Comparing the phonological performance of Kurdish and Persian EFL learners in pronunciation of English vowels

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Abstract

Knowing a second or foreign language is not possible without knowing its sound system. Besides, it is also impossible to disregard the effect of the first language sound system on the pronunciation of sounds of the second. The more these effects disappear, the more native like the learners sound. Accordingly, comparing the sound system of the two languages helps recognize the differences of the languages and sources of feasible errors the learners make which results in decrease the effects of the first language. Thus, this study tried to compare the performance of EFL Kurdish and Persian learners in acquisition of English vowels. In so doing, contrastive analysis hypothesis (CAH) was applied to compare the vowels of Kurdish and Persian with English. Furthermore, a total of 120 students take parted in the study to study any probable differences between the phonological performance of Kurdish and Persian EFL learners at elementary and advanced levels. The results showed some significant differences at the elementary level between the two groups of speakers, though this was not attested at advanced levels. EFL educators can use the results of this research in their pedagogical judgment makings.

1. Introduction

Communication in second language (L2) is mainly dependent on correct pronunciation. Correct pronunciation makes our speech understandable and comprehensible to our interlocutors. Even with a rich lexicon in the second

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language and familiarity with the structures and systems of the L2, our messages cannot be expressed correctly without correct pronunciation, rhythm, and intonation (Varol, 2012).

Since second language learner wants to speak L2 like native speakers, they consider pronunciation of the target language as the major indicator of their knowledge about the language. This is because of the decision of native speakers according to the second language learners’ ability to correctly create the target language sounds using suitable intonation and rhythm. Consequently, the more similar one’s pronunciation is to that of a native speaker, the more likely his speech will be recognized as intelligible and understandable (Derwing & Munro, 2005).

In spite of the critical function of pronunciation in interacting in a second language, it was typically disregarded by language researchers until the audio-lingual method placed an emphasis on listening and speaking. Derwing and Munro (2005) recognized the cause for the lack of emphasis on pronunciation and claimed that “the study of pronunciation has been marginalized in the field of applied linguistics” (p. 379). Thus, linguists were the probable spectators of the research results on this part of study rather than language teachers. Consequently, the reasons influencing the acquisition of second language phonology were not identified correctly. One of these reasons that seriously influences the students’ ability and capability of acquiring L2 pronunciation is the kind of communication between L1 and L2 sound systems. To clarify the impact of the first language on L2 acquisition, lots of theories and hypotheses have been proposed so far. Among those, the most influential is the Contrastive Analysis Hypothesis (CAH) which contrasts and compares two or more languages through a systematic study so as to forecast and clarify the source of errors that L2 students make using the target language.

Applying CAH to phonology consequences in Contrastive Phonology which is described as “the procedure of contrasting and comparing the phonological systems of languages to create their similarities and differences” (Yarmohammadi 1995:19). Ringbom (1994) states that “the predictions of CA work best” in the field of phonology.

A contrastive analysis plan comprises two parts: describing each of the languages (within the same model) and juxtaposition for comparison (James, 1980). Obviously, the alternative of model in phonology is in some way straightforward for the reason that basically there are two parts: taxonomic phonology and generative phonology. In the present study, the former model is adopted because it is more appropriate for phonological CA, mainly in applied areas. Moreover, Kohler (1971) declares that taxonomic approach works quite well where the main objective is to entail contrastive studies and their practical applications into language teaching. While there are lots of criticisms at CA, two basic ideas of it are still at work: L1 is a main reason in L2 learning and contrast and comparison of two languages can be of great aid in learning the second language (Ringbom 1994; Ellis 2008).

Cook (1999:86) creates the application of Phonological CA even more acceptable when he utters CA is “most successful in the field of pronunciation”, Felix (1980) considers that at the phonological level L2 learners begin with their L1 system (quoted in Ioup, 1984). Additionally, Richards (1984) recommends that CA may be most productive at the level of phonology when dealing with the studies of SLA.

2. Statement of the Problem

Due to the multi-lingual and multi-ethnical state of Iran, the influence of the students’ mother tongue and approved language becomes a more controversial subject in English language learning locations. Lots of languages and dialects are spoken in different parts of the country. One of the languages spoken in the western provinces of Iran is Kurdish. It is almost different from Persian which is the formal and authorized language of the country and is separated into several languages such as Ilami-Kurdish, Oramani Kurdish, etc. This difference is also clear in the sound systems of the two languages. Consequently, a Kurdish learner learning English not only tolerates the influence of Kurdish sound system but also the influence of Persian sound system on the phonological system of English. Thus, the knowledge and familiarity of EFL educators with these differences help the learners in better understanding and processing the target language sound system. One of the best approaches which is also maintained by the literature is the application of CA to recognize the similarity and differences of the languages. Fallahi (1991) also refers to the significance of the application of CA for English plans in Iran because of the obvious L1 interference in EFL settings. All in all, this study first gives a theoretical image of the vowels sound system of Kurdish and Persian and it also discriminates the differences and similarities of the Kurdish and Persian vowels in comparison with English vowels. At the practical stage, it examines the phonological performance of Kurdish and Persian speakers of EFL learners in elementary and advanced levels to inspect the sounds that speakers
of Kurdish and Persian transfer from their native language when they pronounce the English sounds and to see whether there is any significant difference between Kurdish and Persian EFL students at elementary and advanced levels in pronunciation of English vowels. Consequently, this study is going to answer the following questions:

1. Is there any significant difference between elementary Kurdish and Persian EFL learner in pronunciation of English vowels?
2. Is there any significant difference between advanced Kurdish and Persian EFL learners in pronunciation of English vowels?

3. Methodology

3.1. Participants

To achieve the goals of this study, a total of 120 male and female EFL learners participated in the study. Giving Allen’s (1992) proficiency test, the subjects were chosen and divided into two levels of elementary and advanced levels. The elementary level students were 60 females and males half of which were Persian native speakers and the other half were Ilami-Kurdish native speakers. Their ages ranged between 15 to 22 years. The Phonological performance of each Persian and Kurdish participant was compared with English vowels. The advanced level students were 60 female and male, half Persian native speakers and half Ilami-Kurdish native speakers. Their ages ranged between 22 to 32 years.

3.2. Instrument

A questionnaire was used as the instrument of this study to identify the phonological performance of Kurdish and Persian EFL learners in acquisition of English Sound system. The questionnaire consisted of a list of 20 discrete lexical items and twenty five sentences including specific words which were selected in a way to ensure that they cover the areas most probable for errors to happen founded on the prediction of contrastive analysis in both Kurdish and English languages. So, five vowels were chosen namely, /i, ɘ, ɔ, ɔ, ʌ/ because these sound were absent in one or both of the languages. Moreover, care was taken to comprise the words which learners had studied in high school. The reading passage was an intermediate text selected for participants to read it aloud. The instruments were approved by two experts in linguistics and TEFL. The reliability proved to be 0.94 and 0.96, respectively.

4. Results

4.1. The Analysis of vowels pronounced by Participants at elementary level

As mentioned before, to achieve the goals of the study, contrastive analysis was employed. The Participants were asked to articulate 5 different types of material to determine their phonological performance. The data gathered in Table 5 clarify what the most likely encountered segmental errors of Persian and Ilami-Kurdish learners at elementary level were.
Table 1 shows the descriptive data analysis of vowels (I, a, u, Ƙ, Ţ, Š), pronounced by 30 elementary Ilami-Kurdish and Persian learners. And table 2 shows the inferential data analysis. In order to see whether these descriptive findings are meaningful or not, the researcher will detail the results of the five specific vowels (I, a, u, Ƙ, Š) pronounced by participants:

In the case of vowel /I/, the table 5 shows that the 90 percent of elementary Persian learners replace /I/ with /i/. For example, the word ship was pronounced as sheep, which was the incorrect choice. Only 10 percent of learners were able to pronounce it correctly. Similarly, in the case of /I/, the 93.33 percent of elementary Ilami-Kurdish learners pronounced /I/ as /i:/ For example, the word ship was pronounced as sheep, which was the incorrect pronunciation. Only 6.66 percent of learners were able to pronounce it correctly.

Table 2 shows that the amount of z < 0.42 is less than 1.96. So, there is no difference in the vowel /I/ pronunciations between Kurdish and Persian performance.

As table 2 shows, the amount of z < 0.42 is less than 1.96. So, there is no difference in the vowel /I/ pronunciations between Kurdish and Persian performance. In considering the vowel /Ƙ/, 83.33 percent of elementary Persian replaces /Ƙ/ with /u/. For example, the word full was pronounced as fool, which was the incorrect choice. Only 16.66 percent of learners were able to pronounce it correctly. In the same manner, the 86.66 percent of elementary Ilami-Kurdish learners pronounced the vowel /Ƙ/ as /u/. For example, the word ‘full’ was pronounced as [fool], which was the incorrect choice. Only 13.33 percent of learners were able to pronounce it correctly. Table 2 shows that the amount of z < 0.43 is less than 1.96 So, there is no difference in the vowel /Ƙ/ pronunciations between Kurdish and Persian performance.

Table 1. Descriptive statistics of the vowels pronounced by the elementary Kurdish and Persian EFL learners

| Vowel | Elementary Ilami-Kurdish | Percentage | Elementary Persian | Percentage |
|-------|--------------------------|------------|--------------------|------------|
| I     | Pronounced as (I)        | 2          | 6.66               | 3          |
|       | Pronounced as (I')       | 28         | 93.33              | 27         |
| u     | Pronounced as (u)        | 4          | 13.33              | 5          |
|       | Pronounced as (u')       | 26         | 86.66              | 25         |
| Š     | Pronounced as (a)        | 23         | 76.66              | 5          |
|       | Pronounced as (e)        | 7          | 23.33              | 25         |
| Ť     | Pronounced as (o)        | 3          | 10                 | 4          |
|       | Pronounced as (o')       | 27         | 90                 | 28         |
| Š     | Pronounced as (a')       | 3          | 10                 | 2          |

| Vowel | P1 | P2 | Z amount | Result       |
|-------|----|----|----------|--------------|
| I     | 0.07 | 0.1 | 0.42 | Not Meaningful |
| Š     | 0.13 | 0.17 | 0.43 | Not Meaningful |
| Ť     | 0.77 | 0.17 | 5.7 | Meaningful    |
| Š     | 0.17 | 0.13 | 0.43 | Not Meaningful |
| Š     | 1   | 0.06 | 0.57 | Not Meaningful |

P1= correct pronunciation ratio for Kurdish speakers
P2= correct pronunciation ratio for Persian speakers

Table 2. Two sample z test for proportions vowels at elementary level.
In considering the vowel /ɔ/, 86.66 percent of elementary Persian EFL learners pronounced /ɔ/ as /ʌ/. For example, the word “ball” was pronounced as [ba:1], which was the incorrect choice. Only 13.33 percent of learners were able to pronounce it correctly. In the same manner, to pronounce vowel /ɒ/, the 90% of elementary Ilami-Kurdish EFL learners pronounced /ɔ/ as /ʌ/. For example, the word ball was pronounced as [ba:l], which was the incorrect choice. Only 10 percent of learners were able to pronounce it correctly taught was rendered as [tɑːt] instead of [tɔːt].

According to Table 2, the amount of z < 0.43 is less than 1.96. So, there is no meaningful difference in /ɔ/ pronunciations between Kurdish and Persian groups. As for the vowel /ʌ/, the 93.33 percent of elementary Persian learners pronounced /ʌ/ with /ʌ/. For example, the word but was pronounced as [bɔt], which was the incorrect choice. Only 6.66 percent of learners were able to pronounce it correctly. While the 90 percent of elementary Ilami-Kurdish learners, pronounced /ʌ/ as /ʌ/. For example, the word cup was pronounced as [kʌp], which was the incorrect choice. Only 10 percent of learners were able to pronounce it correctly. As table 2 shows, as far as /ʌ/ is concerned the amount of z < 0.57 is less than 1.96. So, there is no meaningful difference in the vowel /ʌ/ pronunciations between Kurdish and Persian groups.

In considering the vowel /ɪ/, the 83.33 percent of elementary Persian EFL learners replace /ɪ/ as /a/. For example, /ɪ/ the word “about” was pronounced as ‘ɑ’ which is the incorrect choice. Only 16.66 of percent of learners were able to pronounce it correctly. But unlike, the elementary Persian learners, the 76.66 percent of elementary Ilami-Kurdish speakers pronounced correctly /ɪ/ in the word ‘about’, only 23.33 percent of learners were not able to pronounce it correctly. As table 2 shows, as far as /ɪ/ is concerned the amount of z > 5.7 is more than 1.96. So, there is a meaningful difference in the vowel /ɪ/ pronunciations between Kurdish and Persian groups.

4.2. The Analysis of vowels pronounced by Participants at advanced level

Table 3 shows, the descriptive data analysis of vowels (1, ɔ, u, ɔ, ʌ), pronounced by 30 advanced Ilami-Kurdish and Persian learners. Table 4 shows the inferential data analysis. In order to make these descriptive findings more meaningful, the researcher will detail the results of the five specific vowels (ɔ, ʌ, ɔ, u, 1) pronounced by participants:

Table 3. Descriptive statistics of the vowels pronounced by advanced Ilami-Kurdish and Persian EFL learners

| Vowels pronounced by advanced Ilami-Kurdish and Persian EFL learners | Frequency and percentage | Advanced Kurdish | Percentage | Advanced Persian | Percentage |
|---|---|---|---|---|---|
| 1 | Pronounced as (i) | 24 | 80 | 23 | 76.66 |
| 1 | Pronounced as (ɪ) | 6 | 20 | 7 | 23.33 |
| u | Pronounced as (ʊ) | 22 | 73.33 | 21 | 70 |
| u | Pronounced as (u) | 8 | 26.66 | 9 | 30 |
| ɔ | Pronounced as (ɔ) | 25 | 83.33 | 22 | 73.33 |
| ɔ | Pronounced as (e) | 5 | 16.66 | 8 | 26.66 |
| ɔ | Pronounced as (o) | 21 | 70 | 23 | 76.66 |
| ɔ | Pronounced as (o) | 9 | 30 | 7 | 23.33 |
| ʌ | Pronounced as (ʌ) | 19 | 63.33 | 20 | 66.66 |
| ʌ | Pronounced as (o) | 11 | 36.66 | 10 | 33.33 |
Table 4. Two sample z test for proportions vowels at advanced level

| Vowel | P1        | P2        | Z amount | Result          |
|-------|-----------|-----------|----------|-----------------|
| I     | 0.8       | 0.77      | 0.286    | Not Meaningful  |
| ø     | 0.73      | 0.70      | 0.097    | Not Meaningful  |
| a     | 0.83      | 0.73      | 0.93     | Not Meaningful  |
| o     | 0.77      | 0.77      | 0.64     | Not Meaningful  |
| A     | 0.63      | 0.67      | 0.05     | Not Meaningful  |

P1= correct pronunciation ratio for Kurdish speakers
P2= correct pronunciation ratio for Persian speakers

In considering the vowel /I/, the 76.66 percent of advanced Persian learners pronounced /I/ correctly. For example, the word ‘bin’ was pronounced as ‘bIn’, which was the correct choice. Only 23.33 percent of learners were not able to pronounce it correctly. In the same way the vowel /I/ was correctly pronounced by the 80 percent of advanced Ilami-Kurdish EFL learners. Only 20 percent of learners were not able to pronounce it correctly. As table 4 shows, the amount of z < 0.286 is less than 1.96, so there is no meaningful difference in the vowel /I/ pronunciations between Kurdish and Persian groups.

In considering the vowel /ø/, the 70 percent of advanced Persian pronounced correctly /ø/ as /o/. For example, the word ‘full’ was pronounced as ‘føl’, which was the correct choice. Only 30 percent of learners were not able to pronounce it correctly. In the same way, the vowel /ø/ was correctly pronounced by 73.33 percent of advanced Ilami-Kurdish EFL learners. Only 26.66 percent of learners were not able to pronounce it correctly. According to table 4, the amount of z < 0.097 is less than 1.96, so there is no meaningful difference in the vowel /ø/ pronunciations between Kurdish and Persian groups.

In considering the vowel /a/, the 76.66 percent of advanced Persian pronounced correctly /a/ as /a/. For example, the word ‘ball’ was pronounced as [bɔːl] which was the correct choice. Only 30 percent of learners were not able to pronounce it correctly. In the same way, the vowel /a/ was correctly pronounced by 70 percent of advanced Ilami-Kurdish EFL learners. Only 30 percent of learners were not able to pronounce it correctly. As table 4 shows, the amount of z < 0.097 is less than 1.96, so there is no meaningful difference in the vowel /a/ pronunciations between Kurdish and Persian groups.

In considering the vowel /ʌ/, the 66.66 percent of advanced Persian pronounced correctly /ʌ/. For example, the word ‘but’ was pronounced as [bʌt], which was the correct choice. Only 33.33 percent of learners were not able to pronounce it correctly. In the same way, the vowel /ʌ/ was correctly pronounced by the 63.33 percent of advanced Ilami-Kurdish EFL learners. Only 36.66 percent of learners were not able to pronounce it correctly. According to table 4, the amount of z < 0.05 is less than 1.96. So, there is no meaningful difference in vowel /ʌ/ pronunciations between Kurdish and Persian groups.

In considering the vowel /ɔ/, the 73.33 percent of advanced Persian learners pronounced correctly /ɔ/ as /ɔ/. For example, /ɔ/ in the word ‘about’ was pronounced as [ɔˈbaʊt] which is the correct choice. Only 26.66 percent of learners were not able to pronounce it correctly. In the same way, /ɔ/ was correctly pronounced by the 83.33 percent of advanced Kurdish EFL. Only 16.66 percent of learners were not able to pronounce it correctly. As table 4 indicates, the amount of z < 0.93 is less than 1.96, so there is no difference in the vowel /ɔ/ pronunciations between Kurdish and Persian groups.
5. Discussion and Conclusion

As cited before, the goal of the present study was to scrutinize the phonological performance of Persian and Kurdish EFL students to study whether there is a significant difference in the articulation of five English vowels between Elementary and advanced Kurdish and Persian EFL learners. Consequently, the articulations of the vowels pronounced by the participants were analyzed.

As illustrated in the previous section, the data revealed that there was a significant difference in the pronunciation of /ɑ/ between Persian and Kurdish participants at the elementary level. Only 17 percent of Persian EFL learners at Elementary level were able to pronounce /ɑ/ in word about, because the vowel /ɑ/ do not exist in Persian language. In comparison with Persian EFL learners, 77 percent of Kurdish speakers were able to pronounce /ɑ/ correctly. Also, as far as /ɑ/ is concerned, the amount of z > 5.7 is more than 1.96, so it can be claimed that there is a meaningful difference between Kurdish and Persian groups. Interestingly, such a difference was not proved at the advanced level. Accordingly, it can be concluded that Persian speakers were able to learn the correct pronunciation of the sound after receiving correct input at the upper levels of proficiency.

Educationally speaking, the results of the present study can be processed to be used in teaching pronunciation, material expansion, and testing. EFL educators can use the methodology and results of this study to identify the weaknesses and sources of errors of their students in order to teach the sound effectively. It also should be declared that no study is perfect. Every study has its own limitations. The major limitation of this study is the number of the members and the sounds under study. Therefore, it is proposed that this study be reproduced in greater size and with broader variety of sounds.

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