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Production, Perception and Identification of English and Arabic Vowels and Semi-vowels by Iraqi Arabic EFL Learners

ABSTRACT

The recent paper centers on reporting the error in the production, perception and identification of segmental phonemes of both Arabic and English. Formerly Arabic learners may come across many difficulties in the recognition and pronunciation a foreign language, such as English, due to the enormous variations, principally, in vowels and consonants inventory and their acoustic realizations. It also examines gender influence on learners' performance in three tasks. The total number of subjects are (36) Iraqi EFL learners; categorized into six groups based on their education proficiency levels. MP3 recording device is used in the tasks to record learners' pronunciation. The list of tested words contains (20) words that exemplify simple, long vowels and semi vowels. The results revealed that most Iraqi L2 learners have problems in articulating short and long English vowels and they come across fluctuating gradations of difficulty. The results also show that there is an effect of the level of education on the accuracy rate for some vowel categories. The most problematic vowels were /ɒ, ʌ, ɔ: / which were difficult for most subjects regardless their education level and proficiency in English.

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نطق واستدراك وتميز أصوات العلة وشبه حروف العلة في اللغة الإنكليزية والعربية من قبل العراقيين
متعلمي اللغة الإنكليزية كلغة أجنبية ثانية

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مي باسل علوان

الخلاصة:

تركز الدراسة الحالية على نطق الصوتيات المقطعية باللغتين العربية والإنكليزية. عند قيام متعلمي اللغة العربية بنطق اصوات اللغة الإنكليزية ، قد يواجه العديد منهم صعوبات في نطقها بسبب وجود

اختلافات كبيرة بين اللغة الإنكليزية والعربية ، خاصة فيما يتعلق بعدد حروف العلة وإدراكها الصوتي. يهدف هذا البحث لمعرفة مشاكل المتعلمين في نطق وإدراك حروف العلة الإنكليزية والعربية وشبه العلة . كما يبحث الفروقات بين الجنسين في نطق وإدراك حروف العلة الإنكليزية. عينات البحث الحالي (٣٦) دارسًا عراقياً للغة الإنجليزية كلغة أجنبية مقسمين إلى ستة مجاميع بناءً على مستويات الكفاءة. استخدم الباحث اداة MP3 لتسجيل البيانات (مجموعة الكلمات) الخاصة بنطق الطلاب. ان عدد الكلمات المستخدمة بالاختبار (٢٠) كلمة عربية وانكليزية تحتوي على حروف العلة البسيطة والطويلة بالإضافة إلى الحروف النصفية . وعلى ضوء ما تقدم كشفت البيانات أن معظم الطلاب يواجهون مشاكل في نطق حروف العلة الإنكليزية القصيرة والطويلة وأن متعلمي اللغة الإنجليزية كلغة أجنبية في العراق يواجهون درجات متفاوتة من الصعوبات في تحديد ونطق وإدراك الرموز الصوتية الإنكليزية. وقد اظهرت النتائج ان اكثر اصوات العلة صعوبة /ɒ, ʌ, ɔ:/ لمعظم المتعلمين العراقيين والتي شكلت النسبة الاكبر من حيث عدد الاخطاء وان هناك تأثيراً للجنس من حيث الاداء عند لفظ واستدراك اصوات العلة الانكليزية.

1. Introduction

In all spoken languages, vowels form the peak of syllables and they are voiced sounds which are produced by different positions of the tongue and lips making differences in the shape of the mouth. The number of English vowels is twelve whereas Arabic vowels are six. These differences among the phonemic systems of both languages create real problems for L2 learners in the production, perception and identification of vowels and semi vowels (Badawi & Salim, 2014). Vowels in Arabic are practically allophonic in which they are distributed into two collections: short vowels and long vowels (Gilakjani, 2012; Sabir and Al saeed, 2014: 33). Actually, the articulation of vowels comprises no obstacle of air stream in the vocal tract. Consequently, one vowel is unlike another vowel in feature or timbre (Ladefoged, 2004: 224). According to Roach and Daniel (1997: 30) dissimilar vowel sounds are created when lungs push air through the mouth, the vocal bands vibrate to producing vowel. In case of vowels, there is no blockage and it is conceivable to raise the vowel sound as long as a speaker can continue to dismiss air from the lungs (Calet et al., 2015; Alduais, 2015; Ismail, 2017: 17). Also, in typifying the semi- vowels, they are phonetically like vowels, but phonologically like consonants and that is their unintelligible and significant feature. Basically, the phonetic viewpoint in vocalization of /j/ is the same as that of a front close vowel such as /i:/, but is very short. Likewise, the invention of /w/ is carefully connected to the vowel space and pronunciation of /u:/ (Gimson, 1984: 211). Semi-vowels could also

be challenging for Iraqi learners' production, perception and identification. In other words, they run into pronunciation difficulties in the perception and production of semi- vowels (Hago & Khan, 2015); therefore, it is a necessity for researchers to examine this area of study which is the gap of this paper. Most teachers of English do not focus on this aspect of English phonology and also because the lack of precise pronunciation teaching materials at schools (Kang, & Johnson, 2018). The innate differences and similarities between English and Arabic are considered as the main cause of difficulty. In Arabic, there are two main varieties of Arabic: modern standard Arabic (MSA) and non-standard Arabic (NSA). Arab students acquire NSA as a mother tongue language, and then they start to learn MSA as a formal language at the primary level. Arabs are native speakers of NSA and not MSA (Cowan, 1968). On the other hand, it is possible to depend on MSA since it is the official language of the Arab countries and is, therefore, superior to NSA; it is acquired naturally and informally (Abdulmoneim, 2000:129-30). Classical Arabic and the Modern Standard Arabic (MSA) are different in vocabulary and stylistics. However, basically both of them are not changed in morphology and basic syntactic structures (Hismanoglu, 2012). According to Worthy (1987) many factors could influence L2 learners performance such as first language (L1) interference, Learner's attitude, learner's age, gender differences, early pronunciation instructions and the insufficient knowledge of a particular language (Havlíková, 2020).

2. Standard English Arabic Vowels

2.1 Standard English Vowels

Standard Southern British English (SSBE) is richer in terms of vowel inventories, with nineteen vowel sounds. They can be divided into six vowels /ʌ, ɛ, ɪ, ɒ, ʊ, æ/ accompanied by five long vowels /i:, a:, ɔ:, u:, ɜ:/ and eight diphthongs /eɪ, aɪ, əʊ, aʊ, ɔɪ, ɪə, eə, and ʊə/ (Wells, 1982: 119; Hitch, 2017; Holliman, 2016). Vowel systems of SSBE use the categories of vowel height and backness. Vowel height differentiates between close (high), mid and open (low) vowels, with the tongue located close to the palate, midway, or distant from the palate, correspondingly. Vowel backness differentiates vowel sounds in terms of location of the highest portion of the tongue to the back of the oral cavity, creating the classes of front, central and back vowels (Zhang, 2004; Collins & Mees, 2013: 63). In terms of pronunciation, tested vowels are always

shorter in production than long vowels, diphthongs and diphthongs (Collins & Mees, 2013: 71).

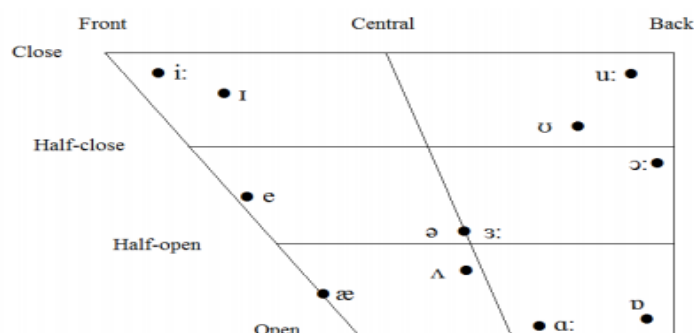


Figure 1: BBC English pure vowels (Roach, 2010).

2.2 Standard Arabic Vowels

Arabic as a Semitic language has restricted vocalic inventory and a rich consonantal system paralleled to other languages like English (Watson, 2002: 1). Modern Standard Arabic has three short vowels /i, a, u/ and they represent the diacritic marks, while there are three counterparts long vowel /i:, a:, u:/; they are front, central, and back (Kalaldeh, 2018; Mahmoud, 2000; Huthaily, 2003). According to (Amer, 2012), vowels in Arabic are nearly allophonic. Short vowels in Arabic are different, from English vowels; which are signified by symbolizations not by letters (Salameh & Abu-Melhim, 2014). Thus, they can be divided into two collections, which are short and long vowels as follows:

i) Arabic Short Vowels

The Arabic vowel /i/ is called "kasrah" in Arabic. It appears under the alphabet in this shape (ِ) as in, 'sir' سر "secret". The tongue in the half-close position for /i/ vowel in Arabic. Here the lips are unrounded. /u/ is the Arabic "ḍammah", which is produced by the tongue in the half - close position with the rounded lips. In Arabic it is written as (ُ) above the alphabet like the word "ṣum" صُم "deaf". /a/ short vowel is represented by (َ) in Arabic and is called "fatha". The tongue in the half-open position and neutral lips form it. It appears in the word "ḥadīth", "speech" حَدِيث (Alqarni, 2018).

ii) Arabic Long Vowels

The long vowel is distinguished by the duration of time that it takes. Those long vowels are similar to short vowels in their position. Arabic has three long vowels. They are called huruuful- Al madd "حروف المد" the letters of prolongation" (Hamad, 2020). The following description of each vowel (1) /ii/ vowel is formed when the continuation letter (y) ' ي ' preceded by the symbolization (◌ِ) "kasrah", for example, "fiil" فيل "elephant". (2) /uu/ long vowel is formed by the prolongation letter (w) "و" preceded by the notation (◌ُ) dammah. It is found in the word "tuul" طول "length". (3) the third Arabic long vowel is /aa/ which is formed by the prolongation letter (a) preceded by the notation (◌َ) fathah. It occurs in the word "qabala" قابل "met" (Al-Zoubi, 2019).

The current study has the following four aims: (1) To investigate the performance of the six Iraqi Arabic groups of EFL learners (teachers, the four stages of the English department and grade 6 secondary school students) in the perception, production and identification of English and Arabic Vowels. (2) To identify the number of errors in the three tasks for each group of learners. (3) To investigate gender influence in their performance in the three tasks. (4) to identify the rank order of the most problematic phonemes. The current study is expected to be of value to English and Arabic learners as it will help them to become familiar with the phonemic system occur in both languages and to pinpoint the difficulties of English and Arabic short, long and semi vowels.

3. Methodology

3.1 Stimuli

Words, used in the present study, were twenty words. Each vowel was presented in monosyllabic word except the vowel /ə/ that was put in disyllabic CVCVCC words to get accurate results in the given test and to discover the real difficulty encountered by the Iraqi EFL learners. Syllables containing the vowel /ə/ in the disyllabic word were the unstressed one to avoid the effect of stress. One word was selected for each vowel. Choosing monosyllabic words was also to avoid the impact of the number of syllables on vowel duration. Most of the words used in the study were from Standard English and Arabic words (see Appendix A). The consonants preceding and following the target vowels were stops, fricatives and affricates since they provide clear boundaries on the spectrogram.

3.2 Subjects

Six groups of Iraqi Arabic L2 learners were employed from different Iraqi Universities. Each group consisted of 6 adults (3 males, 3 females) who speak Iraqi Arabic dialect as their L1 and English as L2. The average age of the Iraqi males and females was (23.3) years (range 18–29 years). The total subjects of the study were thirty six Iraqi Arabic learners: eighteen males and eighteen females. The first group represents teachers of English subjects in high school, and the other four groups were from different Iraqi universities (Baghdad, AL-Mustansirya, Kirkuk, Mosul and Tikrit), the last group represents 6th class students of the high school. Almost all of them reported no speech disorders. The subjects were asked to fill a questionnaire before making a voice recording, to make sure that they met the criteria concerning age, education and level of proficiency. Group A represents teachers, B fourth year English department students, C third year students, D second year students, E first year students, F 6th class secondary school students.

3.3 Procedures

The test words were printed in English in a form of a link using simplified English with a font size 16. The link presented to the subjects who were asked to familiarize themselves with the list of words. They were asked to select the phonemic symbols for each word individually. The test words were randomized and presented again to each subject. The subjects were asked to pronounce the words such as /hur/ (free) by using the standard language and not using the dialect. They were asked to pronounce these words by making short pauses between the words. There were two trials of recording for each subject. The subjects were asked to listen to a native speaker and select the phonemic symbol again in another test words. Each subject was tested individually from his/her house by using several applications like Meet, Messenger, WhatsApp or Telegram.

3.4 Audio Recordings

A sound recorder was downloaded into a laptop version 6.1 (Build 7600) in order to record Learners' production of the tested words. The recordings were saved as (WAV) file and in the laptop and DVD. All recordings come about in a sound-attenuated room. The order of word list appearance was randomized among subjects. The microphone was located nearly 25 cm from the learner's mouth. Advantage of the controlled surroundings continued in stable locations

throughout the recording of the words that contain all types of vowels and semi vowels.

4. Data Analysis and Results

4.1 Analyzing the Total Results of Each Group

i) The English teachers' responses on all the tasks are presented in the following table:

Table (1): Group A Iraqi L2 Learners Performance in the Three Tasks

Group A	Identification task		percentages		Production Task		percentages		Perception Task		percentages	
	correct	error	correct	error	correct	error	correct	error	correct	error	correct	error
S1(f)	16	4	80%	20%	20	0	100%	0%	16	4	80%	20%
S2(f)	10	10	50%	50%	19	1	95%	5%	13	7	65%	35%
S3(f)	11	9	55%	45%	18	2	90%	10%	12	8	60%	40%
S4(m)	6	14	30%	70%	19	1	95%	5%	10	10	50%	50%
S5(m)	13	7	65%	35%	20	0	100%	0%	13	7	65%	35%
S6(m)	11	9	55%	45%	20	0	100%	0%	14	6	70%	30%

Group A performs better in the production task with a percentage of 0% errors, that is, the accuracy scores are 100%. In contrast, their performance in the perception task is better than their performance in the identification task with a percentage 30% errors, (6) errors out of (20), whereas their performance in the identification task is 45% (9) errors out of 20.

ii) The Fourth Year Students' Responses on all the Tasks are presented in the following table:

Table (2): Group B Iraqi L2 Learners Performance in the Three Tasks

Group B	Identification task		percentages		Production Task		percentages		Perception Task		percentages	
	correct	error	correct	error	correct	error	correct	error	correct	error	correct	error
S1(f)	13	7	65%	35%	20	0	100%	0%	16	4	80%	20%
S2(f)	10	10	50%	50%	16	4	80%	20%	1	19	5%	95%
S3(f)	1	19	5%	95%	19	1	95%	5%	3	17	15%	85%
S4(m)	12	8	60%	40%	19	1	95%	5%	11	9	55%	45%
S5(m)	13	7	65%	35%	17	3	85%	15%	12	8	60%	40%
S6(m)	12	8	60%	40%	20	0	100%	0%	17	3	85%	15%

Group B performs better in the production task with a percentage of 0% errors, that is, the accuracy scores are 100% which is similar to group A in this task. In contrast, their performance in the perception task is better than their performance, in the identification task, with a percentage 15% errors, (3) errors out of (20), whereas their performance in the identification task is 40% (8) out of 20.

ii) Third Year Students' Responses on all the Tasks are presented in the following table:

Table (3): Group C Iraqi L2 Learners Performance in the Three Tasks

Group C	Identification task		percentages		Production Task		percentages		Perception Task		percentages	
	correct	error	correct	error	correct	error	Correct	error	correct	error	correct	error
S1(f)	3	17	15%	85%	14	6	70%	30%	3	17	15%	85%
S2(f)	3	17	15%	85%	15	5	75%	25%	2	18	10%	90%
S3(f)	15	5	75%	25%	17	3	85%	15%	7	13	35%	65%
S4(m)	13	7	65%	35%	14	6	70%	30%	2	18	10%	90%
S5(m)	5	15	25%	75%	12	8	60%	40%	5	15	25%	75%
S6(m)	6	14	30%	70%	17	3	85%	15%	10	10	50%	50%

Group C performs better in the production task with a percentage of 15% errors, that is, the accuracy scores are 85% which is different from group A and B in this task. In contrast, their performance in the perception task is better than their performance, in the identification task, with a percentage 50% errors, (10) errors

out of (20), whereas their performance in the identification task is 70% (14) errors out of 20.

iii) Second Year Students' Responses on all the Tasks are presented in the following table:

Table (4): Group D Performance in the three tasks

Group D	Identification task		percentages		Production Task		percentages		Perception Task		Percentages	
	correct	error	correct	error	correct	error	Correct	error	correct	error	correct	Error
S1(f)	11	9	55%	45%	16	4	80%	20%	3	17	15%	85%
S2(f)	3	17	15%	85%	14	6	70%	30%	2	18	10%	90%
S3(f)	4	16	20%	80%	17	3	85%	15%	5	15	25%	75%
S4(m)	11	9	55%	45%	12	8	60%	40%	5	15	25%	75%
S5(m)	7	13	35%	65%	13	7	65%	35%	5	15	25%	75%
S6(m)	3	17	15%	85%	17	3	85%	15%	2	18	10%	90%

Group D performs better in the production task with a percentage of 15% errors, that is, the accuracy scores are 85% which is different from group A and B in this task. In contrast, their performance in the perception task is better than their performance, in the identification task, with a percentage 90% errors, (18) errors out of (20), whereas their performance in the identification task is 85% (17) out of 20.

iv) First Year Students' Responses on all the Tasks are presented in the following table:

Table (5): Group E Performance in the Three Tasks

Group E	Identification task		percentages		Production Task		percentages		Perception Task		Percentages	
	correct	error	correct	error	correct	error	correct	error	correct	error	correct	error
S1(f)	3	17	15%	85%	12	8	60%	40%	3	17	15%	85%
S2(f)	3	17	15%	85%	13	7	65%	35%	1	19	5%	95%
S3(f)	5	15	25%	75%	14	6	70%	30%	3	17	15%	85%
S4(m)	1	19	5%	95%	12	8	60%	40%	2	18	10%	90%
S5(m)	7	13	35%	65%	17	3	85%	15%	7	13	35%	65%
S6(m)	1	19	5%	95%	12	8	60%	40%	1	19	5%	95%

Group E performs better in the production task with a percentage of 40% errors, that is, the accuracy scores are 60% which is different from group A and B, C and D in this task. In contrast, their performance in the perception task is the same as their performance, in the identification task, with a percentage 95% errors, (19) errors out of (20), and their performance in the identification task is also 95% (19) errors out of 20.

v) Grade 6th Secondary School Students' Responses on all the Tasks are presented in the following table:

Table (6): Group F Performance in the Three Tasks

Group F	Identification task		percentages		Production Task		percentages		Perception Task		Percentages	
	correct	error	correct	error	correct	error	correct	error	correct	error	correct	error
S1(f)	3	17	15%	85%	13	7	65%	35%	5	15	25%	75%
S2(f)	4	16	20%	80%	17	3	85%	15%	3	17	15%	85%
S3(f)	2	18	10%	90%	11	9	55%	45%	2	18	10%	90%
S4(m)	3	17	15%	85%	13	7	65%	35%	2	18	10%	90%
S5(m)	7	13	35%	65%	20	0	100%	0%	7	13	35%	65%
S6(m)	3	17	15%	85%	12	8	60%	40%	3	17	15%	85%

Group F performs better in the production task with a percentage of 40% errors, that is, the accuracy scores are 60% which is different from group A and B, C and D in this task. In contrast, their performance in the perception task is the same as their performance, in the identification task, with a percentage 85% errors, (17) errors out of (20), whereas their performance in the identification task is 85% (17) errors out of 20.

4.2 Comparison among the Six Groups' Errors in the Identification Task

The results obtained after analyzing the students' responses on each word in the Identification Task are presented in the following table:

Table (7) Total subjects' Responses in the Identification Task

Groups	Total Errors	Percentages
A	53	% 44.16
B	59	% 49.16
C	75	% 62.5
D	81	% 67.5

E	100	%83.33
F	98	% 81.66

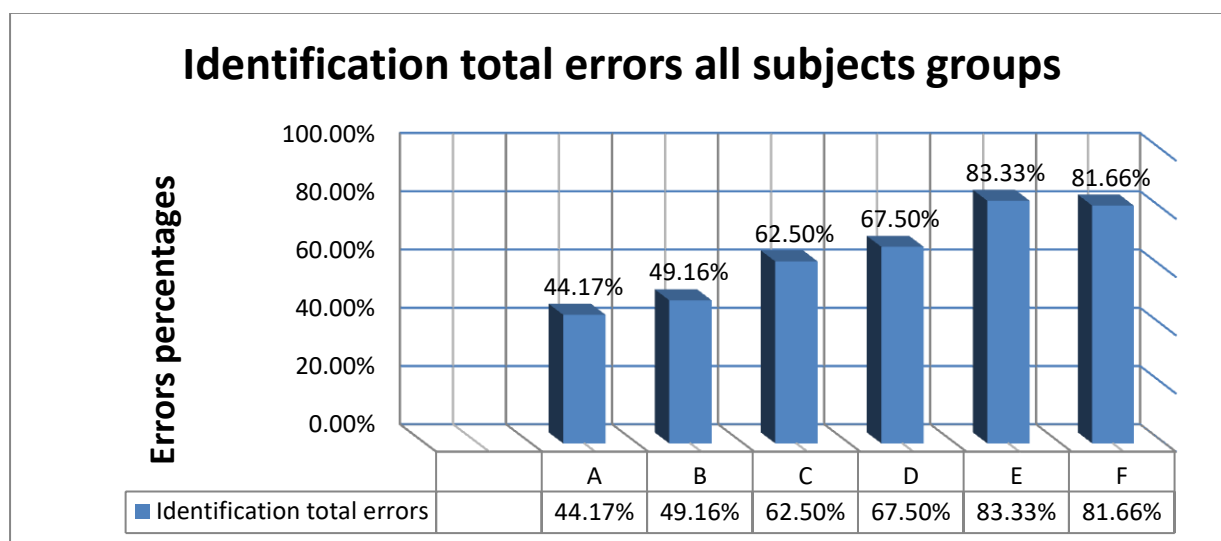


Figure 2: Total groups' errors in the Identification Task

The results in Table (7) and Fig. (1) Indicate that the total percentage of errors of Group E is higher than all other groups with an average 83.33% in contrast to group F with an average 81.66% which indicate that these two groups have the worst performance in the identification task which is different from group A with an average 44.17% and B 49.16%, C 62.50% and D 67.50%.

4.3 Comparison the Six Groups' Errors in the Production Task

The results obtained after analyzing the students' responses on each word in the Production Task are presented in the following table:

Table (8) Total Subjects' Responses in the Production Task

Groups	Total Errors	Percentages
A	4	% 3.33
B	9	% 7.5
C	31	% 25.83
D	31	% 25.83
E	40	% 33.33
F	41	% 34.16

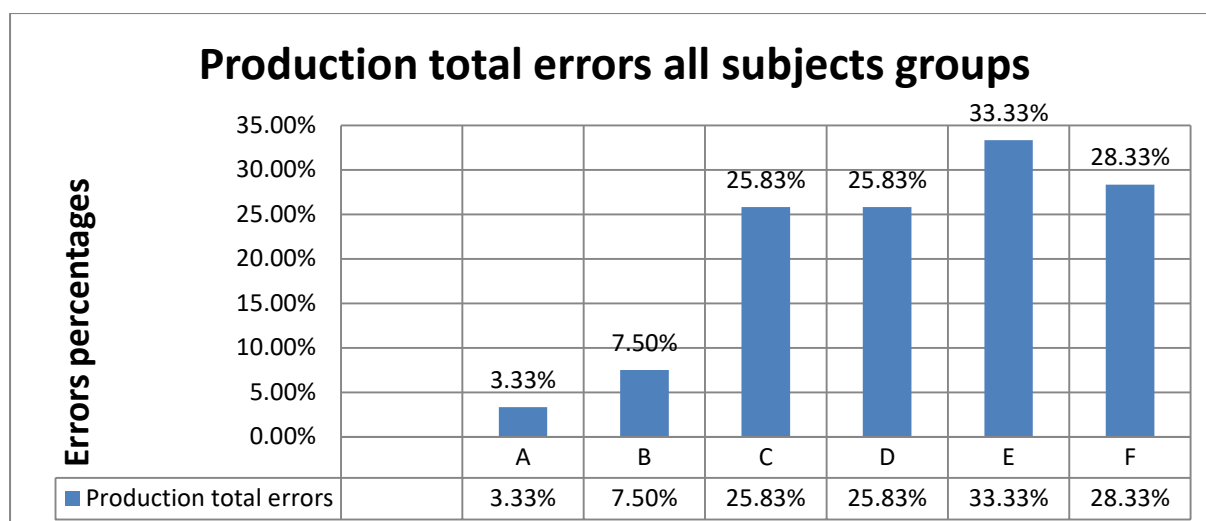


Figure 3: Total groups' errors in the Production Task

The results in Table (8) and Fig. (2) Indicate that the total percentage of errors of group E is higher than all other groups with an average 33.33% in contrast to group F with an average 28.33% which indicate that these two groups have the worst performance in the production task which is different from group A with an average 3.33% and B 7.50%, C 25.83% and D 25.83%.

4.4 Comparison the Six Groups' Errors in the Perception Task

The following table shows the students' responses on each word in the Perception Task:

Table (9) Total Subjects' Responses in the Perception Task

Groups	Total Errors	Percentages
A	42	% 35
B	60	% 50
C	91	% 75.83
D	98	% 81.66
E	103	% 85.83
F	98	% 81.66

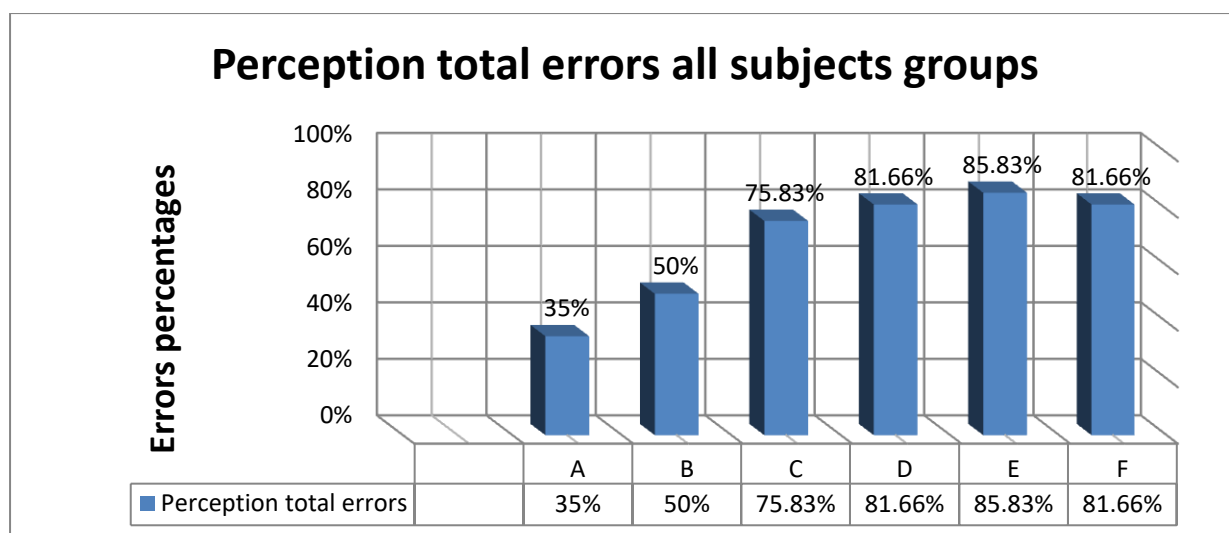


Figure 4: Total groups' errors in the Perception Task

Table (9) and Fig. (3) Indicate that the total percentage of errors of Group E is higher than all other groups with an average 85.83% in contrast to group F and D with an average 81.66% for both which indicate that these three groups have the worst performance in the production task which is different from group A with an average 35% and B 50%, C 75.83%.

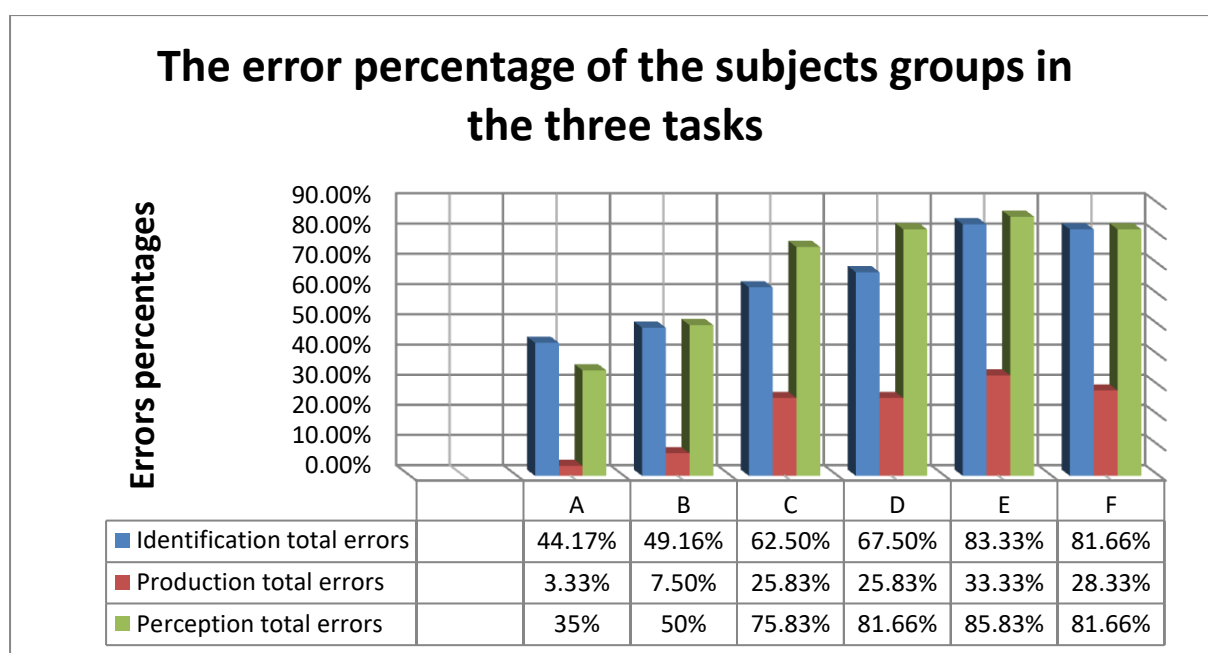


Figure 5: Total groups' errors in the three Tasks

Based on the errors in Figure 5, the average of errors increases in the identification and perception tasks in contrast with the production tasks and all groups' learners commit more errors in these two tasks. However the results

show that all Iraqi EFL Learners did not face that difficulty in pronouncing the English and Arabic words.

4.5 Gender influence among the Six Groups in the three Tasks

The following table shows Gender influence on learners' performance in the three Tasks:

Table (10) Total Subjects' Responses or Error Analysis for Male and Female in the three Tasks

Grou ps	identification				production				perception			
	male		female		male		female		male		female	
A	30	50%	23	38.33%	1	1.66%	3	5%	23	38.33%	19	31.66%
B	23	38.33%	36	60%	4	6.66%	5	8.33%	20	33.33%	40	66.66%
C	36	60%	39	65%	1	28.33%	1	23.33%	43	71.66%	48	80%
D	39	65%	42	70%	1	30%	1	21.66%	48	80%	50	83.33%
E	51	85%	49	81.66%	1	31.66%	2	35%	50	83.33%	53	88.33%
F	47	78.33%	51	85%	1	25%	1	31.66%	48	80%	50	83.33%
Total	22	62.77%	24	66.66%	7	20.55%	7	20.83%	23	64.44%	15	43.33%
	6		0		4		5		2		6	

As table 10 shows that there is gender impact on the performance of the six groups and that females commit more mistakes in the identification and perception tasks in contrast to the production. In all tasks females commit more errors than male in all tasks except in the perception task in which males commit more errors with an average 64.44%, in contrast to females in the same task with an average 43.33%. For more details about the total errors and rank order of vowels and semi vowels in the three tasks see table 11 and table 12 below.

Table (11) Total Subjects' Error Analysis and Rank Order of English Vowels and Semi Vowels in the Three Tasks

vowels	Group A			Group B			Group C			Group D			Group E			Group F		
	Ident.	Pro.	Percep.	Ident.	Pro.	Percep.	Ident.	Pro.	Percep.	Ident.	Pro.	Percep.	Ident.	Pro.	Percep.	Ident.	Pro.	Percep.
/i/	-	-	-	-	-	-	-	-	2	1	-	2	3	-	4	3	-	2
/u/	3	-	2	4	-	4	4	2	4	4	-	6	5	-	6	5	-	6
/w/	6	-	6	5	-	6	6	1	6	6	3	6	6	2	6	6	2	6
/ə/	6	1	6	6	1	6	6	4	6	6	2	6	6	6	6	6	6	6
/ʌ/	3	1	3	5	-	6	6	5	6	6	4	6	6	5	6	6	5	6
/ɒ/	6	-	6	6	-	6	6	6	6	6	5	6	6	5	6	6	6	6
/e/	-	-	-	1	-	-	2	-	2	4	-	5	4	-	6	4	-	4
/ɪ/	6	-	6	6	1	6	6	1	6	6	3	6	6	3	6	6	3	6
/æ/	6	-	5	5	-	6	4	2	6	5	1	6	6	2	6	6	2	6
/ɜ:/	3	-	3	3	1	5	4	3	6	4	2	6	5	3	6	6	3	6
/ɔ:/	-	-	-	1	-	1	3	-	5	3	-	5	6	-	5	5	-	6
/i:/	4	-	2	4	2	4	4	2	5	4	4	6	5	4	6	6	4	6
/a:/	-	-	-	3	-	3	3	2	3	4	3	6	4	2	6	4	2	6
/ɔ:/	2	-	-	3	1	3	3	1	5	3	-	6	6	1	6	6	1	6
	45	2	39	53	6	56	51	29	68	62	27	78	74	33	81	75	34	78

Table (12) Total Subjects' Error Analysis and Rank Order of Arabic Vowels in the Three Tasks

vowels	Group A			Group B			Group C			Group D			Group E			Group F		
	Ident.	Pro.	Percep.	Ident.	Pro.	Percep.	Ident.	Pro.	Percep.	Ident.	Pro.	Percep.	Ident.	Pro.	Percep.	Ident.	Pro.	Percep.
/u/	2	-	-	1	-	1	4	-	-	5	-	3	4	2	3	3	1	3
/ɪ/	-	-	-	-	-	-	-	-	-	-	-	2	3	-	2	1	-	2
/a/	-	-	-	2	1	1	2	-	-	2	-	4	2	-	4	2	1	1
/u:/	-	-	-	-	-	-	5	-	-	4	-	3	6	-	3	6	-	2
/i:/	6	2	1	3	2	2	5	4	4	6	4	4	6	5	5	6	5	5
/a:/	-	-	-	1	-	-	2	-	-	2	-	3	5	-	3	5	-	2
	8	2	1	6	3	4	18	4	4	19	4	19	26	7	20	23	7	15

5. Discussion

In general, it is observed that all the groups face no problems in the production of the English and Arabic symbols due to its existence of most of them in their native vowel system and to the exposing to them as English learners, but (group F) have not exposed to the English vowels so they depend on guessing in their

choosing. In the words (wet, yet, pet) almost all the groups choose the phoneme /e/ because they neglect the possibility of using the /w, y/ as semi vowels. The phoneme /b/ in the word (cross) treats as the consonant (d) and it chooses for the word (دَم and دِين). Most subjects correctly pronounce the short vowel /ɪ/ in the words (fish, سِن), however, they mispronounce the long vowel / i:/ in the English word (peace) because it appears as the diphthong / eɪ /. The difficulty in pronouncing the word (perhaps) because for the other words it considers as a long word. Mispronunciation of the phoneme /ʌ/ in the word (rush) because of the resemblance between the letter (u) and the vowel /u/. They were given a test to identify the phonemes in the English words, all groups listen to a native speaker then they choose the correct phonemes for the same words.

6. Conclusions

The present study attempts to shed some light on the difficulties that Iraqi Arabic students face when learning English vowels and semivowels, also the study highlight their performance in their native language vowels and semivowels. The study also attempts to understand the articulation of vowel phonemes and their rank order difficulty. The following conclusions can be drawn:

1. Most Iraqi EFL Learners face difficulties in the identification of short and long vowels in both English and Arabic words.
2. Results indicate that some short vowels are easy to be identified due to the similarities that which exist in their native language which make them easy to be identified, perceived and pronounced.
3. Easiness in producing and perceiving Arabic vowels by the Iraqi EFL learners.
4. Learners are able to produce English semi-vowels, but face some difficulty in the identification and perception tasks.
5. Most learners mixed up long vowels with diphthongs. This might be due to the fact that they were not trained much to know the length and quality of the vowel sounds.
6. The Arabic vocalic system mainly contains six pure vowels out of which three are long and the other three are short. Thus, it is vocalic system is much simpler than that found in English.

References

- Al-Badawi, M. A., & Salim, J. A. (2014). The perception of English vowels by Arab EFL learners: a case study of university students at Zarqa University. *Perception*, 4(20).
- Alduais, A. M. (2015). An account of phonetics and phonology as similar identical or different. *The International Journal of Indian Psychology*, 3(1), 157-165.
- Alqarni, H. (2018). *Production of English vowels by native Arabic speakers*, The (Doctoral dissertation, Colorado State University).
- Al-Zoubi, M. (2019). The speech sounds of Arabic language and their effect on learning English pronunciation: A contrastive analysis. *International Journal of Humanities and Social Science*, 9(1), 15-27.
- Amer, W. (2012). An investigation into the differences between English and Arabic consonant and vowel sounds: A Contrastive study with pedagogical implications. *Zaqaziq University Journal of Education*, 8(1), 1-18.
- Calet, N., Gutiérrez-Palma, N., Simpson, I. C., González-Trujillo, M. C., & Defior, S. (2015). Suprasegmental phonology development and reading acquisition: A longitudinal study. *Scientific Studies of Reading*, 19(1), 51-71.
- Collins, B., & Mees, I. M. (2013). *Practical phonetics and phonology: A resource book for students*. Routledge.
- Cowan, W. (2011). Rules and counter-rules in historical phonology. In *General and Theoretical Linguistics* (pp. 85-92). De Gruyter Mouton.
- Gilakjani, A. P. (2012). A study of factors affecting EFL learners' English pronunciation learning and the strategies for instruction. *International Journal of Humanities and Social Science*, 2(3), 119-128.
- Gimson, A. C. (1984). The RP accent. *Language in the British Isles*, 1, 45-54.
- Hago, O., & Khan, W. (2015). The pronunciation problems faced by Saudi EFL learners at secondary schools. *Education and Linguistics Research*, 1(2), 85-99.
- Hamid, I., & Ali, S. (2020). Agentive Forms Formation in English and Arabic. *Adab AL Rafidayn*, 50(81).
- Havlíková, P. (2020). Production Accuracy in L2 English Checked Vowels: Cross-sectional Study of Czech Secondary and Post-Secondary School Students.
- Hismanoglu, M. (2012). An investigation of phonological awareness of prospective EFL teachers. *Procedia-Social and Behavioral Sciences*, 31, 639-645.
- Hitch, D. (2017). Vowel spaces and systems. *Toronto Working Papers in Linguistics*, 38.
- Holliman, A. J. (2016). Suprasegmental phonology and early reading development: Examining the relative contribution of sensitivity to stress, intonation and timing. *Trends in language acquisition research series: Linguistic rhythm and literacy*, 25-50.
- Huthaily, K. (2003). Contrastive phonological analysis of Arabic and English.

- Ismail, J. H. (2017). Impact of Phonological Processes of Vowel Shortening on Standard Kiswahili.
- Kalaldeh, R. (2018). Acoustic analysis of Modern Standard Arabic vowels by Jordanian speakers. *International Journal of Arabic-English Studies*, 18(1), 23-48.
- Kang, O., & Johnson, D. (2018). The roles of suprasegmental features in predicting English oral proficiency with an automated system. *Language Assessment Quarterly*, 15(2), 150-168.
- Ladefoged, P. (2004). Phonetics and phonology in the last 50 years. *UCLA working papers in phonetics*, 103, 1-11.
- Mahmoud, A. (2000). Modern Standard Arabic vs. Non-Standard Arabic: where do Arab students of EFL transfer from?. *Language culture and curriculum*, 13(2), 126-136.
- Roach, P. (2010). *English phonetics and phonology fourth edition: A practical course*. Ernst Klett Sprachen.
- Roach, P., Hartman, J., & Setter, J. (1997). English Pronouncing Dictionary (Daniel Jones. *Cambridge: CUP*.
- Sabir, I., & Alsaed, N. H. (2014). Disquisition of Long and Short Vowels in Colloquial Arabic. *International Proceedings of Economics Development and Research*, 79, 32.
- Salameh, M. Y. B., & Abu-Melhim, A. R. (2014). The phonetic nature of vowels in Modern Standard Arabic. *Advances in Language and Literary Studies*, 5(4), 60-67.
- Watson, J. C. (2002). *The phonology and morphology of Arabic*. Oxford University Press on Demand.
- Wells, J. C. (1980). AC Gimson, An Introduction to the pronunciation of English. (Pp. xvi+ 352. Edward Arnold, London, 1980.). *Journal of the International Phonetic Association*, 10(1-2), 80-81.
- Worthy, J., & Viise, N. M. (1996). Morphological, phonological, and orthographic differences between the spelling of normally achieving children and basic literacy adults. *Reading and Writing*, 8(2), 139-159.
- Zhang, L. (2004). Awareness-raising in the TEFL phonology classroom: Student voices and sociocultural and psychological considerations. *ITL-International Journal of Applied Linguistics*, 145(1), 219-268.

Appendix

Appendix A: List of Arabic and English Tested Words

The words	Transcriptions	Phonemic Symbol
Bird	/bɜ:d/	/ɜ:/
Book	/buk/	/u/
Wet	/wet/	/w/
حُر	/hur/	/u/
Perhaps	/pəhæps/	/ə/
Food	/fu:d/	/u:/
Cross	/krɒs/	/ɒ/
شاب	/ʃa:b/	/a:/
Pet	/pet/	/e/
دين	/di:n/	/i:/
Yet	/yet/	/y/
Fish	/fɪʃ/	/ɪ/
روح	/ru:h/	/u:/
Rush	/rʌʃ/	/ʌ/
Bat	/bæt/	/æ/
دَم	/dam/	/a/
Peace	/pi:s/	/i:/
سِين	/sin/	/ɪ/
Pass	/pa:s/	/a:/
Horse	/hɔ:s/	/ɔ:/