

## Towards Modern Phonetic Description for the Arabic Morphological Phenomenon al-Maqṣūr and al-Manqūṣ as an Example

**Dr. Fadel Khalil Al-Sheikh Hassan**

Assistant Professor  
Faculty of Educational And Arts  
UNRWA, Amman  
Jordan

### Abstract

*This study aims to handle many of al-Maqṣūr and al-Manqūṣ issues in the Arabic morphological lesson. It was handled depending on the modern phonemic processes and the data of articulatory phonetics and phonology. As a result, this study will be a model that used for reframing a lot of complex or ambiguous issues in the Arabic morphological lesson. This study has achieved its purpose by displaying what the traditional morphological theory cited in al-Maqṣūr and al-Manqūṣ issues. As well as, it discussed it using the modern phonetic approach. Finally, it settled the matter by reconciling between ancient morphologists' remarks and modern linguists' points of view. The study was divided, according to its curriculum, into three parts. In the first part, aspects of the modern phonemic theory, which represents search devices in the morphological phenomenon, were clarified. In the second part, the aspects of the traditional morphological theory in al-Maqṣūr and al-Manqūṣ were explained. In the third part, it sheds the light on many sides of al-Maqṣūr and al-Manqūṣ in ancients' standards. Furthermore, the study stops on the transformations of al-alifin al-Maqṣūr and al-yā' in al-Manqūṣ, the dual of al-Maqṣūr and al-Manqūṣ, the plural of al-Maqṣūr and al-Manqūṣ, al-tanwīn of al-Maqṣūr and al-Manqūṣ, and the modern phonemic data in what is mentioned above. The study concluded to drop what contrasts with the accurate scientific theory, which is adopted by modern phonetics. Moreover, to have an access to a compromise formula that simplifies the Arabic morphological lesson.*

### **Fundamental Phonemic Determinants in Studying the Morphological Phenomenon**

This study displays the phonetic determinants that establishes for its structure and agrees with its required data. The following points are the most important determinants:

#### **First – Consonants and Vowels**

The linguists agreed to divide the Arabic sounds into consonants and vowels. "This division depends on the sounds' nature and their characteristics, with paying an attention to two main characteristics. They are the vocal cords status and the way the air stream passes through the throat, the mouth and the nose. Third characteristic can be added which is the shape of the lips; however, this characteristic should be a way to differentiate between the vowels themselves not between vowels and consonant."<sup>(1)</sup>

The linguists decided that "a vowel is a speech sound through whose production the air stream passes freely through the throat and the mouth without any obstruction, narrowing the passage of the air or producing a fricative. However, each sound that is not applied on this definition is called consonant. In other words, a consonant is a speech sound through whose production the air stream is obstructed, whether it is a complete obstruction as in *al-Dāl*, or it is a partial obstruction caused by audible friction. Nasals like *al-Mīm* and *al-Nūn* are considered consonants. As well as, the sounds that the air stream veers (it passes through the two sides of the mouth, not through the center of the mouth like *al-lām*) are consonants".<sup>(2)</sup>

This study was attached with two tables, where the consonants and vowels are described. In description consonants and vowels, a phonemic value should be given to *al-Wāw* and *al-Yā'*. Two types of *al-Wāw* and *al-Yā'* are stated as follows:<sup>(3)</sup>

**First** - *al-Wāw* and *al-Yā'* may be long vowels which is equal to twice as much the short sound (*al-ḍammah* and *al-kasrah*). *al-Wāw* is 2 *ḍammah* and *al-Yā'* is 2 *kasrah*. These sounds are called *Wāw al-mad* and *Yā' al-mad*.



- a. short syllables: (CV)
  - b. medium syllables: (CVV), (CVC). They are sometimes called long syllables.
  - c. extended syllables: (CVVCC), (CVVC), (CVCC)
2. Arabic syllables may be divided according to their nature into three divisions: <sup>(2)</sup>
- a. opened syllables: (CV), (CVV)
  - b. closed syllables: (CVC), (CVVC), (CVCC), (CVVCC)

And it must be mentioned that doctor Ismā'īl 'amāyrah has a study in which he presents the Arabic syllabic patterns. He divides the Arabic syllables into three divisions: <sup>(3)</sup>

- a. cardinal syllables: includes short opened syllable (CV), long opened syllable (CVV), and short closed syllable (CVC)
- b. semi-core syllables: includes long closed syllable (CVVC), and short closed solid syllable (CVCC)
- c. subsidiary syllables: includes nine syllables.

(1) Look: studies in Arabic phonetics, Dāūd 'Abdu, page 107-108

(2) Look: Linguistic Sounds, Ibrāhīm A'nis, page 163- 164

(3) Look: Orientalists and Linguistic Curriculum, Ismā'īl 'amāyrah, page 149

And he sees that “most of Arabic words are based on cardinal syllables, while the semi-core syllables and subsidiary syllables are restricted to special positions. However, they vary in their importance and publicity.

What distinguishes subsidiary from semi-core syllables is that subsidiary is used for aesthetic purposes like in hymns and litanies. On the other hand, semi-core arises from stopping so a sukūn is formed.” <sup>(1)</sup>

3. The syllables (CV, CVV, CVC, CVVC) occurs in all speech positions, while the syllables (CVVCC, CVCC) occurs only when you stop at the end of a word. They never occur at the middle. <sup>(2)</sup> For instance, the word ('aādd) - CVVCC – and the word ('udt) – CVCC - . But if there was ḥarakah on al-Dāl in the word ('aādd), it would be formed of two syllables.

'aāddun                    ' a ā d / d u n  
CVVC/ C V C

And if there was ḥarakah on al-Tā' in the word ('udt), it would be formed of two syllables.

('udtu)                    ' u d / t u  
CVC / C V

4. The syllable in Arabic never starts with two consonants or more, and it does not end with two vowels except in stop case <sup>(3)</sup>. Also three vowels or more never occur sequentially in the same syllable.
5. Two consonants can occur sequentially at the middle or the end of an Arabic word. That is possible due to the fact that the first consonant is the end of the first syllable; the second one is the beginning of the second syllable, so that no canoeing happens. <sup>(4)</sup> For example, in the word (yaktub) al-Kāf is the end of first syllable – yak- , and al-Tā' is the beginning of the second syllable – tub-.
6. Syllable in Arabic does not start with a vowel; however, it starts with a consonant followed by ḥarakah wherever the syllable was in the word. <sup>(5)</sup>
7. In Arabic, no syllable consists of one and only one phonetic, whether it is consonant or vowel.

(1): the previous source, page 139

(2): Look: Linguistic Sounds, Ibrāhīm A'nis, page 166

(3) Look: Phonetic Curriculum, 'abd al-ṣabūrshahīn, page 41

(4) The previous source, page 42

(5) Look: the previous source, the previous page

8. Syllable nucleus must be a vowel. It can never be consonant.

9. Although Arabic includes closed and opened syllables, <sup>(1)</sup> it tends to closed syllables. Closed syllables are four, while the opened are two.

10. Arabic distinguishes between vowels according to their length. <sup>(2)</sup> there are short vowels like al-Fatḥah in (kataba), and there are long vowels like in (kaataba)

Ka / ta / ba  
CV / CV / CV  
Kaa/ ta / ba  
CVV/ CV/ CV

11. Arabic does not allow beginning with a stressed consonant because a word phonetic structure requires considering a stressed consonant as two sequent consonants.<sup>(3)</sup>

### ***Traditional morphological theory aspects of al-Maqṣūr and al-Manqūṣ al-Maqṣūr***

Ancient linguists defined al-Maqṣūras “any noun ends with a’lifmafrūqah.”<sup>(4)</sup> Or “any noun ends with a’lif.”<sup>(5)</sup> Or “a noun which its parsing letter is a’liflāzimah.”<sup>(6)</sup>

“al-Maqṣūr got its name because it is shortened from al-hamzah. In other words every Maqṣūr is forbidden from al-hamzah.”<sup>(7)</sup> Or “because it is extended as much there is flexibility in its a’lif. And because it’s a’lif omits al-tanwīn or saken after it . . . . Also it may be because is not parsed”<sup>(8)</sup>

In the ancients’ point of view, al-Maqṣūr may be either standard - the grammarian’s job- or audible - the linguist’s job.<sup>(9)</sup> The standard follows a specific rule, and the audible can be extrapolated from the word’s usage

(1) Look: Sound Linguistic Study, A’ḥmadmukhtar ‘ali, page 257

(2) Look: Studies in Arabic phonetics, Dāūd ‘Abdu, page25

(3) Look: the previous source, page 29-30

(4): al-Maqṣūrwa al-mamdūd, a’bu al-barakat al-a’nbary , page 1

(5): al-tabṣrahwa al-tadhkerah, al-ṣamiri, 2/608

(6): ḥashirat al-ṣabban ‘alasharḥal-a’shmuni ‘alaa’lfyatI’binMalek, 4/106

(7): al-tabṣrahwa al-tadhkerah, al-ṣamiri, 2/608

(8): ham’ al-hawami’, al-saiwti. 2/173

(9): ḥashirat al-ṣabban, 6/106

“The standard Maqṣūr is any noun that ends with a vowel, has a consonant parallel, and there is fatḥah on its penultimate.”<sup>(1)</sup>

Morphologist present the standard forms of al-Maqṣūr as follows:<sup>(2)</sup>

1. (Fa’ala) maṣdar (Fa’ila, Yaf’ali)

Like in (hawan) masdar (hawia, yahwa) because it is paralleld with (baṭra)

2. Each noun with (maf’ūl) rhythm (isimmaf’ūl) and ends with a vowel:

a. (muf’al) as in (mu’ṭā) because it is paralleld with (mukram)

b. (mufta’al) as in (mushtara) because it is paralleld with (mukhtaṣar)

c. (mustaf’al) as in (mustahdan) because it is paralleld with (mostakhraj)

3. (fi’al) (fi’lah plural)

Like in (firan) (firyah plural) because it is paralleld with (sidar)

4. (fu’al) (fu’lah plural)

Like in (’uran) (’urwah plural) because it is paralleld with (zulam)

5. (fa’al) ism jins jam’iy

Like in (ḥaṣan) because it is paralleld with (qadara)

6. (maf’al) place and time noun

Like in (malhan) because it is paralleld with (masraḥ)

While audible Maqṣūr are as:<sup>(3)</sup>

1. fatḥah on the first letter as in (a’ssanā), al-jana

2. kasrah on the first letter as in a’rribā, al-qirā

3. ḍammah on the first letter as in a’ḍuhā

The ancients mentions that al-a’lif in al-Maqṣūr “either it is wāw or yā’, or it is supernumerary. The originally wāw like in raja, its dual is rajawān. While the originally yā’ like in raḥā, its dual is raḥayān. On the other hand, the supernumerary a’lif either it is ll-ta’neeth as in ḥublā, or it is ll-i’lḥāq as in a’rṭā.”<sup>(4)</sup>

**al-Manqūṣ**

“It is the inflective noun that ends with yā’, and there is kasrah on its penultimate letter as al-dāʿī and al-munādy.”  
(5)

(1): shadha al-‘urf, a’ḥmad al-ḥimlawi, page 92

(2) Look: ḥashirat al-ṣabban, 6/106-107, al-Maqṣūrwa al-mamdūd, a’bu al-barakat al-a’nbary , page 2-4, and shadha al-‘urf, a’ḥmad al-ḥimlawi, page 92

(3): al-Maqṣūral-a’nbary , page 4-28

(4): the previous source, page 1

(5) look: shadha al-‘urf, a’ḥmad al-ḥimlawi, page 91

It is called Manqūṣ because when it is parsed (marfūʿ or majrūr), a diminution occurs. <sup>(1)</sup>

Linguists agrees that yā’al-Manqūṣ is two types:

- |   |          |          |
|---|----------|----------|
| 1. Original yā’ in the root as in qaḍāyaqḍī                             | →        | →        |
| 2. Yā’ originally wāw, and it is preceded by kasrah as in daʿā (daʿawa) | addāʿiwa | addāʿī → |

Linguists agrees that yā’ al-Manqūṣ is fixed when the word sarts with (AL) as al-qāḍī, or when it is muḍāf as qāḍī al-quḍāh

yā’ al-Manqūṣ is omitted when the word is (nakirahmarfūʿah) as hadhāqāḍīn, or when it is (nakirahmajrūrah) as marartubiqaḍīn.

**Phonetic al-Maqṣūr and al-Manqūṣ issues Clarifications**

First- al-a’lif in al-Maqṣūr and al-ya’ in al-Manqūṣ transformations:

Traditional morphologists preferred the opinion which says that al-a’lif in al- Maqṣūreither it originally is wāw or yā’, or it is supernumerary for al-ta’nīth or al-i’lḥāq.

The saying that tells al-a’lif in al-maqṣūr is transformed from yā’ - al-hawā for instance - is unacceptable by the phonetic rules. This is due to the fact that the syllabic structure for hawā is different from haway.

HawaaCV/ CVV

Haway CV/ CVC

And as the phonetic acceleration rates law\* tends to accept the syllable CVV more than CVC, al-a’lif remains a main element in the root "without the need of inserting transformations in the root even if it is mentioned in poetry". <sup>(2)</sup>

In addition, the saying that tells al-a’lif is transformed from wāw.

ʿaṣā CV/ CVV

ʿaṣaw CV/ CVC

(1) look: sharḥqatr al-nada wabl al-sada, 1/62

\*This law depends on the speaker desire to continue talking without any interruption, so it requires harraying in pronouncing the syllables (refer Acoustic Morphology, ‘abd al-qader ‘abd al-jalil, page 145

(2): refer Acoustic Morphology, ‘abd al-qader ‘abd al-jalil, page 342

So those who accepted what is mentioned previously "looked only on the structure without paying any attention to the phonetic homogeneity. The phonetic homogeneity is very important, and it will not be achieved if there is wāw because it is hard to the speaker to move directly from fathah to wāw. And because this produces phonetic heaviness, there is no need for it". <sup>(1)</sup>

Al’lif al-maqṣūr may be excess for feminization or annexation; however this opinion needs a revision. Al-a’lif (long vowel) takes the job of feminization or annexation so it is a linguistic mark in al-maqṣūr. While "this sound is considered a main element in the phonetic structure because it is a part of it. So as we do not have the right to make any change on any phonetic element, we do not also have the ability to change on this long vowel". <sup>(2)</sup>

Although al-a'lif is a mark, "it is before that a phonetic element which has a phonological rule inside structures."<sup>(3)</sup>

Like in (ḥublaa), al-a'lif is important for the phonetic homogeneity.

ḥublaa CVC/ CVV

"This is a balanced phonetic structure consists of two syllables. The first one is closed, and the second one is opened. But saying that (al-a'lif is supernumerary and does not serve the structure) is not acceptable by phonetic rules".<sup>(4)</sup>

To sum up, there is no justification to assume that al-a'lif is supernumerary even if it is not exist in the root.

And it must be mentioned that a'lif al-maqṣūr refersto masculine in more than one position, as in marḍā and jarḥā

The linguists agreed that yā' al-manqūṣ is sometimes transformed from wāw

Daʿaa (daʿawa) yadʿawaddaaʿiwaddaaʿiy

The syllabic structure for ( addaaʿiw) is CVV/ CVC (opened medium + closed medium). Although this syllabic structure is acceptable in Arabic, "it produces double effort to pronounce the second syllable. So the speaker tends to the opening case instead of closing case to simplify pronunciation"<sup>(5)</sup>. The syllabic structure becomes

Addaaʿiy CVV/ CVV

(1): the previous source, page 342-343

(2): the same source, page 341

(3): Acoustic Morphology, 'abd al-qader 'abd al-jalil, page 343

(4): the previous source, page 341

(5): refer the same source, page 347

Second - al-maqṣūr al-manqūṣdeuteronomy

The linguists mention in al-maqṣūrdeuteronomy that " if al-maqṣūr consists of four letters or more, al-a'lif transforms into yā' as in muṣṭafaa: muṣṭafayaan. This happens because there is yā' in its verb as iṣṭafaa: yaṣṭafii. Also if al-a'lif is unoriginal, it transforms into yā' as in ḥublaa: ḥublayaan."<sup>(1)</sup> " al-a'lif transforms into yā' if it is the third letter as fataa: fatayaan"<sup>(2)</sup>

"If ya' al-manqūṣ is deleted, it must be come back in deuteronomy as in qāḍin: qāḍiyan."<sup>(3)</sup>

Linguists say that to form dual you have to add morphemes which are: <sup>(4)</sup>

1. long vowel + nasal bilabial voiced (a n).

2. glideplatal + al-nūn (a y n).

The first one is for al-rafeʿ, and the second one is for al-naṣīb and al-jar.

Adding these suffixes is easy "because it does not affect the pronunciation. Al-a'lif and al-yā' are long vowels that join the consonant at the end of a word,while joining them to al-maqṣūr needs analyzing."<sup>(5)</sup>

Al-maqṣūr is two types:

1. Two letters followed byalef as in fataa.

In such words, al-a'lif must be transformed to its origin

Fataa+aanifatayaani

CV/CVV/VV/CV CV/CV/CVV/CV

(1): al-tabṣrahwa al-tadhkerah, al-ṣamiri, 2/634-635

(2): shadha al-'urf, a'ḥmad al-ḥimlawi, page 97

(3): the previous source, the previous page.

(4)refer to: Acoustic Morphology, 'abd al-qader 'abd al-jalil, page 366. And Phonetic Curriculum, 'abd al-ṣabūrshahīn, page 126

(5): Phonetic Curriculum, 'abd al-ṣabūrshahīn, page 126-127

In the first syllabic structure, the syllable (VV) is not acceptable in Arabic so the speaker changes al-a'lif into yā'.

(1)

- In al-naṣīb and al-jarr:

Fataa + ayniFataayayni

CVV/VC/CV

CV/CV/CVC/CV

In the first syllabic structure, the syllable (VC) is not acceptable in Arabic so the speaker changes al-a'lif into yā'.

The same processes happen when al-a'lif is originally waw:

ʔaʃaa+aaniʔaʃawaani

ʔaʃaa+ayniʔaʃaayani

2. Three letters or more followed by a'lef as in salmaa.

"In such words, al-a'lif is always transformed into yaa' as salmaa: salmayaan." (2)

This occurs in order to achieve homogeneity between the linguistic units.

al-manqūṣdeuteronomy can be formed by adding the suffixes in al-rafiʔ :

alqaadii+aaniaalqaadiyaani

when the long fathah meets with a long kasrah, yaa' is produced by the glide between the two mark.

In al-nasib and al-jar:

Alqaadii+ayniaalqaadiyayni

(1): the previous source, page 127

(2)refer to: Phonetic Curriculum, 'abd al-ṣabūrshahīn, page 127

Third - al-maqṣūr and al-manqūṣ plural form (modhakkarsālim)

Morphologists mention that the plural can be formed by adding wāw and nūn or yā' and nūn. If the noun was manqūṣ, "its ya' would be deleted, dammah would be put on the letter before wāw, and kasrah would be put on the letter before yā', for instance, qaaduwn or qaadiyn. And If the noun was maqṣūritsa'lif would be deleted, fathah would be put on the letter before wāw or yā'. For instance, al-a'lawwn or muṣṭafawyn." (1)

In morphologists' point of view, a'lif al-maqṣūr deleted because of the meeting of two static letters. Al-a'lif in muṣṭafuwwn deleted because if there was harakah on it, it would be (muṣṭafayuwn). However, it is hard for the speaker to pronounce ya' madmūmah so it is deleted" (2)

Al-yā' in al-manqūṣ is also deleted because of the meeting of two static letters. "We say al-rramuwn. But if the ya' was there, it would be madmuwamah as alrramiyuwn and this is hard. So al-yā' is deleted." (3)

From a modern phonetic point of view, the plural is formed by adding long dammah and nun in rafiʔ case or adding long kasrah and nun. (4)

Long dammah (wāw) and long fathah (a'lif) produce 4 short marks or 2 long marks. So the long a'lif becomes shorter and its meeting with long dammah produces glide (wāw)

mustafaa+uunamustafa+uunamustafawna

In al-naṣīb and al-jarr case, glide happens between the long fathah (a'lif) and the long kasrah (yā' almadd). As a result, the long fathah becomes shorter and a glide produced (yā').

mustafaa+iinamustafa+iinamustafayna

(1): refer to shadha al-'urf, a'ḥmad al-ḥimlawi, page 98-99

(2): al-taṣrahwa al-tadhkerah, al-ṣamiri, 2/634-636

(3): the previous source, the same page

(4): refer to Phonetic Curriculum, 'abd al-ṣabūrshahīn, page 129 and Acoustic Morphology, 'abd al-qader 'abd al-jalil, page 375

Morphologists mention that al-maqṣūr plural requires deleting al-a'lif and replacing fathah as a mark: (1)

mustafaa+uunmustafaa+iin

CVC/CVV/CVV/VVC (in stop case)

CVC/CV/CVV/VV/VV/CV (in joining case)

Because the fourth syllable is not acceptable, the syllabic structure transformed into the following:

mustafawna/ mustafayna

CVC/CV/CVC/CV (in joining case)

CVC/CV/CVCC (in stop case)

The annexation with al-manqūṣ follows the following rules:

Al-rafiʿ : alqaadii+uunaalqaadii+uunaalqaduuna

Naṣīb and jar: alqaadii+iinaalqaadii+iinaalqaadiina

The morphogists believe that yā' al-manqūṣ should be deleted, and it should be replaced by dammah before alwāw or kasrah before al yā'. This omission occurs to prevent two static letters from meeting.

While from a phonetic point of view, the attention is paid for the phonemes homogeneity. If the noun ends with long kasrah (yā' madd), adding wāw and nūn produce dissonant marks (kasrah and dammah). As a result, the yā' is deleted and wāw remains.

alqaadii+uunaalqaad+uuna

And you add long kasrah and nūn to al-manqūṣ, two long kasrah meet. So the speaker deletes one and keeps on.

(1) refer to Acoustic Morphology, 'abd al-qader 'abd al-jalil, page 366

alqaadii+iinaalqaad+iina<sup>(1)</sup>

Also it is explained from a phonological point of view as follows:

alqaadii+iina (alqaadii+uuna) (alqaadii+iina)

CVV/ CVV CVV/CVV/VV/CV

(alqaaduuna) (alqaadiina)

CVV/CVV/CV

The syllable (VV) is not acceptable in Arabic, so the speaker gets rid of it.

Fourth - tanwin al-maqṣūr and al-manqūṣ;

The linguists agree that when we put tanwin on al-maqṣūr, we omit its 'alif to prevent two static letters from meeting.<sup>(2)</sup> Al-tanwin from a phonetic point of view is nūn and is not considered a part of the word structure. Al-tanwin is a way to close the last syllable if it is short opened syllable.<sup>(3)</sup>

Fataa CV/CVV

Fatan CV/CVC

(1) refer to: Phonetic Curriculum, 'abd al-ṣabūrshahīn, page 130

(2) refer to hashiyat al-sabban 2/106

(3) refer to tahliilaldhawaheralsawtyah, smirstitiah, page 83

The phonetic transformation can be visualized for al-Manqūṣ as follows:<sup>(1)</sup>

Al rafiʿ case	Al jarr case	Justification
Ramiy+u+n	Ramiy+i+n	—————
Rami+u+n	Rami+i+n	Omitting the glide law
Ramiin	—————	Phonetic Symmetry law
Ramin	Ramin	Shortening law

Justifications:

(inalrafiʿ case)

1. Ramiy+u+n Ramiy+i+n

The glide is omitted because it is between two marks so it produces double effort to be pronounced.

2. Ramiunramiian

Aldammah is replaced by kasrah to be suitable for the previous kasrah, so ya' madd is produced

3. Raminramin

Al-ya' is shortened because it is followed by tanwīn in the same syllable.

(inaljarr case)

1. Ramiyinramiian

The glide is omitted because it is between two marks (kasratayn).

2. Ramiinramin

Al-ya' is shortened because simplify the pronunciation.

(1)refer to ru'yajadidahfiitafsiiraltanwin fi alarabyah, smirstitiah, page 123

### Articulatory Description of Arabic Consonants

sound	Manner of articulation	Place of articulation	Voiced or voiceless
ʔ	stop	Glottal	Neither voiced nor voiceless
b	stop	Bilabial	Voiced
t	stop	Alveolar	Voiceless
th	Fricative	Dental	Voiceless
j	affricate	Alveoplatal	Voiced
ḥ	Fricative	Pharyngeal	Voiceless
x	Fricative	Uvular	Voiceless
d	stop	Alveolar	Voiced
dh	Fricative	Dental	Voiced
r	liquid	Alveolar	Voiced
z	Fricative	Alveolar	Voiced
s	Fricative	Alveolar	Voiceless
sh	Fricative	Alveoplatal	Voiceless
ṣ	Fricative	Alveoplatal	Voiceless
ḍ	stop	Alveoplatal	Voiced
ṭ	stop	Alveoplatal	Voiceless
ẓ	Fricative	Dental	Voiced
ʕ	Fricative	Pharyngeal	Voiced
gh	Fricative	Uvular	Voiced
f	Fricative	Labiodental	Voiceless
q	stop	Uvular	Voiceless
k	stop	Velar	Voiceless
l	liquid	Alveolar	Voiced
m	Nasal	Bilabial	Voiced
n	Nasal	Alveolar	Voiced
h	Fricative	Glottal	voiceless
w	glide	Labiovelar	Voiced
y	glide	Platal	Voiced

### Articulatory Description of Arabic Vowels

Sound	Tongue movement	Vertical movement of tongue	Shape of lips
I	Front	High	Unrounded
i/ii	Front	High	Unrounded
U	Back	High	Rounded
u/uu	Back	High	Rounded
A	Front	Low	Unrounded
a/aa	Front	Low	Unrounded

1. General linguistics, kamālBishir, page 74
2. General Linguistics, kamālBishir, page 74
3. Look: Arabic Morphology, al-ṭayib al-bkūsh, page 52-54
4. And Phonetic Curriculum, 'abd al-ṣabūrshahīn, page 30-32
5. Look: studies in Arabic phonetics, dāūd 'abdu, page 107-108
6. Look: studies in Arabic phonetics, Dāūd 'Abdu, page 107-108
7. Look: Linguistic Sounds, IbrāhīmA'nis, page 163- 164
8. Look: Orientalists and Linguistic Curriculum, Ismā'il 'amāyrah, page 149
9. the previous source, page 139
10. Look: Linguistic Sounds, IbrāhīmA'nis, page 166

11. Look: Phonetic Curriculum, ‘abd al-ṣabūrshahīn, page 41
12. The previous source, page 42
13. Look: the previous source, the previous page
14. Look: Sound Linguistic Study, A’ḥmadmukhtar ‘ali, page 257
15. Look: Studies in Arabic phonetics, Dāūd ‘Abdu, page 25
16. Look: the previous source, page 29-30
17. al-Maqṣūrwa al-mamdūd, a’bu al-barakat al-a’nbary , page 1
18. al-tabṣrahwa al-tadhkerah, al-ṣamiri, 2/608
19. ḥashirat al-ṣabban ‘alasharḥal-a’shmuni ‘alaa’lfiyatI’binMalek, 4/106
20. al-tabṣrahwa al-tadhkerah, al-ṣamiri, 2/608
21. ham’ al-hawami’, al-saiwti. 2/173
22. ḥashirat al-ṣabban, 6/106
23. shadha al-‘urf, a’ḥmad al-ḥimlawi, page 92
24. Look: ḥashirat al-ṣabban, 6/106-107, al-Maqṣūrwa al-mamdūd, a’bu al-barakat al-a’nbary , page 2-4, and shadha al-‘urf, a’ḥmad al-ḥimlawi, page 92
25. al-Maqṣūr al-a’nbary , page 4-28
26. the previous source, page 1
27. look: shadha al-‘urf, a’ḥmad al-ḥimlawi, page 91
28. look: sharḥqatr al-nada wabl al-sada, 1/62
29. \*This law depends on the speaker desire to continue talking without any interruption, so it requires harraying in pronouncing the syllables (refer Acoustic Morphology, ‘abd al-qader ‘abd al-jalil, page 145
30. refer Acoustic Morphology, ‘abd al-qader ‘abd al-jalil, page 342
31. the previous source, page 342-343
32. the same source, page 341
33. Acoustic Morphology, ‘abd al-qader ‘abd al-jalil, page 343
34. the previous source, page 341
35. refer the same source, page 347
36. al-tabṣrahwa al-tadhkerah, al-ṣamiri, 2/634-635
37. shadha al-‘urf, a’ḥmad al-ḥimlawi, page 97
38. (3): the previous source, the previous page.
39. (4)refer to: Acoustic Morphology, ‘abd al-qader ‘abd al-jalil, page 366. And Phonetic Curriculum, ‘abd al-ṣabūrshahīn, page 126
40. (5): Phonetic Curriculum, ‘abd al-ṣabūrshahīn, page 126-127
41. (1): the previous source, page 127
42. (2)refer to: Phonetic Curriculum, ‘abd al-ṣabūrshahīn, page 127
43. (1): refer to shadha al-‘urf, a’ḥmad al-ḥimlawi, page 98-99
44. (2): al-tabṣrahwa al-tadhkerah, al-ṣamiri, 2/634-636
45. (3): the previous source, the same page
46. (4): refer to Phonetic Curriculum, ‘abd al-ṣabūrshahīn, page 129 and Acoustic Morphology, ‘abd al-qader ‘abd al-jalil, page 375
47. (1)refer to Acoustic Morphology, ‘abd al-qader ‘abd al-jalil, page 366
  - (1) refer to: Phonetic Curriculum, ‘abd al-ṣabūrshahīn, page 130
  - (2) refer to hashiyat al-sabban 2/106
  - (3) refer to tahlilaldhawaheralsawtyah, smirstitiah, page 83
- (1) refer to ru’yajadidahfiitafsilaltanwin fi alarabyah, smirstitiah, page 123