊ, ɔɪ/ or the closing diphthongs (c.f. Widdowson, 1978), the current study deliberately composed eight loaded sentences that can equally assess the participants' performance on each of these phones. The eight sentences used in sentence-reading task consist of eight sentences which had 107 loaded words that included 12 diphthongs focused. For example, in sentence number one, the sentence tested to the participants was: *The brown house looked dark in the night.* So there were three words loaded with diphthongs [aʊ, aɪ], namely *brown, house* and *night.*

Table 1. Contents of loaded sentences out of 107 words

Targeted phones	Total number of loaded phones	Examples
aʊ	4	brown, house, shout, sounded
aɪ	4	night, time, cry, Caroline
ɔɪ	4	joy, voice, soil, boy

After the recording process of speech stimuli, the data were refined to get sort of needed data. Since in the sentence reading task the participants were asked to read 8 sentences loaded with diphthongs, the speech sample were 160 speech samples from sentence reading task (8 sentences (each sentences represents one diphthongs production) x 10 participants x 2 pre/post tests = 160 speech samples). For the picture description will be 20 speech samples (1 picture description x 10 participants x 2pre/post tests = 20 speech samples). A set of two-way mixed-design analysis of variance (ANOVA) test from SPSS (Statistical Packages for the Social Sciences) in measuring the accentedness and comprehensibility were also be used in the data analysis. The data were taken for both experimental and control group in T1 and T2. Therefore the data administered will be on four contexts: (1) accentedness in sentence reading task (2) accentedness in picture description task (3) intelligibility in sentence reading task (4) intelligibility in picture description task. Each participants in this study got scores from three NE listeners. The accumulative score for each participant used to answer the second research question as well as ANOVA score from SPSS.

ANALYSIS

It is drawn from a fact that some of English diphthongs are different from diphthongs in other languages, so problems might arise in pronouncing them (Murtiningsih, 2012). Therefore, Dardjowidjojo (2009) states that in pronouncing diphthong [aʊ], Indonesian are often simplified becoming one sound only (p.55). Diphthong [aʊ] become [ɔ] as in *kalau* become [kalɔ]. In line with that, Jones (1987, p. 103) also describes that German and French have difficulties in pronouncing diphthong [aʊ] because such diphthong does not exist in their language. What I found in this study also confirms their results on the production of English diphthong where learners tend to replace the diphthong [aʊ] with mid back vowel

[ɔ]. In my study, the learners mispronounced the word *house, shout, brown* and *sounded* that should be articulated as /haʊs, ʃaʊt, braʊn, saʊndɪd/ as /hɔs, ʃɔt, brɔn, sɔndɪd, sɔʊndɪd/. All participants reported had mispronunciation the words in their pre test on the controlled speech level.

The explicit phonetic instruction given resulted on the production of English diphthong [aʊ] in their posttest as Participant 1-5 had no difficulties in pronouncing the diphthong [aʊ] in sentence-reading task. The material given, might simplified the participants' perception on that words with *ow* and *ou* orthography such as in the words *cow* and *house* should be pronounced as diphthong [aʊ]. Carey (2009, p. 3) discussed in his study about the errors caused by 'letter to sound rule confusion' and stated that L2 learners of English often interpreted English pronunciation based on the orthography. Therefore, when the participants were asked to do exercise in reading aloud from Trim's book (1979, p. 41); the participants were aware that all the words given are loaded with *ow* and *ou* in their orthography (e.g. *cow, cloud, owl, found, mouth, proud, mountains, crowd, town,* etc.). In this exercise, I modified Trim's materials in that I erase its phonetic transcription so that the learners tried their best effort without only looking at its phonetic transcription. In the video downloaded from Youtube to get real picture on how to pronounce the diphthong, the participants were tried to imitate the diphthong production by following the model. The model suggested that the participants paid attention to her lips since it helped to form the sound. Additionally, a power point slide was also given to the participants to get more input on how and what characteristics may help to remind them in producing the diphthong [aɪ]. They were some hints to help them in producing correct diphthong [aɪ] such as '*i*' as in *tiger*; '*i-e*' as in *kite*; '*igh*' as in *light*; and '*y*' as in *shy*. The exercise was given also from Trim's book (1979, p. 35) that provided words loaded with diphthong [aɪ] in the word such as *eye, wide, sky, high, night, wine, shy,* etc. It happened like in the pre test where participant mispronounced the word *night* as [neɪt] and when *time* was pronounced as [tem]. Ramelan's study (1985, p. 88) is also similar with my study where most Indonesian learners tend to produce [eɪ] or [e], instead of [aɪ]. Participant 4 in his pre test were found out that he produced the word [taɪm] as [tem]. In this case, the participants were accustomed to produce diphthong without gliding therefore he produced a single vowel. In line with my findings, was also found out by Murtiningsih (2012) in her study in that her students instead of producing the word *mine* [maɪn] they produced [meɪn].

Though, the participants had no problems in their pre test and posttest when they faced the word with diphthong [ɔɪ] as in *joy, voice, soil* and *boy*. In English, however, there are only two orthographic possibilities, that is when a word should be pronounced with diphthong [ɔɪ]; they are '*oy*' as in *toy* and '*oi*' as in *soil*. The participants noticed that the words should be pronounced based on their orthography and the same as producing words such as *sepoi, amboi* and *asoi* in Indonesian (Dardjowidjojo, 2009).

Explicit phonetic instruction benefited to the learners' L2 production of English diphthongs [aʊ], [aɪ], [ɔɪ] at the controlled speech level (sentence-reading task) make it similar with previous studies done by Saito (2011), and Derwing and Munro (2005). The experiment shows the significance of explicit phonetic instruction which can help learners of English significantly improve the segmental phonology in the case of diphthong [aʊ], [aɪ], [ɔɪ]. The present study highlights that participant still had a segmental problem in the pronunciation of [aɪ] in the spontaneous speech level (picture description task). It is also confirm that explicit phonetic instruction enhanced the learners' production of the English diphthongs, moreover it led them to be aware of the differences between the phonetic systems of English and Indonesian. What is more, the effectiveness of explicit phonetic instruction was also verified by the results of the participants in control group (Participants 6-10) where no instruction was given to them. Neither of them demonstrated progress between pre test and posttest.

Drawing on such reasoning, I summarized that the results of NE listeners' rating revealed that ten participants had more difficulties in pronouncing in sentence-reading task or controlled speech level, in that L2 learners such ten participants probably had L1 –L2 transfer problems at segmental levels. Here, it caused a negative influence on NE listeners' perceptions. Moreover, Carey (2009, p. 3) in his study claimed that one of sources of L2 pronunciation errors is that 'letter to sound rule confusion'. That is in my study when the participants spoke English and attempted to interpret English pronunciation from the orthography. Hence, such example as shown above (e.g. *brown, sounded, house, cow*) which have sound rule of English diphthongs may cause mispronunciation. Carey explained that mispronunciation might not because of inability to produce of phoneme, but it might because of interference of spellings. Murcia et.al. (1996) previously argued that there are factors which are positively correlated to the native-like pronunciation such as age, motivation, attitude, the native language, exposure to L2 as well as phonetic ability. This study gives the impression that participants had high correlation on their native language; the findings of the research question number one revealed that mostly they mispronounced the diphthong [aʊ]

and pronounced it as single vowel [ɔ] as Indonesian speakers often said *kalau* [kalaʊ] as [kalɔ] (Dardjowidjojo, 2009).

Furthermore, the present study illustrated that NE listeners rated students' speeches more strictly in the domain of intelligibility than accentedness both in sentence-reading task and picture description task although only in a slight difference scores (highest mean = 3.30 in picture description task, posttest, intelligibility) and (highest mean = 3.25 in picture description task, posttest, accentedness). Derwing and Munro (2005, p. 384) claimed that 'it may do more harm than good for teachers to lead learners to believe that they will eventually achieve native pronunciation or to encourage them to expend time and energy working toward a goal that they are unlikely to achieve (acquiring native-like fluency)'.

CONCLUSIONS AND RECOMMENDATIONS

All participants reported had mispronunciation on the words *house, shout, brown* and *sounded* in their pre test of their controlled level speech. However, after a two-week instruction, the participants in the experimental group reported had no difficulties in pronouncing the diphthong [aʊ] in posttest of sentence-reading task. In addition, an occurrence happened in my study when the participants attempted to interpret English pronunciation from the orthography. For example when participants pronounced the words *brown, shout, sounded,* and *house,* which the participants attempted to read it as [brɔn], [ʃɔt], [sɔʊndɪd], [hɔs]. The diphthong [aɪ] as in *night* and *time* were reported mispronounced by one participant in the experimental group. In this case, the participants were accustomed to produce diphthong without gliding therefore he produced a vowel [e] or glide [eɪ]. But, it is not surprising when all participants correctly pronounced the diphthong [ɔɪ] as in *joy, voice, soil* and *boy* since the participants noticed that the words should be pronounced based on their orthography.

Explicit instruction benefited the participants correct the production of English diphthongs [aʊ] and [aɪ] at the controlled speech level for participants in the experimental group. The participants still have a segmental problem in the pronunciation of [aɪ] in the spontaneous speech level (picture description task). Out of eighteen words occurred in the picture description task for both pre test and posttest from ten participants, one reported had mispronounced the diphthong [aɪ] and results in problems in pronouncing the words *like* and *night*.

Furthermore, the present study illustrated that NE listeners rated students' speeches more strictly in the domain of intelligibility than accentedness both in sentence-reading task and picture description task. The data from findings confirmed that that even accented speech can be intelligible for NE listeners and proved that segmental aspect is the major source affecting pronunciation features for communication breakdown. This study gives the impression that participants had high correlation on their native language; the findings of the research question number one revealed that mostly they mispronounced the diphthong [aʊ] and pronounced it as single vowel [ɔ] as Indonesian speakers often said *kalau* [kalaʊ] as [kalɔ] (Dardjowidjojo, 2009).

As recommendations for future studies, there are two more topics are further posed to improve and expand from the present study's framework. First, because the current study involved with only one interview on the accentedness (Jenkins, 2005), it did not allow me to get more understanding about learners' particular difficulties on pronouncing the three diphthongs tested. Therefore, I suggest the future study to take a deep look from the learners' perceptions (e.g. participants who had difficulties in producing the diphthong /aɪ/) what caused them difficult in pronouncing segmental aspects of pronunciation. Second, although the findings of the present study were limited to EFL setting, it would be challenging to investigate further how not only NE listeners but also NNE listeners react on the same speech samples of native Indonesian learners (i.e. in EIL context).

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