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A Case Study to Improve Pronouncing English Consonant Clusters by Young Yemeni Learners in Malaysia

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ABSTRACT

Acquiring pronunciation accuracy and efficiency in the English language by ESL and EFL learners are essential. Yet, this is a challenge affecting Arab Yemeni learners as studies have shown that Arab Yemeni learners face difficulties in pronouncing English initial and final consonant clusters. This study investigates the pronunciation of English consonant clusters by young Yemeni EFL learners and the difficulties faced in pronouncing English consonant clusters. This case study employed an intervention for a total of four weeks with 8 young Yemeni participants. The respondents were introduced to basic phonology system and taught to recognise the differences between English and the Yemeni sound systems, participated in listening sessions to a native speaker for using English consonant clusters segments and practised choral repetition and self-correction using audio recordings. The American accent is targeted in this study as it is easier to be acquired by the English Yemeni learners. The respondents' pronunciation was transcribed with the PRATT software to show the degree of differences between the pre- and post-study results after conducting the phonology course intervention. The study shows many developmental differences in pronouncing English consonant clusters after conducting four phonological training techniques which the Yemeni learners went through. This study would assist and provide a guide to Yemeni EFL learners and educators to address the difficulties of pronouncing English consonant clusters.

Keywords: Yemeni EFL learners, consonant clusters, PRATT, phonology, markedness, mother tongue interference.

INTRODUCTION

Consonant clusters are distinct aspects found in most languages of the world (Chomsky, 1981). These aspects have the ability to control the production of a target language. However, each language has variable restrictions in the final and the initial syllable of a word or an utterance (Chomsky, 1981; Jabbari, 2011; Arnold, 2010). Hence second language learners have different preferences to pronounce English words that consist of initial or final consonant clusters which determine different degrees of difficulty due to syllable constriction variables such as cluster type, cluster length and manner of articulation (Salem, 2014).

Although there is a great consensus among researchers that second language learners pronounce English consonants incorrectly which lead to semantic confusion and ineffective communication, second language learners' pronunciation of consonant clusters can be improved

through training processes such as listening to a native speaker session, practicing choral repetition and self-mentoring using audio recordings (Arnold, 2010). According to Yahya (2002), teachers of second language learners do not consider pronunciation training as a skill to be conveyed in English classes as listening, speaking, reading and writing. Yahya (2002) added that training to pronounce correct English should be frequently conveyed to reach the proficient level of the English language.

Accordingly, this paper examines the English consonant clusters production of young Yemeni learners after recognising the sound system of English and the Yemeni dialects as well as training the correct pronunciation of English.

RESEARCH PROBLEM AND OBJECTIVE

As mentioned, although English consonant clusters are crucial segments in word syllable structure, most English second language learners cannot pronounce English consonant clusters accurately. This is due to the type of consonants combined; however, it is best to help second language learners to improve their overall level of English pronunciation (Salem, 2014). That is because acquiring a correct pronunciation by EFL learners is necessary for better communication (Morley, 1991). Furthermore, the correct pronunciation of the English language is also considered an essential part to attain effective academic qualifications.

It is aimed that the findings will provide directions for second language learners, especially Yemeni learners to reach an intelligible level of English production to overcome the difficulty of pronouncing English consonant clusters.

LITERATURE REVIEW

There are two main theories attested in the literature of phonology to explain why second language learners make errors when they pronounce the target language; the transfer theory or the Contrastive Analysis Hypothesis (CAH) by Lado (1957), which implies that the influence of mother tongue affects the pronunciation of the target language. This theory relates all phonological errors to the first language effect because second language learners depend on the structure of their mother tongue to pronounce the target language. L1 transfer can lead to a non-native-like L2 pronunciation which could result in poor communication between native and non-native speakers (Sato,1984). On the other hand, Tarone (1980) criticised the transfer theory as it cannot explain all errors of second language acquisition.

The Markedness Analysis Hypothesis (MAH) theory was suggested by Eckman (1977) and improved by Tarone (1980) to study the differences between the first and the target language. It implies that differences between the two languages increase the difficulty to pronounce the target language. The Markedness theory classifies pronunciation difficulty into degrees, according to the differences of the syllable structure between L1 and the second L2 (Al-Saidat, 2010). With the acquisition of English consonant clusters by Koreans (Yoo, 2004), Koreans learners of English adapted the unmarked syllable structure because it is easy and familiar to them. Based on the two previous theories, the CAH can explain the incorrect pronunciation of the English initial consonant clusters pronounced by Yemeni learners. For instance; the initial position of Yemeni clusters allows no clusters at the beginning of the word, whereas, English permits CCV, CCCV

on the syllable structure of the word. As a result, Yemeni learners tend to make pronunciation errors because initial consonant clusters are absent in the Yemeni dialect. Therefore, the Yemeni learners transfer the Yemeni dialect syllable structure constraints to pronounce the initial in English words. This transfer makes an inaccurate pronunciation of the English language. Furthermore, MDH can predict where the problematic issues that Yemeni learners have in pronouncing the English language. It explains the reasons for the phonological English errors by Yemeni learners, especially in the final consonant clusters.

According to Kharma and Hajjaj (1989), Yemeni learners pronounce English consonant clusters incorrectly, as they insert a vowel before or between the initial and the final clusters to ease the production of complex English words. The incorrect consonant cluster pronunciation is considered a substantial obstacle when young learners leave from secondary schools to universities of Yemen, especially learners who choose certain major fields in the university such as engineering, medicine, English language and commerce. That is because English is the main language that teachers use as part of these fields (Al-Romaim, 2013). Watson (2008) has highlighted the differences in syllable structure between English and the Yemeni dialect as the following table 2.1.

Table 1
Comparison of Syllable Structures of English and Yemeni

English syllable	Yemeni syllable
CV CCV CCCV	CV
VCC VCCC VCCCC	VCC VCCC

Based on the differences of the syllable structure between the English language and the Yemeni dialect, correct pronunciation of English words that have initial and final consonant clusters is difficult for the Yemeni learners. As a result, Yemeni learners use syllable structure patterns of their L1 to pronounce English using vowel insertion to ease the production of the consonant clusters. Using vowel insertion decreases the efficiency of accurate English pronunciation (Al-Shuaibi, 2006; Broselow, 1983, Kharma & Hajjaj, 1989). However, Anderson (1987) claimed that modifying English consonant clusters using vowel insertion by L2 learners depend on the length of the initial and the final consonant clusters. According to Arnold (2010), English correct pronunciation cannot be acquired easily. It must be preceded by knowledge restrictions as well as training exercises. Olness (1991) accounted that training to pronounce English inside the classroom should be frequently practised by learners with teachers.

El-Halees (1986) studied the phonological knowledge of the English Arabic teachers; he found that Arab teachers know very little about the sound system of English and their own language which contribute to the negative impact through teaching in class. Phonological lessons and exercises are rarely provided in the Arab English curriculum, especially the Yemeni curriculum of English which lacks many important aspects to improve the pronunciation of the

Yemeni learners of the English language (El-Halees, 1986 and Al-Shuaibi, 2006). As a result, Arab learners, especially Yemeni learners face many difficulties to convey their message correctly through communication with other people (Al-Shuaibi, 2006). Arnold (2010) trained four Kuwaiti students to overcome English consonant clusters difficulties through practising listening, speaking, repeating after native speakers, and recording pronunciation for self-assessments for six months. Arnold (2010) noticed that the production of English consonant clusters has become closer to native speakers' pronunciation. The same ideas were suggested by Dung (2015) to solve the inaccurate pronunciation of English consonant clusters by Vietnam learners. Therefore, to achieve accurate English pronunciation, Yemeni learners should be more exposed to listening inside and outside the classroom. Besides, Yemeni learners should practice speaking and repeating the correct pronunciation of native speakers.

METHODOLOGY

This case study employed an intervention which carried out in Penang in a Yemeni school in Malaysia. The case study was conducted in the second level of a secondary school group from the Yemeni school. The group comprised of 8 participants aged between 13-15 years old. All of them study English as a subject taught by Arab English teachers. Before conducting the study, word corpus of 20 words was chosen from the Yemeni English curriculum of the secondary school. The words consisted of 10 words starting with an initial English consonant cluster and another 10 words ending with a final consonant cluster. That was followed by employing these words within sentences to ensure clarity of the pronunciation as in Table 3.1 The training session was employed based on Arnold's (2010) techniques that he used to develop the pronunciation of the learners. Arnold (2010) first taught the learners the sound system of the English language and then he enrolled the learners.

The study was conducted within four weeks. The first week, the participants were given a reading task in order to pinpoint the difficulty of pronouncing the initial and the final consonant clusters. This stage was analysed using the software PRAAT to measure the duration of pronouncing the consonant cluster. PRAAT is a software that can analyse speech and identify many aspects such as intensity, pitch, format and duration. In this study, duration measurements are used to examine accurate pronunciations. Learners' Pronunciation was first recorded by PRAAT. This software breaks down English words into consonants parts and provides the duration time of pronouncing the targeted consonant cluster as in figure 1. The duration of time for pronouncing the English consonant cluster was then compared to the correct native pronunciation of the English language.

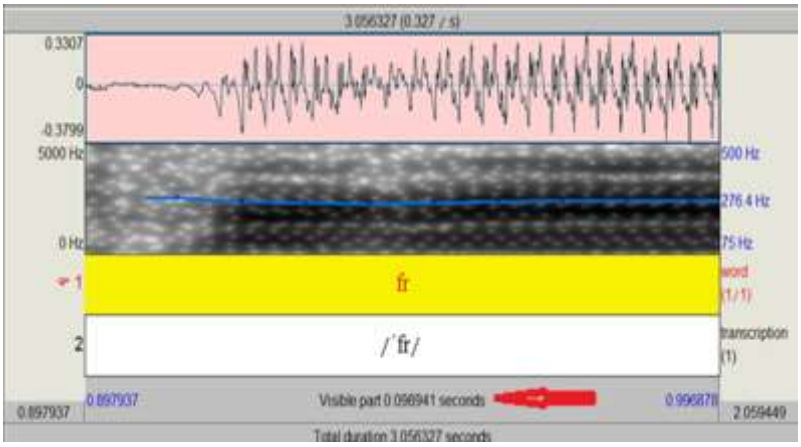

Figure 1: The spectrogram of /fr/

In the second week, students were enrolled in phonological classes to recognise the sound system of the English language as well as the Yemeni sound system in two days. That was followed by training sessions conducted for 10 days which included; intensive speaking and listening, repeating native pronunciations, listening to their pronunciation to self-monitoring. During the fourth week, the researcher recorded the same word corpus pronunciation and analysed the learners' pronunciation using the same procedures as step one. After that, the differences were highlighted and provided in tables.

Table 2
The English Word Corpus

Consonant clusters	The sentences
Floor	She cleans the floor
Spoon	We use a spoon and
Stay	I stay in a house
True	The answer was true
Slim	She is slim
Draw	Children like to draw
Strange	He is a strange man
Strong	She is strong
Worked	She worked very hard
fixed	We fixed the car
Buildings	High buildings
Invents	He invents the machine
Texts	Read the texts, please.
Tempts	The weather tempts us to go for a swim
Forests	I like to see forests

RESULTS AND DISCUSSION

The first stage in this study devoted to determining the young Yemeni pronunciation of the English consonant clusters. Through this stage, the Yemeni learners' pronunciation was recorded and measured to investigate the errors of pronouncing English consonant cluster using the software PRAAT. It was noticed that all the learners maintained the same results and conducted

incorrect English consonant clusters pronunciation as illustrated in tables 3 and 4. The training sessions were employed in the second stage to improve the Yemeni learners' pronunciation of the English language. The third stage employed the same procedures as stage one, which aimed to investigate the learners' pronunciation after the training sessions. Accordingly, results showed varied pronunciations and close duration to the native pronunciation, as in tables 5 and 6.

Table 3
Results of the English Initial Consonant Clusters before the Training Sessions

Word	Transcription	Yemeni Duration	Native Duration
Spoon	/ɪsbuːn/	0.27-0.29 sec	0.19 sec
Floor	/fɪlɔr/	0.11-0.14 sec	0.08 sec
Stay	/ɪsteɪ/	0.19- 0.24 sec	0.17 sec
True	/ətruː/	0.10-0.12 sec	0.09 sec
Slim	/əslɪm/	0.14 – 0.18 sec	0.11 sec
Draw	/dˈrɔː/	0.13-0.18 sec	0.09 sec
Strange	/ɪstreɪmʤ/	0.27-0.32 sec	0.22 sec
Strong	/əstrɔːŋ/	0.37- 0.39 sec	0.22 sec

Table 3 shows the initial English consonant clusters pronunciation before the learners were involved in the training sessions. It can be observed that the young Yemeni learners insert vowels in between the English consonant clusters which determine the long period of pronouncing the English consonant clusters. It can also be noticed that the words 'strange' and 'strong' recorded the longest period, that is due to the existence of the three initial consonant clusters with no interfering vowel. In countries that, the word slim and truly have the shortest period because the combination of the onset /sl/ and /tr/ exists in the Yemeni dialect which determines the same manner of articulation between English and the Yemeni dialect.

Table 4
Results of the English final consonant clusters before the training sessions

Word	Transcription	Yemeni duration	Native duration
Worked	/wɜːrkɪd/	0.33-0.40 sec	0.21 sec
Fixed	/fɪksɪd/	0.29-0.35 sec	0.20 sec
Buildings	/ˈbɪldɪŋɪs/	0.30- 0.40 sec	0. 21 sec
Invents	/ɪnˈventɪs/	0.45-0.35 sec	0.22 sec
Texts	/teksɪts/	0.44-0.53 sec	0.25sec
Correct	/kəˈrekɪt/	0.15-0.22sec	0.14 sec
Tempts	/tembtɪs/	0.60-0.43 sec	0.25sec
Forests	/ˈfɔːrɪsɪts/	0.40-0.37 sec	0.23sec

Table 4 shows the final English consonant clusters pronunciation before the learners were involved in the training sessions. The Yemeni learners inserted / ɪ/ between the stem word and the suffixes /ed/ and /s/ which increased the length of the duration of pronouncing the final consonants clusters. In addition, the distance of the English final consonants cluster pronunciation increased as the number of consonant clusters expands such as /tempts/. The results indicate inaccurate pronunciations because the Yemeni pronunciation duration is longer than the native pronunciation.

Table 5
Results of the English Initial Consonant Clusters after the Training Sessions

The word	Transcription	Native Duration	Yemeni duration
Spoon	/sbuːn/	0.19 sec	0.19-0.20 sec
Floor	/flɔ/	0.08 sec	0.9 sec
Stay	/steɪ/	0.17 sec	0.17-0.18 sec
True	/truː/	0.09 sec	0.9 sec
Slim	/slɪm/	0.11 sec	0.11 sec
Draw	/drɔː/	0.09 sec	0.10
Strange	/ɪstreɪnʤ/	0.22 sec	0.23-0.24 sec
Strong	/ɪstrɔːŋ/	0.22 sec	0.21-0.23 sec

In contrast to table 4, the above table shows the transcription and the distance of the initial consonant clusters after the training sessions. Time of pronouncing the initial consonant clusters has declined positively to ensure that Yemeni learners did not utilise vowel insertion between the final consonant cluster. Although the duration of words /strong/ and /strange/ recorded shorter periods, these initial consonant clusters were proceeded by /ɪ/ because three-consonant clusters are combined in one position that indicates greater difficulty for Yemeni learners and implies more training to reach the accurate pronunciation. That is because the Yemeni dialect sound system allows no consonant clusters at the initial part of the word.

Table 6
Results of the English Final Consonant Clusters after the Training Sessions

Word	Transcription	Native duration	Distance
Worked	/wɜːrkt/	0.21 sec	0.22-0.27 sec
Fixed	/fɪkst/	0.20 sec	0.19-0.22 sec
Buildings	/ˈbɪldŋs/	0. 21 sec	0.19-0.22 sec
Invents	/ɪnˈvents/	0.22 sec	0.25-0.27 sec
Texts	/teksts/	0.25sec	0.30-0.33 sec
Correct	/kəˈrekt/	0.14 sec	0.13-0.15 sec
Tempts	/tempts/	0.25sec	0.29-0.30 sec
Forests	/ˈfɔːrɪsts/	0.23sec	0.23-0.24 sec

Table 6 illustrates the English final consonant clusters pronunciation after the training sessions by the young Yemeni learners. The Yemeni learners' pronunciation has clearly improved as the utilisation of /ɪ/does not exist between the final consonant cluster. However, the word /tempts/ has four final consonant clusters that explain the longest duration among the above words. That is because the Yemeni direct sound system allows only the consonant clusters at the final part of the word.

CONCLUSION

The present study is limited to investigating the pronunciation of the English initial and final consonants clusters after training the learners how to pronounce English correctly. Learners have difficulties pronouncing the English consonants clusters due to the length of the clusters and the differences in the articulation place of some English words, as well as, the non-existence of some English consonants in the Yemeni dialect created errors by Yemeni learners of English language.

Moreover, the pronunciation of the initial consonant cluster showed better articulation after the training sessions. Hence, to solve the problematic pronunciations of English consonant clusters by Yemeni learners, some training courses that focus on listening and speaking skills can be provided to come over this difficulty. That can be done within different ways like exposing to audio and native speakers of English. Learners also can repeat complex words of English after listening to an audio or a native speaker. In the end, it should be noticed that the pronunciation of other English aspects was not tracked in this study such the production of consonant such /p/ and the realisation of /r/.

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