

9-15-2020

Semi-Vowels in English and their Counterparts in Arabic, A Contrastive Study

Mubdir Shihab Ahmed

The Open Educational College/ Ministry of Education

Follow this and additional works at: <https://alustath.uobaghdad.edu.iq/journal>

Recommended Citation

Ahmed, Mubdir Shihab (2020) "Semi-Vowels in English and their Counterparts in Arabic, A Contrastive Study," *Alustath Journal for Human and Social Sciences*: Vol. 59: Iss. 3, Article 1.

DOI: 10.36473/ujhss.v59i3.1144

Available at: <https://alustath.uobaghdad.edu.iq/journal/vol59/iss3/1>

This Article is brought to you for free and open access by Alustath Journal for Human and Social Sciences. It has been accepted for inclusion in Alustath Journal for Human and Social Sciences by an authorized editor of Alustath Journal for Human and Social Sciences.

**Semi-Vowels in English and their Counterparts
in Arabic, A Contrastive Study**
Inst. Mubdir Shihab Ahmed (Ph.D)
The Open Educational College/ Ministry of Education
E-mail: mubdir_alazawi@yahoo.com

Received:20/10/2019

Accepted:16/11/2019



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

Abstract

The present study attempts to shed light on a phonetic phenomenon in both English and Arabic related to what is called semi-vowels. The English semi-vowel /j/ and /w/ and the Arabic (ي) and (ي) are either considered consonants or vowels depending on certain bases. Hence, this study tries to investigate these bases. The study aims at giving a description of the English and Arabic semi-vowels and showing whether both languages are similar or different with reference to their production and function. The study hypothesises that considering the English Semi-vowels as either consonants or vowels is determined phonetically or phonologically, whereas in Arabic such a case is determined by the phonological environment in which they occur. To realize the aims of the study and to prove its hypotheses, a description of semi-vowels in both languages is presented and a contrastive analysis is carried out. The study concludes that the semi-vowels in both languages are considered vowels in their production and like consonants in their function. Also, the study finds that there is no much difference as regards the production of the semi-vowels in both languages.

Key words: semi-vowels, production, function.

أشباه العلل في اللغة الانكليزية و نظيراتها في اللغة العربية، دراسة مقارنة

م. د. مبدر شهاب احمد ، لغة انكليزية / لغة

الكلية التربوية المفتوحة / وزارة التربية

البريد الالكتروني: mubdir_alazawi@yahoo.com

الملخص :

تحاول هذه الدراسة تسليط الضوء على ظاهرة صوتية باللغتين الإنجليزية والعربية تتعلق بما يسمى أشباه العلل. يمكن عد أشباه العلل الإنجليزية / j / و / w / والعربية (و) و (ي) اصواتا صحيحة او اصوات علة وفقا لقواعد معينة. ومن ثم تحاول الدراسة التحقيق في هذه القواعد. تهدف الدراسة إلى إعطاء وصف لأشباه العلل الانكليزية و العربية وإظهار مدى تشابهها أو اختلافها بما يتعلق بطريقة لفظها ووظائفها باللغتين. تفترض الدراسة أن اعتبار اشباه العلل في اللغة الإنجليزية اصوات صحيحة او علة تحدد طبقا لعلم صوت الكلام او لعلم الصوتيات ، في حين تحدد الحالة في اللغة العربية حسب البيئة الصوتية التي تحدث فيها. لتحقيق أهداف الدراسة وإثبات فرضياتها ، يقدم وصف أشباه العلل في اللغتين كلتيهما ، ويجرى تحليل مقارنة. تستنتج الدراسة على ان اشباه العلل في كلتا اللغتين تعتبر اصوات علة في طريقة لفظها و مشابهه للأصوات الصحيحة من الناحية الوظيفية. كذلك، تجد الدراسة بأنه لا يوجد اختلاف كبير في طريقة لفظ أشباه العلل في اللغتين كلتيهما .

الكلمات المفتاحية: أشباه العلل ، طريقة اللفظ ، الوظيفة.

Section One

1.1 The Problem

Phonetics and phonology, as is known, deal with the production and function of sounds in a language respectively. As such, differences among sounds of language with regard to their description and classification are related to whether they are described from a phonetic or phonological point of view, as is the case with the two English semi-vowel /j/ and /w/ and their counterparts (ج) /ja/ and (و) /wa/ in Arabic. These semi-vowels in both English and Arabic are either considered consonants or vowels depending on certain bases. Therefore to have a full understanding of the semi-vowels in English and their counterparts in standard Arabic, an attempt is to be carried out to investigate the bases that determine their classification and description in both languages.

1.2 Aim of the Study

The present study aims at:

1. Presenting an adequate description of the English semi-vowels /j/ and /w/ and their counterparts (ج) /ja/ and (و) /wa/ in Arabic.
2. Finding out whether both languages are similar or different in relation to the production and function of the semi-vowels.

1.3 Hypotheses

This study is based on the fact that languages share in common some points of similarity and difference which leads to hypothesize the following:

1. Considering the semi-vowels /j/ and /w/ as either consonants or vowels in English is determined either phonetically or phonologically.
2. In Arabic, this phenomenon is determined by the phonological environment, in which the two semi-vowels (ج) /ja/ and (و) /wa/ occur and by the different signs such as fatha (◻) or kasra (◻) used in a word.

1.4 Procedures

In order to realize the aims of the study, the following procedures are adopted:

1. Presenting as an accurate and adequate description of the two English semi-vowels /j/ and /w/ and their counterparts in Arabic as possible by investigating their production and function in both languages.

2. Carrying out a contrastive analysis of the semi-vowels in both languages to identify the points of similarity and difference with regard to this phenomenon.

1.5 Limits of the study

The present study is limited to the investigation of the English semi-vowels /j/ and /w/ and their Arabic counterparts (ي) /ya/ and (و) /wa/.

1.6 Value of the Study

The present study will be important to those who teach and learn phonetics and phonology in English and Arabic as it provides them with an understanding of this Phenomenon .

1.7. Data Collection

The study makes use of the relevant literature found in available sources such as books and other sources on the study of phonetics and phonology of English and Arabic.

Section Two

The Semi-Vowels /j/ and /w/ in English

2.1 Introduction

The semi-vowels /j/ and /w/ are considered as approximants in English. An approximant is an articulation, in which the articulators approach each other but not sufficiently to produce a complete consonant such as plosive, nasal, or fricative (Roach,2009:80). Articulators are always in some positional relationship with each other and any vowel articulation could also be classed as an approximant. However, the term approximant usually used only for consonants (ibid:49). The most important thing to remember about these two phonemes is that they are phonetically like vowels, but phonologically like consonant, i.e. they are usually included in the consonantal category on the functional ground, but from the point of view of phonetic description, they are more properly as vowel glides (Gimson,1980:35, Roach,2009:80).

The semi-vowel is a segment, which carries the phonetic properties of a vowel and can act as a consonant in terms of phonology. Accordingly, a semi-vowel has its properties of a vowel, which means that vocal cords are vibrating when pronouncing it. In the aspect of acoustic, they share the formal pattern of a

vowel. Secondly, it can merely act as a consonant, a starting segment of a syllable, but not function as the core of a syllable like vowel. Lass (1976) considers /j/ (“y” in “yes”) and /w/ (“w” in “win”) as quick utterances of vowels /i/ and /u/ in English, and ascribes them to segments of [-cons] [-voc] in SPE system .

2.2 The Sounds /j/ and /w/: Phonetic Realization (Production)

Phonetically speaking, the articulation of /j/ is particularly the same as that of front close vowel such as [ɪ] but is very short. In the same way, /w/ is closely similar to [ʊ]. This is apparent when making the initial sound of such as ‘yet’ or ‘wet’ very long, one can hear this. But despite this vowel-like character, these two sounds are used like consonants (Roach,2009:50).

Gimson (2009:211) argues that a semi-vowel is a rapid vocalic glide on a syllabic sound of greater steady duration. The semi-vowels /j/ and /w/ glide from positions of approximately /i:/ (with a spread or neutral lips) and /u:/ (with round lips) respectively, for example:

year /jɜː/, **west** /west/, **Oswald** /ɒswɔld/, **spaniel** /spænjɪl/

The actual point at which the essential vocalic glide begins depends on the nature of the following sound, for example, the glide of /j/ in **yeast** /jiːst/ has closer beginning than that of /j/ to /ɒ/ in **yacht** /jɒt/, and the starting point of /w/ before /u:/ in **woo** /wu:/ is closer than that of /ɒ/ in **what** (ibid).

Gimson (2009:212) also maintains that since /j/ and /w/ are vocalic glide, they may be expected to have acoustic features similar to those of vowels, i.e. a characteristic of two or three formants structure similar to that of /i:/ or /u:/ as for vowels, two formants are sufficient for good recognition.

It is to be noted that the vocalic allophones of /j/ are articulated by the tongue assuming the position for a front, half-close to close vowel (depending on the degree of openness of the following sound) and moving away immediately to the position of the following sound and the lips are generally neutral or spread, but may anticipate the lip-rounding of the following vowel in such cases as *you*, *yawn*, etc. (ibid).

A /j/ glide is sometimes heard at a point of front vowel, where the first vowel is /i:/ or a diphthong ending in /ɪ/ (*especially* /ai/, /eɪ/, /oi/ as in *seeing*, *saying*, *sighting*, *fine*, *enjoy*).

The vocalic allophones of /w/, as Gimson (2009:215) explains, are articulated by the tongue assuming the position for a back half-close to close vowel (depending upon the degree of openness for the following sound), the lips are rounded (more closely when followed by /u:/, /ʊ /, or /ɜ :/ than when preceding a more open or front vowel as in *woo*).

Wood, war, with, west, we, in these cases where /w/ precedes /u:/, the lip rounding for /w/ is closer and more energetic than that associated with /u:/ permitting a distinction between such a pair, as *ooze, woos*.

A /w/ glide is sometimes heard at a point of vowel hiatus where the first vowel is /u:/ or a diphthong ending in /ʊ / (*especially /aʊ/, e.g. doing, following, our, allow*). Such a perceptible /w/ results from the relatively following vowel (ibid:216). (See also Ladefoged,2011:68; O'conner,1973:149,228).

2.3 The Sounds /j/ and /w/:Phonological Realization (Function)

Roach (2009:50) maintains that despite the vowel-like character, the /j/ and /w/ are used like consonants. For example, they only occur before a vowel phoneme, which is typically a consonantal distribution. Gimson (1980:201) argues that although the semi-vowel are in phonetic terms, generally vocalic, they are treated within the consonantal class, mainly because their function is consonantal rather than vowel-like, i.e. they have a marginal rather than a central situation in the syllable. A word beginning with /w/ or /j/ is treated as beginning with a consonant in the following ways: if a word beginning with /w/ or /j/ is preceded by the indefinite article, it is the 'a' form that is found as in *a way, a year*. Another example is that of the definite article 'the', which is pronounced as /ð ə / before a consonant as in *the dog /ð ə dɒ g/, the cat /ð ə kæt/,* and as /ð ɪ / before vowels as in *the apple /ð ɪ æpl/, the orange /ð ɪ ɒ r ɪ ndʒ/. So, with /w/ or /j/ the pronunciation of the is /ð ə / as in the way /ð ə weɪ /, the year /ð ə jɪ ə/. This evidence illustrates why it is said that /j/ and /w/ are phonologically consonants (Gimson, 1980:211, 2009:51).*

However, it is important to remember that to pronounce them as fricative (as many foreign learners do) or as affricate is a mispronunciation. Only in special context do we hear friction noise in /j/ and /w/; this is when they are preceded by *p,t,k* at the beginning of the syllable(Gimson,1980:211; Roach,2009:51; Ladefoged,2011:68), as in these words:

Pure	/pju ə /	(no English word begins with pw)
Tune	/tju:n/	twin /twɪ n/
Queue	/kju:/	quit /kwɪ t/

Another evidence which shows that /j/ and /w/ are phonologically consonants is that when *p,t,k* come at the beginning of a syllable and are followed by a vowel, they are aspirated. This means that the beginning of a vowel is voiceless in this context. However, when *p,t,k* are followed by (*j,w,l,r*) these voiced continuant consonants lose their voicing and become fricative. So words like *play* /pleɪ /, *tray* /treɪ /, *quick* /kwɪ k/, *cue* /kju:/ contain devoiced and fricative, whereas words like *lay*, *ray*, *wick*, and *you* contain voiced (*l,r,w,j*) (ibid).

Section Three

Semi-Vowels (ي) /ya/ and (و) /wa/ in Arabic

3.1 Introduction

The term semi-vowels انصاف الحركات /ansafharakaat/ is given to the sounds /ya/ ي and /wa/ و, which are pronounced by the organs of speech starting from the position of diacritics حركة [haraka] but it transmits quickly from this position to another, and because of this transitional nature these sounds are considered as consonants اصوات مهموسة [asswaatmahmoosa] and not diacritics /harakaat/ as in: ولد [walad] (boy) and حوض [hawth] (pool), يترك [yatrak] (leave), بيت [bayt] (house) (Bishir,2000:36).

These two sounds are considered soft sounds, اصوات اللين [aswat al-leen] in Arabic because of the transitional or gliding nature they have when comparing with other diacritics [harakaat]. From the production point of view, these two sounds are considered as nearly like diacritics [harakaat], which is rendered in English by vowels, but from the function point of view, they behave like consonants. [aswaatsaamita] and for this reason they are called semi-vowels (ibid).

3.2 The Sound (ي) /ya/ and (و) /wa/: Phonetic Realization (Production)

Bishir (2000:369) states that the sound (ي) /ya/ is produced when the organs of speech that produce this sound have the suitable position to pronounce a kind of كسرة kasra (◻) then the same organs leave this position quickly and move towards the middle of the tongue and to the hard palate. When producing the

(ي) /ya/ sound, the lips are spread and the passage to the nose is blocked. Also, there is a sort of vibration of the vocal cords. The (ي) /ya/ sound is a semi-vowel pronounced by the hard palate and such a property can be characterized in the following examples: (See also: Anees,1999:40-41):

(يترك) leave [yatruk],

(بيت) house [bayt]

Bishir (ibid) maintains that in the production of the sound (و) /wa/, the organs of speech take the suitable position to pronounce dhama (□) and that the lips take the rounded shape. The passage to the nose is blocked by raising the hard palate, and the vocal cords start to vibrate.

The Arab scientists accurately consider the sound (ي) /ya/ as a sound produced by the middle of the hard palate. It is pronounced when the middle part of the front of the tongue is raised closely towards the palate (Gibil, 2006:101). The sound /ya/ and /wa/ are transitional sounds. They are composed in the position of the lax sound then transmit or glide to another position (Anees,1999:44).

3.3 Controversial Issues on the State of the Sounds (ي) /ya/and (و) /wa/

There is a sort of controversy among the Arab phonologists with regard to the state of these two sounds, i.e. the (ي) /ya/ and (و) /wa/ . Some Arab phonologists argue that these two sounds are long diacritics حركات طويلة [harakaattaweela]. While others say that both sounds are to be considered as semi-vowels اشباه حركات [ashbaaharakaat] for they have a sort of softness that makes them similar to the diacritics or حروف المد [huroof al mad] (Muhammad,2002:139) (Cited in Anees,1999:44).

Ibin Jini (Cited in Anees,1999:44), the famous Arab linguist, support the first viewpoint which considers the two sounds as long diacritics حركات طويلة [harakaattaweela] as he says that the sound which have the characteristics of extension without cutting are: أ، و، ي [alaf, waw, and ya'a]. the sounds /wa/ and /ya/ are considered either vowels or consonants depending on different bases. They are considered as vowel sounds (Bishir,2000:370; Anees,1999:26), as in:

القاضي [alkathi] the judge

ادعو [a'du:] I call

Since /ya/ in القاضي [alkathi] (the judge) is nothing but kasra (◌), and the /wa/ in ادعو [a'du:] is a long dhama (◌). There is no difference between kasra (◌) and /ya/. The only difference is the duration of the time when pronouncing each one of them. The same thing can be applied to the pronunciation of /wa/.

The two sounds, i.e. /ya/ and /wa/ are also considered as consonants اصوات صامته [aswaatsaamita] in relation to their production and function. Some Arab linguists argue that the sound /wa/ (و) as in: ولد [walad] (boy) and sound /ya/ as in يترك [yatruk] (leave) are to be considered as consonants for certain reasons. First, they are not clearly heard in the same way, when they are considered as vowels, particularly in examples such as القاضي [alkathi] (the judge) and [a'du:] (I call). Second, when the sound /ya/ is pronounced, the space between the tip of the tongue and the hard palate is narrower than the space between them when pronouncing the kasra (◌). The same thing is also true for the sound /wa/ where the space between the tip of the tongue and the hard palate is narrower than producing the sound /wa/ than the space between them in case of pronouncing dhama (◌). Third, the sounds /wa/ and /ya/ in القاضي [alkathi] (the judge) and [a'du:] seem to be shorter than dhama (◌) and kasra (◌) respectively (Anees,1999:26).

3.4. The Sounds (ي) /ya/ and (و) /wa/: Phonological Realization (Function)

Some Arab scholars think that the (و) /wa/ in حَوْض [hawth] (pool) and (ي) /ya/ in بَيْت [bayt] (house) are to be regarded as combination of two vowels (diphthongs). In fact, this is not correct since the diphthong is to be realized as one unit, and that when examining the example given above, it is clear that they contain two separate units. These two units are realized by fatha (◌) and (و) /wa/ in حَوْض [hawth] (pool), and fatha (◌) and (ي) /ya/ in بَيْت [bayt] (house). This, in turn, shows that both (و) /wa/ and (ي) /ya/ are functionally consonants depending on certain criteria. The first criterion is that both sounds are considered consonants when they occur in initial position in a word (Bishir,2000:370; Omer,1976:305). Consider the following examples:

واهب [waahib] (giver)

يَلد [yalid] (bear),

where both /wa/ and /ya/ are considered as consonants and their consonantal function is determined by their occurrence in initial position. This shows that the determination of the state of both sounds, i.e. whether they are semi-vowels

or consonants is determined by the environment in which they occur. The second criterion that decides the consonantal state of /wa/ and /ya/ is realized in terms of phonological environment. Both /wa/ and /ya/ are considered consonants when they are followed by any kind of diacritics, like kasra (◌ِ) or fatha (◌َ), as in the examples below: (ibid)

وَعِدَ [wo'ida] (being promised)

مَيَامِين [mayameen]

The third criterion, which decides that both (و) /wa/ and (ي) /ya/, are consonant sounds is also related to the environment in which both sounds occur. They are considered consonants when they are preceded by fatha (◌َ) (Bishir,2000:370), as in the examples below: (ibid)

حَوْضَ [hawth] (pool)

بَيْتَ [bayt] (house)

Section Four

A Contrastive Analysis of the English and Arabic Semi-Vowels

4.1 Introduction

This section presents a contrastive analysis of semi-vowels in English and Arabic in an attempt to find out to what extent the two languages diverge or converge in this respect. The analysis in this section is based on the analyses made in section two and three of this study. The comparison of the semi-vowels in both languages will make account of the following:

4.2 Phonetic Realization of the Semi-Vowels in English and Arabic

It is obvious that there is no much difference between English and Arabic as regards the production of the semi-vowels in both languages. In English, the production of /j/ is similar to that of the front close vowel which is pronounced with a part of the tongue nearer to centre than to front raised just above the half close position. The lips are loosely spread. The tongue is lax compared with tension for /i:/. In Arabic, the sound (ي) /ya/ is produced when the organs of speech that result this sound have the suitable position to pronounce a kind of كسرة kasra (◌ِ), then the same organs leave this position quickly and move towards the middle of the tongue and to the hard palate. When producing the

(ي) /ya/ sound, the lips are spread and the passage to the nose is blocked. Also, there is a sort of vibration of the vocal cords. It is to be noted that when producing the English /j/ and the Arabic /ya/, the lips are spread, and that the vocal cords vibrate. This means that both languages consider these two sounds as voiced.

The production of the sound /w/ in English is closely similar to /ʊ/, which is pronounced with a part of the tongue nearer to centre than to back raised just above the half close position. The lips are rounded. The tongue is laxly held, no firm contact being made between the tongue and the mouth. In Arabic, on the other hand, the sound /و/ is pronounced when the organs of speech responsible for producing this sound take the suitable position to pronounce dhama (□) and the lips take the rounded shape. The passage to the nose is blocked by raising the hard palate, and the vocal cords start to vibrate. It is to be noted that there is a sort of similarity between the English /w/ and the Arabic /wa/ with regard to their production in the sense that when producing both of them, the lips are rounded, and the vocal cords vibrate.

4.3 Phonological Realization of the Semi-Vowels in English and Arabic

English and Arabic show a marked similarity in relation to their semi-vowels from the phonological point of view, i.e. their function. In English, the semi-vowels /j/ and /w/ are like vowels in their production and like consonants in their function. In Arabic, on the other hand, the sounds (ي) /ja/ and (و) /wa/ are like vowels which are rendered in Arabic by حركات [harakaat] in their production, and like consonants which are rendered in Arabic by اصوات مهموسة [asswaatmahmoosa]. In English, the /j/ and /w/ are used like consonants mainly because their function is consonantal rather than vowel-like, i.e. a word beginning with /w/ or /j/ is preceded by the indefinite article, it is ‘a’ form that is found, as in *a way*, *a year*. Another example is that of the definite article ‘the’, which is pronounced as /ð ə / before consonants, as in *the dog* /ð ə dɒ g/, *the cat* /ð ə kæt/, and as /ð ɪ / before vowels, as in *the apple* /ð ɪ æpl/, *the orange* /ð ɪ ɒ rɪ ndʒ/. So with /w/ or /j/, the pronunciation of *the* is /ð ə /, as in *the way* /ð ə waɪ /, *the year* /ð ə jɪ ə/. This evidence illustrates why it is said that /j/ and /w/ are phonologically consonants. Another evidence which shows that /j/ and /w/ are phonologically consonants is that when **p, t, k** come at the beginning of a syllable, and are followed by a vowel, they are aspirated. This means that the beginning of a vowel is voiceless in the context. However,

when **p, t, k** are followed by (j,w,l,r), these voiced continuant consonants lose their voicing and become fricative. In Arabic, on the other hand, both (و) /wa/ and (ي) /ya/ are functionally consonants. Both sounds are considered consonants when they occur in initial position in a word. Consider these following examples:

واهب [waahib] (giver)

يَلد [yalid] (bear),

where both /wa/ and /ya/ are considered as consonants and their consonantal function is determined by their occurrence in initial position. This shows that the determination of the state of both sounds, i.e. whether they are semi-vowels or consonants is determined by the environment in which they occur. Also, the consonantal state of /wa/ and /ya/ is realized in terms of phonological environment. Both /wa/ and /ya/ are considered consonants when they are followed by any kind of diacritics like kasra (◌ِ) or fatha (◌َ), as in the examples below :

وَعِدَ [wo'ida] (being promised)

مِيَامِين [mayameen]

The third criterion, which decides that both (و) /wa/ and (ي) /ya/, are consonant sounds is related to the environment in which both sounds occur. They are considered consonants when they are preceded by fatha (◌َ), as in the example below:

حَوْضَ [hawth] (pool)

بَيْتَ [bayt] (house)

Conclusions

The preceding analysis of the semi-vowels in English and Arabic has led to the following conclusions:

1. With both English and Arabic, the semi-vowels are considered as vowels in their production and like consonants in their function. In English, the semi-vowel /j/ is like the short vowel /ɪ /, and /w/ is like the short vowel /ʊ / as regards their production. In Arabic, on the other hand, the semi-

vowel /ya/ is like كسرة *kasra* (□), which is regarded in Arabic as *haraka*, and the /wa/ sound is similar to ضمة *dhama* (□).

2. There is a sort of similarity between the English short vowel /ɪ / and the Arabic kasra (□), and in the same way, the English /ʊ / is similar to the Arabic dhama (□). This leads to conclude that there is no much difference between English and Arabic as regards the production of the semi-vowels in both languages.
3. With reference to the function of the semi-vowels in English and Arabic, both languages show that it is the phonological environment in which the semi-vowel occurs can determine the consonantal state of semi-vowels in both languages.

4.

Bibliography

- Al-Hamad, G. K. (2002). *Al-madkhalelaelim al-aswaat al-Arabiyya*. Al-majma'a al-elmi press.
- Anees, I. (1999). *Al-aswaat al-lugawiyya*. Maktabat al-Anglu al-Masriyya.
- Bishir, K. (2000). *Elmu al-aswaat*. Cairo: Gareeb press.
- Crystal, D. (2003). *A dictionary of linguistics and phonetics*. (5th Ed.). London: Blackwell.
- Gibal, H. M. (2006). *Al-mukhtasar fi aswaatalluga al-Arabiyya. A theoretical and applied study*. Cairo: Maktabat al-a'adab.
- Gimson, A.C. (1980). *An introduction to the pronunciation of English*. (3rd Ed.). Wing King. Tong co. Ltd.
- Ladefoged, P. (2011). *A course in phonetics*. (6th Ed.). Wordsworth, Cengage Learning.
- Lass, R. (1976). *English phonology and phonological theory: synchronic and diachronic studied*. Cambridge University Press.
- Mubarak, M. (1995). *Mu'jam al-mustalahaat al-alsuniyya*. Dar al-fikir al-Lubnani.
- O'connor, J.D. (1973). *Phonetics*. Hazell Watson and Viney Ltd.
- Omer, M.A. (1976). *Dirasat al-aswaat al-ligawiyya*. (1st Ed.). Kuwait University, alam al-kutib.
- Roach, P. (2009). *English phonetics and phonology*. Cambridge University Press.