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The Pronunciation of English Segments by Bahdini Kurdish Learners of English

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Abstract

This study investigates the production of English segments by Bahdini Kurdish (BK) learners of English in the 2nd and 4th years of their study. The study aims at identifying the type or subtype of English sounds that are considered problematic for BK learners of English and examining whether there is an improvement in the production of the 4th year in comparison to that of the 2nd year. 50 undergraduate students from College of Languages, Duhok University purposively are selected from second and fourth years of their study. From each level, twenty-five students are taken and their ages range between 20 and 23. A production test composed of (118) words is employed as an instrument to collect the required data from the respondents. The respondents are asked to read the whole wordlist then the data is transcribed using the International Phonetic Alphabet (IPA) symbols. To fulfil the aims of the study, both descriptive and statistical analysis methods are used to describe the findings of the data analysis of both levels. The findings reveal that vowels, in general, are more problematic than consonants for BK learners of English and the diphthong class is more difficult for both groups compared to that of the monophthong class. Furthermore, the results of the statistical independent sample test reveal that statistically the 4th years' production of both types of sounds is better compared to that of the 2nd year. The means of the 4th year learners' correct production of consonants as well as vowels are 1.91 and 1.73 respectively; whereas 2nd year learners scored the means 1.90 and 1.63 for consonants and vowels respectively. Learners' mispronunciation of English sounds is mainly due to some linguistic factors such as L1 transfer, the disparity of the sound system between Kurdish and English, inconsistency of vowel sounds. Finally, some ideas are recommended by the researcher for BK learners to improve their pronunciation of English sounds

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لفظ الاصوات الانجليزية من قبل الطلاب الكرد-اللهجة البهدينية

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المستخلص

أجرت هذه الدراسة تحقيقاً عن إنتاج الأجزاء الإنجليزية من قبل متعلمي اللغة الكردية البهدينية للإنجليزية في السنتين الثانية والرابعة من دراستهم. كانت الدراسة تهدف إلى تحديد نوع أو فرع الأصوات الإنجليزية التي عُدّتْ مشكلة بالنسبة لمتعلمي اللغة الإنجليزية من اللغة الكردية البهدينية وفحص ما إذا كان هناك تحسن في إنتاج السنة الرابعة مقارنة بذلك في السنة الثانية. تم اختيار 50 طالباً جامعياً من كلية اللغات في جامعة دهوك بطريقة موجهة من السنة الثانية والرابعة من دراستهم. تم اختيار خمسة وعشرين طالباً من كل مستوى، وتتراوح أعمارهم بين 20 و 23 عامًا. تم استخدام اختبار الإنتاج المكون من (118) كلمة كأداة لجمع البيانات المطلوبة من المستجيبين. طُلب من المستجيبين قراءة قائمة الكلمات بأكملها، ثم تم تسجيل البيانات باستخدام الرموز الألفبائية الصوتية الدولية. لتحقيق أهداف الدراسة، تم استخدام كلٍ من الطرائق التحليلية الوصفية والإحصائية لوصف نتائج تحليل البيانات لكل من المستويين. كشفت النتائج أن الحروف الصوتية بشكل عام أكثر صعوبة من الحروف الساكنة بالنسبة لمتعلمي اللغة الإنجليزية من اللغة الكردية البهدينية، وأن فئة الثنائيات أصعب لكلتا الفئتين مقارنة بفئة الواحدات. فضلا عن ذلك، كشفت النتائج إحصائيًا أن إنتاج السنة الرابعة لكلٍ من أنواع الأصوات أفضل مقارنة بذلك في السنة الثانية. تعود أخطاء متعلمي الأصوات الإنجليزية بشكل رئيس إلى بعض العوامل اللغوية مثل نقل اللغة الأولى، والتباين في نظام الصوت بين الكردية والإنجليزية، وعدم اتساق أصوات الحروف الصوتية. وأخيرًا، تم توصية متعلمي الكردية البهدينية ببعض الأفكار من قبل الباحث لتحسين نطقهم للأصوات الإنجليزية.

الكلمات المفتاحية : التلفظ، ألاصوات الإنجليزية، اللغة الأولى، اللغة الثانية، التداخل

1Introduction

To communicate in English as a L2 effectively ,learners need to master its pronunciation. However, the acquisition of English pronunciation is not an easy task and L2 learners encounter difficulties that prevent them from achieving their goals in acquiring English pronunciation .Consequently, Bahdini Kurdish (BK) university learners of English Language Department-College of Languages-Duhok University are not an exception. Although they take English language skills courses of phonetics and phonology, their speech still involves a lot of segmental pronunciation errors. This is because Kurdish and English are two completely different languages with regard to their orthography. BK is regarded as a phonetic language namely there is a one-to-one correspondence between phonemes and letters .In other words, each phoneme is orthographically represented by only one letter individually. By contrast, English is not a phonetic language because there is no one-to-one correspondence between phonemes and letters. That is to say, there is no relationship between spelling and pronunciation. This also may lead BK learners of English to confuse English sounds and consequently produce errors .Moreover, BK subdialect and English show differences in their sound systems. BK has 35 phonemes in its sound system: 27consonants and 8 vowels; whereas in English, there are 44 phonemes: 24 consonants and 20 vowels. There are some sounds in English that are not found in BK and vice versa. Due to these cross-linguistic differences ,BK learners of English face difficulty in pronouncing those sounds that do not exist in their L1 .

Although there are considerable number of studies that investigated the segmental pronunciation errors made by second language (L2) learners of English from different first language (L1 (backgrounds such as Mandarin by Bent et al, 2007; Japanese by Saito, 2011 and Thai by Sahatsathatsana, 2017), no studies have closely examined the pronunciation errors made by the BK-speaking learners of English in a systematic way. Based on the theory of transfer, therefore, this study will investigate and analyze BK learners' segmental pronunciation errors in English .Moreover, it will identify the linguistic factors that cause BK learners to make segmental pronunciation errors and simultaneously try to find some suitable strategies that help them overcome or at least reduce these pronunciation problems so that they can speak English with better pronunciation **1.1**.**Aims of the Study**

The current study aims at :

.1investigating segmental pronunciation errors made by BK learners of English in the 2nd and 4th year of their study.

.2examining whether there is an improvement in the production of the 4th year's English sounds in comparison to that of the 2nd

.3identifying the type or subtype of English sounds that are considered problematic for both 2nd and 4th years .

1.2Research Questions

The current study attempts to answer the following questions :

.1What type or subtype of English sounds) vowels or consonants) are more problematic for both 2nd and 4th year students ?

.2Do the 4th year students 'segmental pronunciation errors get decreased compared to those of the 2nd year students ?

.3Does L1 affect the segmental pronunciation of both 2nd and 4th year students?

1.3Hypotheses

It is hypothesized throughout the study that :

.1Vowels are more problematic than consonants for both 2nd and 4th year students.

.2Generally speaking, it is expected that4 th year students' segmental pronunciation errors get decreased compared to those of the 2nd year students.

.3 It is hypothesized that the students' segmental pronunciation performance is influenced by their L1 phonological system.

1.4The Model

The model adopted by the researcher in this study is based on the theory of transfer which was first emerged in the Contrastive Analysis Hypothesis theory) CAH) formulated by Lado (1957). This theory seeks to investigate how L2 learners tend to rely on their L1 when attempting to produce utterances in L2 . This theory is one of the methods used by a plethora of researchers to study the errors occurring in all linguistic subsystems, which occur in both spoken and written language, made by L2 learners. It also is considered a hot issue in second language acquisition (SLA) and has been viewed differently by many researchers regarding the importance of the L1 influence on L2 .

1.5Limits of the Study

The study is limited to the segmental pronunciation errors made by BK learners. BK is a subdialect of Kurdish language spoken by the people of Duhok, Zakho, Akre and Amedi. The study is also restricted to university level students learning English. Furthermore ,the data is limited to a production test by the participants and perception is out of the scope of this study.

2Literature Review

2.1Previous studies on segmental pronunciation errors

Numerous studies emerged to scrutinize segmental pronunciation errors committed by English L2 learners of different nationalities of the world. This section will review some prominent studies carried out in the field of segmental pronunciation .

Habibi (2016) examined segmental pronunciation errors encountered by Indonesian major students at university level. Ten participants were recruited and the researcher used a tape recorder to record the performance of participants while presenting their research proposals. Then, their recordings were listened to and transcribed. The study showed that Indonesian students had difficulties in both consonant and vowel sounds. However, vowels were more problematic for them. Similar conclusion was arrived at by Lestari, et al (2020) .who carried out a study on segmental pronunciation errors committed by English Department fourth semester students of Muria Kudus University. After analyzing the obtained data, it was found that the most frequent errors made by the participants were vowels with the percentage of 48.1%; whereas consonants scored the percentage of 22.8% and 29.1% was for diphthong class. This indicates that errors of vowels occurred more frequently than consonants .

Shamallakh (2018) traced the pronunciation problems of English vowels that Persian EFL learners face. The population of the study consisted of 71 students of Islamic university. A productive pronunciation test composed of a list of words that covered all English vowels 12 ,pure vowels and 8 diphthongs were used. The results found that the pure vowels /æ/, /ɒ/, /ɜ:/, /ɔ:/, /i:/ and /u:/ and the majority of diphthongs /ɪə/ ,/ʊə/, /eə/, /eɪ/, /əʊ/ and /aʊ/ were problematic for the students to pronounce correctly. On the bases of these results, he recommended that more attention should be paid to speaking skills. Alzinaidi and Abdel Latif (2019) used a productive pronunciation test to diagnose the consonant pronunciation errors made by Saudi students of English at university level. The sample of the study were (40) university students with two different levels of proficiency ,intermediate and lower-intermediate. From each level, 20 students were chosen purposively. The pronunciation test was composed of a list of 30 words with some problematic sounds. Following the data analysis, it was found that the pronunciation performance of the former group was higher compared to that of the latter group. This indicates that the number of pronunciation errors decreases with the increase of the proficiency level .

On their part, Haji and Mohammed (2019 (conducted a study to examine the production of English monophthongs by Kurdish EFL learners at university level. The participants of the study were 20 native BK learners of English. A pronunciation test that included a list of sixty English words containing all English monophthong vowels was used. The students were asked to read the words and their performance was recorded and transcribed. The findings revealed that the most problematic monophthongs for the learners were the central ones such as /ʌ/, /ɜ:/ and /ə/. The researchers traced back the mispronunciation of these vowels to their absence in the learners' L1 phonological system, lack of exposure to and practice on this group of vowels. In addition ,Firdaus, (2019) examined segmental pronunciation errors committed by ten English graduates of UINSA University using audio recording .It was found that vowels in general were more problematic than consonants because the majority of errors made by the subjects were vowels. She referred the main reasons behind these errors to the inconsistency of vowels, L1 interference as well as fossilization .

Finally, Farrah and Halahlah (2020 (investigated the common segmental consonant pronunciation errors made by 120 Palestinian EFL learners in Hebron University. The researchers conducted two tools such as a questionnaire and a pronunciation test to collect the data. The results revealed that the most problematic sounds for the students were those sounds that are not found in their L1 such as /p/, /v/, /ʒ/, /ŋ/ and /tʃ ./Consequently, the researchers came up with the conclusion that Palestinian learners' errors are caused as a result of some linguistic factors such as the difference between the sound systems of Arabic and English, the influence of the L1 on the L2 and the effect of spelling on pronunciation. Finally, they provided some solutions to overcome these problematic sounds.

To sum up, the aforementioned literature review encompasses a number of studies that scrutinized segmental pronunciation errors made by learners of different languages. The studies differ in number of participants as sample of the study as well as the targeted sounds. To the best knowledge of the researcher, so far no study systematically investigated pronunciation errors made by BK learners with two different English proficiency at university level taking the whole 44 English sounds occurring in three positions (initial, medial and final) of the word. The findings of the study would offer better understanding about the problematic sounds and the source of their mispronunciation whether because of transfer or some other factors.

2.2Factors Affecting Learning Pronunciation

Generally speaking, learners of English dream of having English-like pronunciation because pronunciation is considered a basic skill for learner's L2 acquisition. However, they encounter some difficulties in the pronunciation of English words. Kenworthy (1987: 4ff), Brown (2001:284ff ,(Lane (2010:4ff) and Celce-Murcia et al (2012:37ff) identify some factors affecting learners' pronunciation that are presented in the following subsections.

2.2.1Native language

Suwanaroa et al. (2020: 2) define native language as the first language a child is exposed to. It is also referred to as L1 (this term will be used in this study .(Brown (2001: 284) points out that L1 is the most influential factor affecting learners' pronunciation. If learners' L1 is greatly different from L2, the learners are more likely to experience difficulties in learning pronunciation) Plansangket, 2016). According to Avery and Ehrlich (1992: xv), the sound system of the L1 influences pronunciation in three ways: when learners encounter the sounds that are different from their native sound system, when rules for combining sounds are different, and when stress and intonation patterns from L1 can be transferred to L2 .

Interference or "negative transfer" which can be explained by contrastive analysis, originally proposed by Lado (1957 ,(explains that interference with a L2 occurs when the structures of L1 and L2 language are different. He also claims that "when learning a foreign language ,we tend to transfer our entire native language in the process". This early view might be too strong as it has drawn some criticism among today's researchers .However, most of them agree on the fact that negative transfer is a significant factor to account for foreign accents regarding the acquisition of distinctive segmental and suprasegmental features (Celce-Murcia et al, 2012)

2.2.2Exposure to L2

Lane (2010: 5) states that pronunciation learning is affected by the amount of language exposure the learners receive and the extent to which they use it. For example, she stated that learners who live in an English-speaking country, devote much of their time to English and use it in their daily activities are more likely to pronounce the language better than those who live in a non-English-speaking country, have less exposure to English and rarely use it (for similar views, see Kenworthy, 1987 ;Brown, 2000, and Celce-Murcia et al. 2012.(

2.2.3Motivation

Motivation plays an important role in improving pronunciation. According to Brown (1994: 114), motivation is viewed as an inner desire that pushes the learner to take a particular action. It can be divided into two basic types: integrative and instrumental. The former is socially integrated in the society of L2 while the latter is the one in which learners learn L2 to achieve a certain goal such as a job promotion (Brown 1992 ,cited in Plansangket, 2016). Kenworthy (1987: 8) states that if the learners are highly motivated to have a better pronunciation, they can develop a concern for pronunciation. Conversely, if they are unmotivated or unconcerned, this is due to the fact that they simply are unaware that the way they speak results in misunderstanding for the listeners.

2.2.4Age

There are two contradicting views regarding the age factor. Some researchers such as Scovel (1988) supports Critical Period Hypothesis, which was proposed by Lenneberg in 1967, that learning a L2 is very difficult or almost impossible and the learners are unable to achieve native-like fluency after puberty. This is due to some neurological changes in the brain that culminate during the period of puberty block the learning ability to learn a language fully. By contrast, other researchers such as Hoefnagel-Hohle (1975, cited in Celce-Murcia et al, 2012) and Mackey (2006 (447 :claim that some individuals have the ability to achieve native-like proficiency even if they start learning an L2 after puberty. Mackey (2006: 447 (relates this to some social and psychological factors such as the amount and type of input learners receive, different types of motivation and learners 'attachment to their language .

It can be said, in general, that younger learners of language are more successful than adult learners in the process of acquiring an L2. However, there are some exceptions such as the well-known American girl named Genie who started acquiring language after she exceeded the critical period. This is a simple and clear evidence against the idea that language acquisition cannot take place after puberty (see Yule, 2017 to know the story of Genie in detail.(

2.2.5Phonetic ability

Kenworthy (1987: 6ff (points out that there is a common view that some people have a better ear for foreign languages than some other people. This enables them to discriminate between two sounds more accurately and imitate them better than others. This skill is referred to as "Phonetic Coding Ability" and it is affected by training .Learners with good phonetic ability benefit from pronunciation drills. That is to say, as soon as they hear the sounds, they imitate more than once. Whereas those with poor phonetic ability do not mimic the sounds. Brown (2001: 285 (finds that learner's poor pronunciation ability can be improved by making a greater effort and concentrating on particular sounds .

2.2.6Prior pronunciation instruction

In addition to the aforementioned factors ,Plansangket (2016: 8) adds another factor called prior pronunciation instruction and states that it affects learners' pronunciation competence. She claims that learners with prior pronunciation lectures such as phonetics and phonological knowledge tend to apply phonetic or phonological rules to their English production. On the contrary, learners who have not been instructed in this area or are taught by teachers whose pronunciation is dissimilar to the standard pronunciation might be unaware of their errors. Consequently, this may lead to intelligibility problems for the listeners (Plansangket, 2016.(

2.3Features of pronunciation

Nearly all linguists, Kelly (2000:1), Yates ,(1 :2002) Ramelan (2003:22), Yates and Zielinski (2009:11), and Zemkova (2018 ,(15 :divide features of English pronunciation into two main categories : segmental and suprasegmental features. Although these two different aspects of pronunciation are sometimes treated in isolation, it is important to remember that they all work in combination when we speak. Therefore, they are usually best learned as an integral part of spoken language (Yates, 2002). Because this study deals with segmental features of pronunciation in English and BK, their pronunciation features will be outlined and the main points of similarities and differences will be highlighted to see what are the barriers for L2 learners in acquiring the competence of learning English pronunciation adequately .

2.3.1Segmental features of pronunciation

The segmental pronunciation system of every language is concerned with phonemes. These phonemes are considered as distinctive segmental units and are the minimal units of speech that can change the meaning of the word (Zimkova, 2018). For example, the word' *bat* 'consists of three phonemes /bæt/. If we change the middle phoneme, the meaning will change. Consequently, we get a different phoneme. This is a principle which determines the exact and total number of phonemes in a particular language (Kelly, 2000). The phonemes of almost all languages of the world fall into two main categories: vowels and consonants. The following section will present a brief overview of the phonemes of both English and BK .

2.3.1.1English Segmental Features

2.3.1.1.1Vowels

Vowels are those phonemes that are articulated with relatively no obstruction to the airflow when they pass through the vocal folds (Roach, 2009). Kelly (2000: 2) states that vowel phonemes are all voiced due to the vibration of the vocal folds during the production .They are divided into two main categories: single (also called pure or monophthong) and diphthongs.

Compared to some other languages, English has a considerable number of pure vowel phonemes or monophthongs. Pure vowels do not glide from one vowel to another and can be subdivided into short and long vowels. The former ones are short when producing and they include vowels such as /æ/ as in m<u>a</u>t, /e/ as in p<u>e</u>t, /ə/ as in <u>a</u>round, /ʌ/ as in f<u>u</u>n, /ɪ/ as in b<u>i</u>t, /ʊ/ as in p<u>u</u>t and /ɒ/as in p<u>o</u>t .The latter ones are longer than the short vowels when articulating and are made of one phoneme plus two dots/ː/

indicating a length mark. English has five long vowel phonemes which are /ɜ:/ as in bird, /ɑ:/ as in park, /ɔ /:as in fought, /i:/ as in feed and /u:/ as in pool (Roach .(2009 ,

)for further elaboration concerning segmental features of vowels, see Kelly, 2000; Ramelan, 2003; Seferoglu, 2005 ;Roach, 2009; Ladefoged & Johnson, 2015; and Zemkova, 2018 .(

Another group of vowels identified for English is the diphthongs. Roger (2000: 31 (views a diphthong as a sequence of two simple vowels. Kelly (2000: 2) and Roach (17 :2009) define the phenomenon of diphthongs in English as a movement that glides from one vowel to another. Yule (2017: 35) points out that when a diphthong like /aɪ/ as in high is produced, our articulators move from the vocalic position /a/ to /ɪ/. Roach (2009: 17) states that the most significant point to notice about a diphthong is that the first part of it is much longer and more prominent than the second. There are eight diphthongs in English which fall into two classes: centring and closing diphthongs. In the former type, a diphthong moves quickly towards the schwa /ə/ which is in the centre of the mouth. English has three centring diphthongs, namely /ɪə/ as in fear/ ,ʊə/ as in poor and /eə/ as in fair. In the second type, the tongue glides from a low position towards either a high front vowel like /eɪ /as in date or high back vowel like /əʊ/ as in go .In addition ,Roach (2009: 17) mentions five closing diphthongs in English stating that the diphthongs that move towards the high front vowel ɪ are /aɪ/ as in fight/ ,ɔɪ/ as in toy and /eɪ/ as in gate while the diphthongs that glide towards the high back vowel ʊ are /əʊ/ as in toe and /aʊ/ as in cow .

Additionally, Roach (2009:18f) mentions another kind of vowels for English called triphthongs stating that these vowels are difficult to be pronounced and recognized. He views them as a combination of three successive vowels. They are articulated quickly with no interruption .Triphthongs in English are composed of the five closing diphthongs with the addition of the schwa /ə/ such as /aɪə/, /ɔɪə/, /eɪə/, /əʊə/, /aʊə/ as in‘ hire’, ‘loyal, ‘player’, ‘slower’ and ‘tower’ respectively. Ogden (64 :2009) demonstrates that this type of vowels is controversial among phonologists since they do not have a phonological status. He adds that these vowels can determine whether a word is monosyllabic or disyllabic giving the examples of ‘hire’ and ‘higher .’According to him, and in RP, the former is monosyllabic because it consists of only one morpheme; whereas the latter is disyllabic as it is composed of two morphemes. In this study, the pronunciation of triphthongs is not examined.

2.3.1.1.2Consonants

English consonant phonemes can be voiceless) unvoiced) or voiced (Yule, 2017). Voiceless are produced when the vocal folds are wide open, the air passes through them with no vibration and these include/ p/, /t/, /k/, /f/, /Θ/, /s/, /ʃ /, /tʃ/ and /h/. Voiced are produced when the vocal folds are drawn together, the air pushes them apart and passes through with vibration, such as /b/, /d/, /g/, /v/, /ð/, /z/, /ʒ/, /dʒ/, /m/, /n/, /ŋ/ ,/l/, /w/, /r/ and /j ./

In addition to the presence or absence of the feature voicing aforesaid, Kelly (2000:6) and Yates (2002: 4) point out that these consonant phonemes can be further described in terms of other characteristics such as the manner of articulation, how the sound is made in the vocal tract and whether the blockage is complete or partial and the place of articulation, where the sound is made. (for more details on the characteristics of consonant, Ladefoged and Johnson 2015; Roach, 2009). Table 1 summarizes the manner and place of articulation of English consonants (Kelly 2000 ,and Roach, 2009)

Table 1: English Consonant Phonemes

Consonant Classes		Place of articulation							
		Bilabial	Labio-dental	Dental	Alveolar	Palato-Alveolar	Palatal	Velar	Glottal
Manner of Articulation	Plosive	p b			t d			k g	
	Fricative		f v	Θ ð	s z	ʃ ʒ			h
	Affricate					tʃ dʒ			
	Nasal	m			n			ŋ	
	Lateral				l				
	Approximant	w				r	j		

2.3.1.2Segmental Features in BK

Concerning the number of phonemes in BK, there is no unanimous consensus about a unified number of phonemes among Kurdish phonologists (29 are identified by Rasul, 2011 and Amin, 2014; 33 by Fakhri, 1978 and Ahmed, 2007; 34 by Dizey et al, 2013 and Islam, 2015; 35 by Ways, 1984 and Hawrami, 2010; 36 by Amin, 2009 and Ali and Abdullah, 2019; 39 by Marif, 1976 ;and 40 by Mahuyi, 2008). The disagreement regarding a unified number of phonemes traces back to the fact that some sounds in Kurdish have been taken from Arabic language (Muhammed, 2009). For example/ ,ɣ/, /ħ/ and /ʕ/ are basically not Kurdish, but have been borrowed from Arabic as a result of language contact . Besides, some sounds appear as phonemes in one dialect but not in another (Mosa, 2016). For example, in Sorani subdialect of central Kurmanji dialect/ ,ɬ/ and /l/ are two distinct phonemes since exchanging their positions with each other will lead to the change of their meanings as in/ ʧıl/ means 'forty' and/ ʧıɬ/ means 'slimy' or gluey' (Muhammed, 2009 ,(but/ ɬ/ is an allophone of /l/ in BK not a phoneme .Furthermore, some sounds are represented by a letter in the Latin writing system of Kurdish but they are not in the Arabic writing system such as /i ./This sound is found between two consonants as in /dıl/, /mıl/ and /tıl / meaning 'heart, shoulder, finger' respectively, but it is not represented in Arabic writing system .

Additionally ,there is no unanimous agreement among Kurdish phonologists about the phenomenon of diphthongs. Therefore, Kurdish phonologists split into two groups. The first group believes in the presence of diphthongs in Kurdish and provides some examples such as /wa/, /wi:/, /we/ and /ɛw/ as in words /xwa' /God', /swi:r/ 'salty', /werɛk/ 'brave' and /ʃɛw/ 'night' Khursheed (2010). The second group

headed by Shaheen (2008: 57) and Ali and Abdullah (2019: 109f (discard the aforementioned diphthongs claiming that these are not diphthongs because they are not composed of two consecutive vowels, but they consist of a vowel + a consonant /ɛw/ or a consonant + a vowel /wa/, /wi:/ and /we ./

Following the aforementioned debate among Kurdish phonologists about a unified number of phonemes, Dizeyi et al, (2015 (118 :states that the phonemes of every language can be determined in various methods. One of the well-known methods to identify the phonemes of any language is minimal pairs, which refer to those words that are identical in form except for one sound occurring in the same position such as *pan* and *fan* .This contrastive phoneme changes the meaning of the word. Based on the principle of this method, Ali and Abdullah (2019:43f) classify phonemes in BK into (35.(

Consonants

Consonants are those sounds produced with complete or partial blockage in the vocal tract that impedes the airflow. 27 consonants are realized for BK and classified into voiced and voiceless sounds . Voiced consonants are sixteen and include /b/, /d/, /ʤ/, /ɾ/, /r/, /z/, /ʒ/ ,/ʕ/ ,/ɣ/ ,/v/, /m/, /n/, /l/, /g/ ,/w/ and /j/, while the voiceless ones are eleven and include /p/, /t/ ,/ħ/ ,/x/, /ʧ/, /s/, /ʃ/, /f/ ,/q/, /k/ and /h/ (Ali and Abdullah, 2019:42). BK consonant phonemes are presented in Table 2 (for a detailed description of consonant phonemes, see Dizeyi et al, 2015)

Table 2: Kurdish Consonant Phonemes

		Place of Articulation								
		Bilabial	Labio-Dental	Alveolar	Palato-Alveolar	Palatal	Velar	Pharyngeal	Uvular	Glottal
Manner of Articulation	Plosive	p b		t d			k g		q	
	Fricative		f v	s z	ʃ ʒ		x ɣ	ħ ʕ		h
	Affricate				tʃ dʒ					
	Nasal	m		n						
	Flap			ɾ						
	Trill			r						

	Lateral			l						
	Approximant	w				J				

Vowels

The vowels in BK are classified into: short and long. Short vowels are those that take less time when they are produced and they consist of three sounds which are /ə/, /ɨ/ and /ʉ/. By contrast, long vowels consume more time to be produced and they are /i:/, /e:/, /u:/, /o:/ and /a:/ (Ali and Abdullah, 2019). (For similar classification and more details about vowels, see Dizey et al, 2015 and Khoshnaw, 2015). Dizey et al, (2015: 17) show BK vowel phonemes in figure 1.

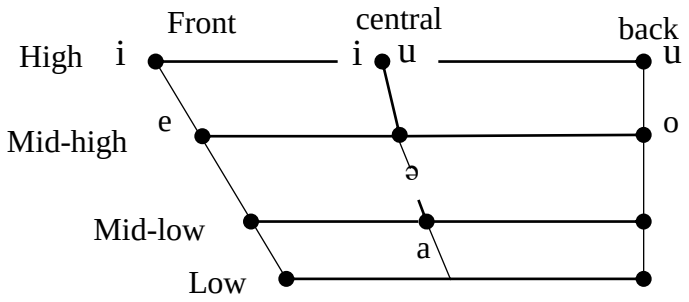

Figure 1: BK Vowel Phonemes -Dizey et al, (2015: 17)

2.3.1.4Comparison of English and BK phonemes

The main points of differences in the sound system of English and BK are the following:

.1Phonemes in English outnumber the ones in BK. There are (44) phonemes in English while Kurdish has (35) phonemes according to the classification of Ali and Abdullah (2019) followed in the present study.

.2The number of consonant phonemes in English is (24). These can be (9) voiceless and (15) voiced; whereas BK has (27 (consonant phonemes and these fall into (11) voiceless and (17) voiced .

.3Some consonants occur in English but not in BK such as the dental fricative /Ɵ/ and /ð/, the velar nasal /ŋ/ and the retroflex /r./

.4Some consonants exist in BK but are not found in English such as the velar fricative /x/ and / ɣ ,/the pharyngeal fricative/ ħ /and /ʕ/, and the uvular plosive /q /

.5In English (8) diphthongs are found, but these are not found in BK .

Besides, there is a one to one correspondence between letters and phonemes in BK and words are pronounced as they are written. In English, on the contrary, a letter may have different sounds, namely there is no one-to-one correspondence between letters and phonemes. Thus, words are sometimes written in a way but pronounced differently. In English, there are letters that are not pronounced called silent letters whereas these silent letters do not occur in BK. Because of these differences in the sound systems

of both English and BK, BK learners of English may face difficulty in pronunciation, especially of those phonemes that do not occur in BK .

.3What is Transfer ?

Transfer has been defined by many linguists under different terminologies. For example, Weinreich (1953: 1) under the term of interference views transfer as those deviation instances that result from the rules of the linguistic system of both languages that occur in the performance of bilinguals due to their familiarity with two or more languages .Osgood (1953: 520) views it as the impact of the prior activity on the learning of the later task. On his part, Lott (1983: 213) considers transfer as those errors that learners make in the use of a target language (TL) resulting from the effect of the L1. Odlin (1989: 27) uses the term language transfer and provides one of the most comprehensive and widely accepted definition of transfer by viewing it as the influence resulting from the similarities and differences between the TL and any other language that has been acquired previously. Hudson (2000: 169) considers transfer as the effect of the previous knowledge of the acquisition of the subsequent knowledge (see also Ausubel , ;1963Jarvis & Pavlenko, 2008). To Brown (2014: 94), transfer refers to the carryover of the earlier knowledge or performance to the following learning .Lastly, Yule (2017: 213) views transfer as the use of linguistic elements such as sounds, structures and expressions from L1 to L2 when performing it.

Following the various aforementioned definitions, it can be deduced that there is still a debate among linguists concerning whether this phenomenon is a present concept in the field of L2 acquisition or not. For instance, Lado (1957), Selinker (1972), Corder (1974 (and Ellis (1997) state that during the early stages of learning an L2, learners depend heavily on the forms of their L1 when performing in L2. Besides, Dulay and Burt (1974) claim that the term transfer is not vital in the process of learning L2 .

3.1Types of Transfer

In this section, a detailed presentation is given to the classification of transfer taking some factors into consideration such as transfer directionality, transfer effects and the linguistic levels at which transfer occurs.

Concerning the first factor, directionality, it needs to be stated that transfer phenomenon did not only focus on the influence of the L1 on the L2 because it is unnatural to assume that L2 in all cases is affected by L1) Moattarian, 2003). Based on this view, a clear distinction is made between two kinds of directions of transfer by Jarvis and Pavlenko (2008): the forward transfer and the reverse transfer. The former occurs when the prior learned language influences the subsequent learning one (L1→L2); whereas the latter occurs when the new learned language influences the prior learned one, i.e. the influence takes place in the opposite direction (L2→L1). Under the term of interference, Els, et al (1984: 49) and Gass and Selinker (2004 (94 :refer to the two aforementioned kinds of direction as proactive inhibition and retroactive inhibition respectively.

As far as the classification of transfer, Brown (2014: 94f), according to the influence it possesses on the new learning language, divides transfer into two types: positive and negative (view also, Odlin, 2001). The former occurs when the learner's previous knowledge results in learning the following task correctly i.e., when a prior unit or structure of the L1 benefits the current learning subject matter of the L2 with no errors. In this regard ,Hudson (2000: 169) demonstrates that positive transfer occurs when the features of

L1 are the same to those of L2. Although this type of transfer helps learners successfully in learning L2, the results are less discussed. Negative transfer occurs when learner's prior knowledge hinders the performance of his/her next task (Brown, 2014: 95). In other words, when a learned earlier item in the L1 is applied incorrectly to a subsequent item in the L2. This traces back to the dissimilar linguistic features especially between the two completely different languages background (Yule, 2017). Additionally, negative transfer occurs more commonly during the early stages of L2 learning, but it deceases gradually when the learner makes progress and becomes more familiar with the target language. Hudson (2000, 170) refers to this type of transfer as' interference' since it leads to errors in L2 .

To sum up, it can be said that positive transfer facilitates the process of learning L2. By contrast, negative transfer hinders this process as it leads to the production of errors and consequently delays the SLA process.

As for the linguistic levels at which transfer occurs, some earlier studies in 1980s and 1990s noticed that some subsystems of language such as lexicon and morphology are more exposed to the effects of transfer than syntactic level which is considered less problematic for L2 learners) Hakansson, 1995). However, the subsequent works emphasized that all linguistic elements are vulnerable to being transferred to the L2. Thus, transfer can occur at all linguistic levels such as phonological, lexical, syntactic , semantic, and even pragmatic (Corder, 1971, 1981; Ellis, 1985 and Odlin 1989). This study only deals with phonological transfer (for a detailed explanation of other linguistic levels, see Jarvis & Pavlenko, 2008). In general, the phonological transfer is used to refer to how a person's knowledge of the sound system of a particular language can influence on his/her perception as well as production of the speech sounds in another different language (Jarvis & Pavlenko .(2008 ,In this sense, any cross-linguistic comparison of the sound system of L1 and L2 needs to encompass a description of both phonetics and phonology of L1 and L2 (Briere, 1968, cited in Odlin: 1989). Phonological transfer can occur at segmental as well as suprasegmental level. It is believed that negative phonological transfer occurs when L2 learners replace the correct sound patterns of the L2 with the incorrect ones of their L1. This is considered the major source of pronunciation errors.

.4Methodology

This section deals with the procedures followed in conducting the study .It includes a description of the study population, speech materials, the method used for data collection and analysis.

4.1**Participants**

The participants of the current study consist of 50 25) males and 25 females) EFL undergraduate native BK learners of English. They were students from English Department, College of Languages, University of Duhok during the academic year of 2022-2023. 13 males and 12 females were from the second stage; whereas 12 males and 13 females were from the fourth stage. They were chosen randomly among 300 students without taking their scientific level into consideration so as not to affect the results of the study. The age of the students ranged between 18-22 years old. All of them had spent at least 12 years learning English before joining college. None of them had been to an English speaking country and did not have any previous exposure and communication with English native speakers. Those who had been in one of the English-speaking countries for some time were excluded because this will affect the results of the study. Moreover, those students whose mother tongue is not Kurdish are also eliminated by the researcher.

Table 3 shows the population of the study.

Table 3 :The Participants of the Study

Level	**Gender**		**Total**
	Males	Females	
Second year	13	12	25
Fourth year	12	13	25
Total	25	25	50

4.2**Speech Material**

In the field of scientific research, researchers employ different kinds of speech materials to collect data. For example, Hassan (2014), Ghounane (2018) Farrah and Halahlah (2020), and Jahara and Abdelrady (2021) conducted recorded production tests and questionnaire as instruments to analyze the pronunciation errors committed by English language students; whereas Haji and Mohammed (2019) relied only on recorded production test as a tool to investigate the pronunciation of English monophthongs by Kurdish EFL University students. In this study, a production test is designed to examine the production of English segments by BK learners of English at university level. The test is a read speech of (118 (words that include 44 English sounds (consonants and vowels) occurring in three different positions (initial, medial, and final) of the words. 66 words were chosen that encompass the (24) consonant sounds, that include all groups of consonants occurring in all word positions with the exception of the fricatives/ ʒ/ and the nasal /ŋ/ that are not found initially and the fricative /h/ and the glides /w/, /r/ and /j/ that do not occur finally, as shown in Table 4**.**

Table 4 :The test words including the consonant phonemes in three positions of words

No.	**Group**	**Phonemes**	**Initial**	**Medial**	**Final**
.1	Plosives	/P/	plate /pleɪt /	mops /mɒps/	wrap/ ræp/
.2		/b/	breed /bri:d/	robbed /rɒbd/	grab/ græb/
.3		/t/	turn /tɜ:n/	stern /stɜ:n/	tent/ tent/
.4		/d/	dune /dju:n/	folds/ fəʊldz/	road/ rəʊd/
.5		/k/	crow /krəʊ/	mocked /mɒkt/	lake /leɪk/
.6		/g/	gate /geɪt/	begs /begz/	mug/ mʌg/
.7	Fricatives	/f/	phone /fəʊn/	laughed /lɑ:ft/	surf/ sɜ:f/
.8		/v/	vast /vɑ:st/	saved /seɪvd/	wave/ weɪv/
.9		/Ɵ/	thirst /θɜ:st/	myths /mɪθs/	path/ pɑ:θ/
.10		/ð/	though /ðəʊ/	loathed/ ləʊðd/	breathe /bri:ð/
.11		/s/	stone /stəʊn/	blast/ blɑ:st/	peace /pi:s/
.12		/z/	zeal/ zi:l/	closed /kləʊzd/	cause /kɔ:z/
.13		/ʃ/	chef /ʃef/	blushed /blʌʃt/	crush/ krʌʃ/
.14		/ʒ/	----------	vision/ vɪʒn/	massage /mæsɑ:ʒ /
.15		/h/	hole/ həʊl/	behind /bɪhaɪnd/	----------
.16	Affricates	/ʧ/	chief /tʃi:f/	fetched /fetʃt/	stretch/ stretʃ/

.17		/ʤ/	joy /ʤɔɪ/	surged /sɜ:ʤd/	edge/ edʒ/
.18	Nasals	/m/	mate /meɪt/	hump/ hʌmp/	lamb /læm/
.19		/n/	knight /naɪt/	fond/ fɒnd/	dawn/ dɔ:n/
.20		/ŋ/	----------	rings /rɪŋz/	long/ lɒŋ/
.21	Lateral	/l/	lock /lɒk/	fault /fɔ:lt/	owl/ aʊl/
.22	Approximants	/w/	once /wʌns/	twin/ twɪn/	----------
.23		/r/	ripe /raɪp/	pram/ præm/	----------
.24		/j/	yard/ jɑ:d/	dew /dju/:	----------

As far as the vowel type is concerned, (52) words of this type were selected that represent the whole (20 (vowel sounds, including both pure (monophthong or single) and diphthong vowels ,occurring in all positions of the word, as mentioned below, except the short back /ʊ/ and the diphthong vowel /ʊə/ that do not occur initially as well as the short front vowels /ɪ/, /e/ and /æ/, the back /ɒ/ and /ʊ/ and the central /ʌ / that are not found finally as indicated in Table 5 .

Table 5: The test words including the vowel phonemes in three positions of words

No.	group	Phonemes	Initial	Medial	Final
.1	Pure long	/i/ :	eat /i:t/	wheat/ wi:t/	flea/ fli/:
.2		/u/ :	ooze /u:z/	prove /pru:v/	flew/ flu/:
.3		/ɜ/ :	earn /ɜ:n/	purse/ pɜ:s/	fur /fɜ/:
.4		/ɑ/ :	aunt /ɑ:nt/	heart /hɑ:t/	bar /bɑ/:
.5		/ɔ/ :	all /ɔ:l/	fall /fɔ:l/	flaw /flɔ/:
.6	Pure short	/ɪ/	ink/ ɪŋk/	lick /lɪk/	----------
.7		/e/	elf /elf/	says /sez/	----------
.8		/ɒ/	odd /ɒd/	mosque /mɒsk/	----------
.9		/ʊ/	----------	wool/ wʊl/	----------
.10		/æ/	ant /ænt/	trap /træp/	---------
.11		/ʌ/	up /ʌp/	suck /sʌk/	---------
.12		/ə/	abuse /əbju:z/	menace /menəs/	labour/ leɪbə/
.13	diphthongs	/əʊ/	own/ əʊn/	soul /səʊl/	sew /səʊ/
.14		/aʊ/	out /aʊt/	doubt /daʊt/	plough/ plaʊ/
.15		/ʊə/	----------	tours/ tʊəz/	poor/ pʊə/
.16		/ɪə/	ear /ɪə/	beard /bɪəd/	beer /bɪə/
.17		/eə/	air /eə/	dares /deəz/	bare /beə/
.18		/eɪ/	ache /eɪk/	rake /reɪk/	bay/ beɪ/
.19		/ɔɪ/	oil /ɔɪl/	hoist /hɔɪst/	coy/ kɔɪ/
.20		/aɪ/	isle/ aɪl/	strive/ straɪv/	tie/ taɪ/

The test words of both categories of sounds were common and familiar to the participants. The participants were asked to read the wordlist clearly and once only. Moreover ,they were requested to leave a space between words while reading the words. Some of the selected words of the pronunciation test were selected by the researcher and some others were extracted mainly from O'Connor (1980), Kelly (2000), Roach (2009) and Orion (2012)

4.3Procedures of Data Collection

In this study, a production test is used as a tool for gathering the data. The test words were randomly arranged, and presented in a paper to the participants to read aloud and their production was recorded. For the recording process, an electronic device of a Samsung Galaxy A33 smart phone was used because the quality of the sound of this tool was clear and audible. Before the distribution of the pronunciation test to the participants, it had been given to a group of three specialists, Ph. D holders ,in the field of phonetics and phonology as jury members. Following the suggestions of the jury members, some changes have been made. After this scientific step, the process of data collection started. The recording process of the voices of the participants was taken place in one of the teachers' quiet room at the English Language Department-College of Languages-Duhok University .The process of collecting the required data took about one month starting from the 10th of March till 10th of April 2023. It is worth mentioning that the students, in general, were not cooperative during the process of data collection. Consequently, the researcher faced some difficulties in collecting the data. For example, some students, especially, females, refused to record their voice reading the designed words. Some others were not ready to spend their break time reading the wordlist, whereas some others were reluctant whether to participate or not. However, in coordination with the head of English Department and some teachers, this issue was overcome and solved. During their free time, the participants were summoned individually to record their production of the test words. Moreover, they were not told about the main purpose behind the study, but were informed that their recording was to be taken for a scientific research and their approval was granted. Additionally ,they were informed that there was no need to worry about making errors while reading the words and at the same time informed that their voice recording would be kept anonymous. Before the recording, each participant had been given enough time to take a look at the words so as to read them smoothly and at normal ease with no pause or hesitation. In sum, (67) recordings were conducted, but among these recordings only (50), 25 from each stage, were taken and used for data analysis. The remaining 17 recordings were excluded because the participants skipped some words, or the recording was noisy and unclear or the words had been pronounced terribly .

4.4Procedures of Data Analysis

The data of each participant was listened to more than one time when necessary and then transcribed using IPA. It was checked for the correct production of the segments. Correct productions are given value (2) and (1) to the incorrect one .

The collected data was also given to two other phonologists for checking the correct production of segments .Following this step ,inter-transcriber correlation was measured to show the reliability of the analysis. To check the reliability between the researcher's transcription and the other two inter-transcribers, statistically, it has been measured by Cronbach's Alpha coefficient method which is used to measure the internal consistency among the items of content. It ranges from 0.0 to 1.0**)** Cohen et al. 2007). The results

of Cronbach's alpha of English sounds, including both consonant and vowels, for both second and fourth levels are given in Table 6 .

Table 6: Reliability Statistics: Cronbach's Alpha Coefficient on Standardized Items

Stage	Consonant Clusters	Number of Transcribers
Second	0.9393	Three
Fourth	0.9393	

Table 6 shows that the transcribers' procedures for the test words were consistent because the reliability scale among them scored higher rates .

5Results

This section is devoted to the results of the BK learners' production of English sounds. First, the results of the production of consonants in three positions, initial, medial and final, are indicated separately to identify the students' performance in consonants and what subclasses of consonants (plosive ,fricative, affricate, nasal, lateral and approximants) are more problematic for the learners. Second the results of the vowels in the three positions are shown and which subclasses of vowels (pure and diphthongs) are more problematic for them. Finally, the results of the 2nd year production of sounds are compared to that of the 4th year to identify whether the study stage has an effect on the production of sounds by the learners. The results are reported via showing the percentage of the correct production of each the designed item of sound in three positions. After that, the total percentage of each subclass of sounds is taken out. Following this, the mean of the total percentages between the whole subclasses of sounds is calculated. Finally ,these total percentages of both 2nd and 4th learners 'performance of sounds are compared and contrasted across the three positions to identify whose performance is better in the production of English sounds in general. To confirm whether the differences in the production of English sounds between the two groups of leaners are statistically significant or not, the independent samples t. test of parametric test types is used.

5.1The Production of English Consonant Sounds

Generally, the results show that the learners' performance in the production of consonants is noticeably good because of the high rates of correct productions. Tables 7 and 8 illustrate the performance of the 2nd and 4th year learners in consonants .

Table 7: Results of Consonants-2nd Year Students

Consonants		**Correct**						**Incorrect**					
		Initial		**Medial**		**Final**		**Initial**		**Medial**		**Final**	
		N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Plosives	/p/	25	%100.0	24	%96.0	25	%100.0	0	%0.0	1	%4.0	0	%0.0
	/b/	25	%100.0	25	%100.0	24	%96.0	0	%0.0	0	%0.0	1	%4.0
	/t/	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	0	%0.0
	/d/	25	%100.0	24	%96.0	24	%96.0	0	%0.0	1	%4.0	1	%4.0
	/k/	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	0	%0.0

	/g/	25	%100.0	25	%100.0	23	%92.0	0	%0.0	0	%0.0	2	%8.0
	Percentage		**%100.0**		**%98.7**		**%97.3**		**%0.0**		**%1.3**		**%2.7**
Fricatives	/f/	25	%100.0	24	%96.0	25	%100.0	0	%0.0	1	%4.0	0	%0.0
	/v/	24	%96.0	25	%100.0	25	%100.0	1	%4.0	0	%0.0	0	%0.0
	/Ɵ/	23	%92.0	23	%92.0	23	%92.0	2	%8.0	2	%8.0	2	%8.0
	/ð/	18	%72.0	4	%16.0	14	%56.0	7	%28.0	21	%84.0	11	%44.0
	/s/	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	0	%0.0
	/z/	25	%100.0	18	%72.0	25	%100.0	0	%0.0	7	%28.0	0	%0.0
	/ʃ/	17	%68.0	25	%100.0	25	%100.0	8	%32.0	0	%0.0	0	%0.0
	/ʒ/			25	%100.0	6	%24.0			0	%0.0	19	%76.0
	/h/	24	%96.0	25	%100.0			1	%4.0	0	%0.0		
	Percentage		**%90.5**		**%86.2**		**%84.0**		**%9.5**		**%13.8**		**%16.0**
Affricates	/ʧ /	18	%72.0	25	%100.0	23	%92.0	7	%28.0	0	%0.0	2	%8.0
	/ʤ /	25	%100.0	20	%80.0	21	%84.0	0	%0.0	5	%20.0	4	%16.0
	Percentage		**%86.0**		**%90.0**		**%88.0**		**%14.0**		**%10.0**		**%12.0**
Nasals	/m/	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	0	%0.0
	/n/	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	0	%0.0
	/ŋ /			3	%12.0	4	%16.0			22	%88.0	21	%84.0
	Percentage		**%100.0**		**%70.7**		**%72.0**		**%0.0**		**%29.3**		**%28.0**
Lateral	/l /	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	0	%0.0
	Percentage		**%100.0**		**%100.0**		**%100.0**		**%0.0**		**%0.0**		**%0.0**
approximants	/w/	25	%100.0	25	%100.0			0	%0.0	0	%0.0		
	/r /	25	%100.0	25	%100.0			0	%0.0	0	%0.0		
	/j /	25	%100.0	3	%12.0			0	%0.0	22	%88.0		
	Percentage		**%100.0**		**%70.7**				**%0.0**		**%29.3**		
	Mean		**%96.1**		**%86.0**		**%88.3**		**%3.9**		**%14.0**		**%11.7**

Table 7 indicates that the 2nd year learners have a good rate of correct production of all subclasses of consonants in three positions .The overall means of the initial, medial and final correct production of all subclasses of sounds are 96.1%, 86.0% and 88.3% respectively. While 3.9%, 14.0% and 11.7% are the low means of incorrect production**.**

Table 8 :Results of Consonants-4th Year Students

Consonants		**Correct**						**Incorrect**					
		Initial		**Medial**		**Final**		**Initial**		**Medial**		**Final**	
		N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
os .iv	/p/	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	000	%0.0

	/b/	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	0	%0.0
	/t/	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	0	%0.0
	/d/	24	%96.0	25	%100.0	25	%100.0	1	%4.0	0	%0.0	0	%0.0
	/k/	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	0	%0.0
	/g/	25	%100.0	24	%96.0	25	%100.0	0	%0.0	1	%4.0	0	%0.0
Percentage			**%99.3**		**%99.3**		**%100.0**		**%0.7**		**%0.7**		**%0.0**
Fricatives	/f/	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	0	%0.0
	/v/	23	%92.0	25	%100.0	25	%100.0	2	%8.0	0	%0.0	0	%0.0
	/Θ/	22	%88.0	21	%84.0	24	%96.0	3	%12.0	4	%16.0	1	%4.0
	/ð/	23	%92.0	11	%44.0	16	%64.0	2	%8.0	14	%56.0	9	%36.0
	/s/	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	0	%0.0
	/z/	24	%96.0	20	%80.0	20	%80.0	1	%4.0	5	%20.0	5	%20.0
	/ʃ/	18	%72.0	25	%100.0	25	%100.0	7	%28.0	0	%0.0	0	%0.0
	/ʒ/			25	%100.0	13	%52.0			0	%0.0	12	%48.0
	/h/	25	%100.0	25	%100.0			0	%0.0	0	%0.0		
Percentage			**%92.5**		**%89.8**		**%86.5**		**%7.5**		**%10.2**		**%14**
Affricates	/ʧ /	24	%96.0	23	%92.0	25	%100.0	1	%4.0	2	%8.0	0	%0.0
	/ʤ /	25	%100.0	25	%100.0	21	%84.0	0	%0.0	0	%0.0	4	%16.0
Percentage			**%98.0**		**%96.0**		**%92.0**		**%2.0**		**%4.0**		**%8.0**
Nasals	/m/	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	0	%0.0
	/n/	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	0	%0.0
	/ŋ /			5	%20.0	8	%32.0			20	%80.0	17	%68.0
Percentage			**%100.0**		**%73.3**		**%77.3**		**%0.0**		**%26.7**		**%22.7**
Lateral	/l /	25	%100.0	25	%100.0	25	%100.0	0	%0.0	0	%0.0	0	%0.0
Percentage			**%100.0**		**%100.0**		**%100.0**		**%0.0**		**%0.0**		**%0.0**
approximants	/w/	23	%92.0	25	%100.0			2	%8.0	0	%0.0		
	/r /	25	%100.0	25	%100.0			0	%0.0	0	%0.0		
	/j /	25	%100.0	6	%24.0			0	%0.0	19	%76.0		
Percentage			**%97.3**		**%74.7**				**%2.7**		**%25.3**		
Mean			**%97.9**		**%88.9**		**%91.2**		**%2.1**		**%11.1**		**%8.8**

Similarly, Table 8 shows that 4th year have very high rates of correct productions for all groups of consonants in all positions. The average means of correct productions are 97.9%, 88.9% and 91.2% for consonants in initial, medial and final positions respectively.

5.2The Problematic Classes of English Consonant Sounds

We further compared the consonants classes to find out what classes of consonants are the most difficult for each 2nd and 4th years. The results are indicated in Tables 9 and 10.

Statistically, the results of the one-sample test for comparing the classes of consonants in terms of pronunciation difficulty shown in Table 9 below indicate that the affricate class was the most difficult to pronounce correctly compared to other classes for the 2nd year students. This is because the t. value of this class is the lowest (71.24) compared to those of other classes .Additionally, the standard deviation (std.)

of this class is the highest (0.13 (compared to those of other classes of consonants. This indicates that the higher the (std.) of the class of consonants is, the more difficult it is. The other classes of consonants namely nasal, fricative, glide and plosive come after one another in terms of pronunciation difficulty. This is because the t .values of these classes scored 151.97, 157.388, 169.45, and 246.97 respectively .As for the class of lateral, 2nd year students faced no difficulty in producing it at all because it had been pronounced 100% correctly .Consequently, not. Value is scored and the (std) is 0.00.

Table 9: The Comparison of Consonant Classes in 2nd Year

Consonants	Stage	N.	Mean	Std.	Test	P (sig(
Plosive	2nd	25	1.98	0.04	246.97	0.001
Fricative	2nd	25	1.87	0.05	157.388	0.001
Affricate	2nd	25	1.88	0.13	71.24	0.001
Nasal	2nd	25	1.81	0.05	151.97	0.001
Lateral	2nd	25	2.00	0.00	----------	0.001
Approximants	2nd	25	1.85	0.05	169.45	0.001

As far as the 4th year students are concerned, similarly, the results in Table 10 indicate that the affricate class was the most difficult one with the least t. value scored (107.57) compared to other classes. Also, the standard deviation (std) of this class is the greatest (0.09) compared to those of other classes of consonants. The other classes of consonants: nasal, glide fricative and plosive come after one another in terms of pronunciation difficulty. This is because the t. values of these classes scored 111.14 ,117.07 , 152.45and 600.48 respectively. As for the class of lateral, 4th year students faced no difficulty in producing it at all because it had been pronounced 100% correctly. Consequently, no t. value is scored and the (std) is.0.00

Table 10: The Comparison of Consonants Classes in 4th Year

Consonants	Stage	N.	Mean	Std.	Test	P (sig(
Plosive	4th	25	1.99	0.01	600.48	0.001
Fricative	4th	25	1.89	0.06	152.45	0.001
Affricate	4th	25	1.95	0.09	107.57	0.001
Nasal	4th	25	1.81	0.08	111.14	0.001
Lateral	4th	25	2.00	0.00	----------	0.001
Approximants	4th	25	1.85	0.07	117.07	0.001

5.3The Production of English Vowel Sounds

Generally, the results show that the learners' performance in the production of vowels is fairly good because of the high rates of correct productions, however, it is lower than that of the consonants. Tables 11 and 12 illustrate the performance of the 2nd and 4th year learners in vowels respectively.

Table 11: Results of Vowels-2nd Year Students

Vowels	Correct			Incorrect		
	Initial	Medial	Final	Initial	Medial	Final

				N	%	N	%	N	%	N	%	N	%	N	%
Pure Vowels	Short	Front	/ɪ /	25	100.0 %	17	%68.0			0	%0.0	8	%32.0		
			/e/	21	%84.0	10	%40.0			4	%16.0	15	%60.0		
			/æ/	19	%76.0	25	100.0 %			6	%24.0	0	%0.0		
		Central	/ʌ/	25	100.0 %	21	%84.0			0	%0.0	4	%16.0		
			/ə /	1	%4.0	7	%28.0	14	%56.0	24	%96.0	18	%72.0	11	%44.0
		Back	/ɒ /	16	%64.0	16	%64.0			9	%36.0	9	%36.0		
			/ʊ/			19	%76.0					6	%24.0		
		Percentage		**%71.3**			**%65.7**		**56.0 %**		**%28.7**		**34.3 %**		**%44.0**
	Long	Front	/i/:	24	%96.0	16	%64.0	23	%92.0	1	%4.0	9	%36.0	2	%8.0
		Central	/ ɜ /:	20	%80.0	22	%88.0	16	%64.0	5	%20.0	3	%12.0	9	%36.0
		Back	/ɑ:/ ,	19	%76.0	22	%88.0	21	%84.0	6	%24.0	3	%12.0	4	%16.0
			/ ɔ /:	25	100.0 %	23	%92.0	5	%20.0	0	%0.0	2	%8.0	20	%80.0
			/u/:	21	%84.0	21	%84.0	11	%44.0	4	%16.0	4	%16.0	14	%56.0
		Percentage			**%87.2**		**%83.2**		**60.8 %**		**%12.8**		**16.8 %**		**%39.2**
Diphthongs	Centring	/ə/	/ɪə /	0	%0.0	2	%8.0	2	%8.0	25	100.0 %	23	%92.0	23	%92.0
			/eə/	7	%28.0	13	%52.0	14	%56.0	18	%72.0	12	%48.0	11	%44.0
			/ʊə /			1	%4.0	0	%0.0			24	%96.0	25	100.0 %
	Closing	/ɪ/	/eɪ/	15	%60.0	25	100.0 %	24	%96.0	10	%40.0	0	%0.0	1	%4.0
			/aɪ /	25	100.0 %	18	%72.0	23	%92.0	0	%0.0	7	%28.0	2	%8.0
			/ɔɪ/	23	%92.0	12	%48.0	16	%64.0	2	%8.0	13	%52.0	9	%36.0
		/ʊ /	/əʊ /	18	%72.0	15	%60.0	15	%60.0	7	%28.0	10	%40.0	10	%40.0
			/aʊ/	25	100.0 %	12	%48.0	7	%28.0	0	%0.0	13	%52.0	18	%72.0
	Percentage				**%64.6**		**%49.0**		**50.5 %**		**%35.4**		**51.0 %**		**%49.5**
	Mean				**%74.4**		**%66.0**		**55.8 %**		**%25.6**		**34.0 %**		**%44.2**

The table shows that 74.4% ,%66.0 ,and 55.8% are the means of initial, medial, and final correct production respectively of pure and diphthong vowels. Whereas 25.6%, 34.0%, and 44.2% are for the incorrect means of production in initial, medial, and final positions respectively.

Table 12 :Results of Vowels-4th Year Students

Vowels				Correct						Incorrect					
				Initial		Medial		Final		Initial		Medial		Final	
				N	%	N	%	N	%	N	%	N	%	N	%
Pure Vowels	Short	Front	/ɪ /	23	%92.0	18	%72.0			2	%8.0	7	%28.0		
			/e/	25	100.0 %	15	%60.0			0	%0.0	10	%40.0		
			/æ/	23	%92.0	24	%96.0			2	%8.0	1	%4.0		
		Central	/ʌ/	24	%96.0	22	%88.0			1	%4.0	3	%12.0		
			/ə /	12	%48.0	17	%68.0	21	%84.0	13	%52.0	8	%32.0	4	%16.0
		Back	/ɒ /	21	%84.0	19	%76.0			4	%16.0	6	%24.0		
			/ʊ/			19	%76.0					6	%24.0		
	Percentage				**%85.3**		**%76.6**		**%84.0**		**14.7 %**		**%23.4**		**16.0 %**
	Long	Front	/i/:	25	100.0 %	19	%76.0	24	%96.0	0	%0.0	6	%24.0	1	%4.0
		Central	/ɜ /:	20	%80.0	23	%92.0	18	%72.0	5	%20.0	2	%8.0	7	%28.0
		Back	/ɑ:/ ,	18	%72.0	25	100.0 %	24	%96.0	7	%28.0	0	%0.0	1	%4.0
			/ ɔ /:	24	%96.0	23	%92.0	14	%56.0	1	%4.0	2	%8.0	11	%44.0
			/u/:	22	%88.0	23	%92.0	10	%40.0	3	%12.0	2	%8.0	15	%60.0
	Percentage				**%87.2**		**%90.4**		**%72.0**		**12.8 %**		**%9.6**		**28.0 %**
Diphthongs	Centring	/ə/	/ ɪə /	5	%20.0	1	%4.0	7	%28.0	20	%80.0	24	%96.0	18	%72.0
			/eə/	14	%56.0	21	%84.0	21	%84.0	11	%44.0	4	%16.0	4	%16.0
			/ʊə /			0	%0.0	1	%4.0			25	100.0 %	24	%96.0
	Closing	/ɪ/	/eɪ/	21	%84.0	24	%96.0	25	100.0 %	4	%16.0	1	%4.0	0	%0.0
			/aɪ /	25	100.0 %	22	%88.0	25	100.0 %	0	%0.0	3	%12.0	0	%0.0
			/ɔɪ/	24	%96.0	18	%72.0	21	%84.0	1	%4.0	7	%28.0	4	%16.0
		/ʊ /	/əʊ /	19	%76.0	16	%64.0	14	%56.0	6	%24.0	9	%36.0	11	%44.0
			/aʊ/	25	100.0 %	17	%68.0	5	%20.0	0	%0.0	8	%32.0	20	%80.0
	Percentage				**%76.0**		**%59.5**		**%59.5**		**24.0 %**		**%40.5**		**40.5 %**
	Mean				**%82.8**		**%75.5**		**%71.8**		**17.2 %**		**%24.5**		**28.2 %**

Similarly, Table 12 shows that 4th year has high rates of correct productions for all groups of vowels in all positions. The average means of correct productions is 82.8%, 75.5%, and 71.8% for vowels in initial , medial and final positions respectively.

5.4The Problematic Classes of English Vowel Sounds

We further compared the types of vowels to find out which vowel class is the most problematic for both 2nd and 4th years. The main results are presented in Tables 13 and 14 .

As far as the difficulty of classes of vowels is concerned, statistically the results of the one-sample test for comparing the two categories (pure and diphthongs) of vowels in terms of pronunciation difficulty as shown in Table 13 below indicate that the diphthongs were more difficult for both 2nd-year students to be pronounced correctly than pure vowels. (64.78) is the t. value for 2nd year which is lower compared to that of the pure vowels which scored (74.33 .(About the (std.) of the diphthong class, 2nd year scored (0.118 (which is higher than that of pure vowels scored (0.115) as illustrated below:

Table 13: Results of One Sample Test for Vowels Classes Comparison2 -nd Year

Vowels	Stage	N.	Mean	Std.	Test	P (sig(
Pure Vowels	2nd	25	1.72	0.115	74.33	0.001
Diphthongs	2nd	25	1.53	0.118	64.78	0.001

With regard to the difficulty of classes of vowels for 4th year, statistically the results of the one-sample test as shown in Table 14 show that the diphthong class is more difficult than the pure class. (75.91) is the t. value for the diphthong class which is lower in comparison with that of the pure class scored (92.83). Besides, the (Std.) of this class is (0.10) which is considered greater compared to that of the pure class that scored (0.09 .(

Table 14: Results of One-Sample Test for Vowels Classes Comparison4 -th Year

Vowels	Stage	N.	Mean	Std.	Test	P (sig(
Pure Vowels	4th	25	1.82	0.09	92.83	0.001
Diphthongs	4th	25	1.64	0.10	75.91	0.001

5.5 English Sounds in 2nd and 4th Stages

Generally, the results show that 4th year students pronounced both main types of English sounds better than the 2nd year students as indicated in Table 15 which shows the mean percentages of the correct and incorrect pronunciation of the main types of English sounds of both levels .

Table 15: The Mean Percentages of the Correct and Incorrect Pronunciation of English Sounds.

Level	English Sounds	Correct			Incorrect		
		initial	medial	final	initial	medial	final
2nd Year	Consonants	%96.1	%86.0	%88.3	%3.9	%14.0	%11.7
	Vowels	%74.4	%66.0	%55.8	%25.6	%34.0	%44.2
4th Year	Consonants	%97.9	%88.9	%91.2	%2.1	%11.1	%8.8
	Vowels	%82.8	%75.5	%71.8	%17.2	%24.5	%28.2

Statistically, to determine whether the difference between the two levels in terms of pronunciation is significant or not, the independent sample test was used .The results, as illustrated in Table 16 below, show that significant differences between 2nd and 4th year students can be observed in the performance of both types of sounds :consonants and vowels. This is because the p. value (Sig) of consonants and vowels which are comprised of 0.03 and 0.00 respectively are less than the significance level (0.05). By comparing the means of 2nd and 4th-year students in regard to the two types of sounds, it can be stated that the performance of the latter group is better compared to that of the former one .The means of the 4th year students of consonants and vowels are 1.91 and 1.73 respectively. These means are greater in comparison with the ones of the 2nd year students who scored 1.90 for consonants and 1.63 for vowels .

Table 16 :Results of the Independent Samples Test of Consonants and Vowels- 2nd and 4th Year Students.

Segments	Stage	N.	Mean	Std.	Test	P (sig(
Consonants	2nd	25	1.90	0.03	2.12-	0.03
	4th	25	1.91	0.02		
Vowels	2nd	25	1.63	0.10	3.67-	0.00
	4th	25	1.73	0.08		

5.6The Comparison of Consonant and Vowel Classes in 2nd and 4th Stages

The results of the one-sample test for comparing the classes of both consonants and vowels in terms of pronunciation difficulty as shown in Table 17 below indicate that the affricate and nasal classes were the most difficult to pronounce correctly compared to other classes for both 2nd and 4th years. This is because the t. values of these classes are the lowest compared to those of other classes. (71.24 and 107.57) were the t .values of the former class and the (151.97 and 111.14) were for the latter class for both groups respectively. Additionally, the standard deviation (std (of these classes was the highest compared to those of other classes of consonants. This indicates that the higher the (std) of the class of consonants is, the more difficult it is. With regard to other classes of consonants namely ,fricative, glide and plosive come after one another in terms of pronunciation difficulty for 2nd year. This is because the t. values of these classes scored 157.388, 169.45, and 246.97 respectively. While the classes glide ,fricative and plosive come after one another for the 4th year as the t. values of these classes scored 117.07, 152.45, and 600.48 respectively. As for the class of lateral, 2nd and 4th year, students faced no difficulty in producing this class at all because it had been pronounced 100% correctly. Consequently, no t. value is scored and the (std) is .0.00

Table 17: Results of the One-Sample Test for Consonant Classes Comparison- 2nd and 4th Stages .

Consonants	Stage	N.	Mean	Std.	Test	P (sig(
Plosive	2nd	25	1.98	0.04	246.97	0.001
	4th	25	1.99	0.01	600.48	0.001
Fricative	2nd	25	1.87	0.05	157.388	0.001
	4th	25	1.89	0.06	152.45	0.001
Affricate	2nd	25	1.88	0.13	71.24	0.001
	4th	25	1.95	0.09	107.57	0.001
Nasal	2nd	25	1.81	0.05	151.97	0.001
	4th	25	1.81	0.08	111.14	0.001
Lateral	2nd	25	2.00	0.00	_____	0.001

	4th	25	2.00	0.00	_____	0.001
approximants	2nd	25	1.85	0.05	169.45	0.001
	4th	25	1.85	0.07	117.07	0.001

As for the comparison of vowel classes, pure and diphthong, in both2 nd and 4th years, the results of one sample test reveal that the diphthong class was more difficult for both 2nd and 4th years than the pure class. This is due to the lower t. values this class scored for both groups. 64.78 is the t. value of the 2nd year; whereas 75.91 is for the 4th year. Besides, the (Std.) of this class for both levels is higher compared to that of the pure class. The 2nd year scored 0.118 as the (Std.); whereas 0.10 is for the 4th year as illustrated in Table 18 below .

Table 18: Results of the One Sample Test for Vowel Classes comparison-2nd and 4th Stages

Vowels	Stage	N.	Mean	Std.	Test	P (sig(
Pure Vowels	2nd	25	1.72	0.115	74.33	0.001
	4th	25	1.82	0.09	92.83	0.001
Diphthongs	2nd	25	1.53	0.118	64.78	0.001
	4th	25	1.64	0.10	75.91	0.001

6Discussion

BK learners of Duhok University face difficulty in producing correctly both types and subtypes of English sounds .Undoubtedly, this has an impact on their process of learning as well as their speaking skill .In this section, the results of the study will be discussed within the framework of the three postulated research questions.

Regarding the first question addressed in the present study about what type or subtype of English sounds is more problematic for both 2nd and 4th years students, the results revealed that both stages had more difficulty in producing vowels than consonants. These results match the results of Habibi (2016); Firdaus (2019) and Lestari, et al (2020). Also, it was found that diphthongs were more problematic for both learners compared to monophthongs. This result corresponds with the result of Shamallakh (2018) who concluded that the majority of diphthongs are more difficult than monophthongs .The reason for the problem of vowels, in general, is that the majority of the sounds of this class are not found in learners' L1. This is due to the linguistic disparity between the sound system of two languages as stated by Farrah and Halahlah (2020). As for the consonant classes, it was found that the affricate was the most challenging class for both groups. However, this result is not in line with the conclusion that Farrah and Halahlah arrived at. As far as the second research question whether the 4th year students' segmental pronunciation errors get decreased compared to those of the 2nd-year students, the results showed that the performance of the former group was noticeably better compared to that of the latter group in pronouncing both types or subtype of English sounds. This result is in line with the result of Alzinaidi and Abdel Latif (2019). Finally, as for the third question whether BK learners 'performance of segmental pronunciation is affected by the phonological system of their L1, the results revealed that the participants' production of English sounds was heavily influenced by the interference of their L1. This is due to the linguistic differences between the sound system of Kurdish and English. Thus ,these results go with the results of previous studies (e.g. Haji and Mohammed ;2019 ,Farrah and Halahlah, 2020) who claimed that L2 learners' mispronunciation of sounds traces back to the absence of these sounds in learners' phonological system .

Thus, the hypotheses that vowels are more problematic for both 2nd and 4th years students, 4th year students' segmental pronunciation errors get decreased compared to those of the 2nd-year students and finally learners' production of English sounds is influenced by the phonological system of their L1 are all confirmed

7Conclusion

The results of the data analysis of the production of English segments of both levels have come up with the conclusions that BK learners of English are good at the production of English sounds because of the high rate of correct production. Vowel sounds, in general, are more problematic than consonants to be pronounced correctly for both 2nd and 4th years. This also is true for the diphthong class of vowels. It was also found that the sounds that are not familiar in learners' L1 sound system are more challenging for them than the familiar ones .

Furthermore, the results show that the performance of the 4th year students in the production of both main types and subtypes of sounds is noticeably better compared to that of the 2nd-year students. Based on the aforementioned conclusions, the mispronunciation of English sounds by BK learners is a result of some linguistic factors. These factors are L1 interference, the disparity of the sound system between Kurdish and English ,inconsistency of vowel sounds, as well as lack of exposure to L2 .

In the light of the previous results, the researcher recommends the following points to improve the pronunciation of English sounds:

.1Learners should be given the opportunity to practice their English in the class.

.2Learners need to do some extra activities such as watching English movies, listening to English songs, and reading English books that suit their levels .

.3Finally, learners need to take some English courses run by native speakers.

Additionally, the researcher suggests the following topics for further studies:

.1A sociolinguistic investigation of English sounds is needed so as to identify whether males or females' pronunciation performance is better.

.2An acoustic analysis of English sounds is necessary to be conducted.

.3Considering perceptual difficulties faced by BK learners of the sounds in English is vital to be carried out to arrive at a better understanding of BK learners' underlying phonological processes .

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Appendix 1 :Jury Members

Full Name	Major	Academic Title	Affiliation
-Dr. Asma'a Amin Hussein	Phonetics and Phonology	Lecturer	Duhok University
-Dr. Sae'ed Idris Sae'ed	Linguistics	Assistant Professor	Duhok University
-Dr. Anmar Hammodi Sae'ed	Phonetics and Phonology	Assistant Professor	Mosul University

Appendix 2: Transcribers

Full Name	Major	Academic Title	Affiliation
-Dalya Dyan Najeeb)Segments Part-Second Year(	Phonetics and Phonology	Assistant Lecturer	Duhok University
-Tara Ihsan Abdullah)Segments Part- Fourth Year(	Phonetics and Phonology	Assistant Lecturer	Duhok University