

PHONETIC AND PHONOLOGY IN COMPARATIVE ANALYSIS OF ARABIC AND ENGLISH LANGUAGE

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Abstract

Phonetic is concerned with describing the speech sounds that occur in the Languages of the world. It is a science that contains a lot of concepts, terms and definitions that must be properly assimilated for any meaningful interaction. The problems in the learning of English and Arabic are phonetic and phonology which are derived from the phonemic structure of the learners' mother tongue. A thorough knowledge of Arabic phonology will enable the learners to overcome the psycholinguistic problem of interference of English which is a result of negative transfer of pronunciation habits already formed in the mother tongues. The paper is therefore a case study of the comparative phonetic and phonological analysis of Arabic and English language. It examines the causes of the problems encountered by the students and the factors that influence pronunciation of the two languages. The writers conclude that students should master the sounds of the two languages with proper attention paid to their places of articulation.

Definition of Phonetics and Phonology

Phonetics ('Ilm Taswir al-'Aswat) is defined as the basis of human noises by which messages are actualized or given an audible shape; the nature of those noises, their combinations and their functions in relation to the message. Cannorn (1967), Ekundare (1993) also defines phonetics as sounds which is the basis of human speech an acoustic phenomenon. It has a source of vibration somewhere in the vocal apparatus.

Phonology ('Ilm al-'Aswat al-Kalamiyyah) is concerned not only with establishing which units of sounds a language uses, but also how it makes use of them and examines the relationship between sounds in a given language, and in addition takes action of the theory of sound system in general.

Phonology, according to Scription (1972), is the statement or description of the lingual stoically relevant suprasegmental features, the phonetic system, Allophones, their distribution and the phonological structure. Ekundare (1993) simply puts phonology as "The study of the properties of the sound system of a language which speakers have mastered or internalized by the time they are competent users of it.

According to the aforementioned definitions of both the phonetics and the phonology, one could deduce that phonetics only deals with how speech sounds are made, classified and transcribed, and the phonology also has to do

with the study of the actual sounds of language. It tells one what these sounds are, how they fall into patterns and how they change in circumstance in the course of actual speech performance.

Organs of speech are the vital parts of the body which take active parts in the production of the sounds.

English	Arabic
Pharynx	الحلق
Uvular	اللهايات
Soft Palate / Velum	الطباق
Alveolar	الغار
Hard Palate	اللثة
Upper Teeth	الأسنان العليا
Upper Lip	الشفة العليا
Tongue	اللسان
Lower Tongue	الأسنان السفلى
Lower Teeth	الشفة السفلى
Lungs	الرغان
Wind Pipe	القصبة الهوائية
Vocal Cords	الوتران الصوتيان

Arabic Consonant Sounds

Special note to put in mind is that Arabic vowel sounds are quite different from letters. This is similar to English language as well where the letters are distinct from the sounds.

All Arabic letters are consonants. The Arabic consonant sounds are twenty eight in number.

Place of Articulation

Place of articulation can be defined as the nearest point where the movable and stationary organs of speech meet or about to come in contact with one another.

In Arabic language, there are two systems to determine the place of articulation of a particular sound, we put *Sukun* (ْ) or *Shaddah* (ّ) on the sound and then pronounce it with the help of a vocalized letter before it. The point where the moveable and stationary organs are in total or partial contact with one another is the place of articulation of the sound / ڤ / we put *Sukun* or *Shaddah* on it and a vocalized letter such as *hamzah* before it; or then, we pronounce it slowly. By doing this, we will see that the place of articulation of sound / ڤ / is alveolar.

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The Following are the Places of Articulation and their Sounds

Sounds	English	Arabic
ء / هـ / ع / ح / غ / خ	Pharyngeal	حلقى
ق	Uvular	لهاتى
ك	Velar / Soft Palate	طبقي
ج	Palatal	غارى
ش / ي	Palato-alveolar	لثوى غارى
ث / ظ / ذ	Inter-dental	بيأسنانى
ف	Labio-Dental	شفوى أسنانى
و / ب / م	Bilabial	شفوى
ص / ن / ر / ل / ص / ز / ط / س / د / ت	Alveolar	لثوى

Manner of Articulation

The Arabic consonant sounds are divided into three:

- i. **Plosive Sound:** they are given this name because they are produced with a complete closing of the air compressed behind the closure.
- ii. **Fricative Sound:** A sound is said to be a fricative when the movable and stationary organs of speech do not have total contact but nearer to each other.

Description of Sound by considering the Position of the Vocal Cords

Under this unit Arabic consonant sounds are divided into two voiced and voiceless sound.

- i. **Voiced Sound:** A sound is said to be voiced when it is produced while the vocal cords are coming together and the space between them is so narrow and therefore causes a vibration.
- ii. **Voiceless Sounds:** A sound is said to be voiceless when the vocal cords are wide apart while the the sound is produced and thus there is no vibration. The voiceless sounds are:

أقصى حلقى	وسط حلقى	أدنى حلقى	لهاتى	طبقي	غارى	لثوى غارى	لثوى	بيأسنانى	شفوى أسنانى	شفانى		
د			و	ت	ج		ت ظ ذ			ب	مهموس مجهور	شديد
ط	ح	خ						س ز	ف		مهموس مجهور	رخوء
ظ		غ						ن ل ر		م	أنفى مكرر	متوسد ط
							ي			و		

Classification of Speech Sounds

There are two major classes of human speech sounds. Those sounds produced when the vocal cord vibrates without any further obstruction of the air stream along its route of the body which are called vowels; those sounds which are produced as a result of the outgoing air, whether or not the vocal cords vibrate are called consonants. While the vocal cords go on vibrating, the air moving out gets to the oral cavity where it is modified. This happens through the movement of the tongue and the lips. The movement of the tongue has been made use of by phoneticians to evolve a reference point in the description of vowels.

The English Sound System: Vowel

The English sound system has special symbols for the sounds of English. We shall now give you the symbols and the spellings which the symbols represent. There are twenty of such symbols which represent the English vowels. These are explained below:

1. /i:/

The spelling that could represent it are the following:

ee tree, cheese, canteen.

e complete, be, these.

ea leaf, reason, sea.

ie piece, field, siege

ei seize, receive.

ey key, quay.

2. /i/

It occurs in the following spellings:

i sit, fifth, with, rich.

y city, rythm, symbol.

e wicket, wicked.

ie ladies, cities.

a village, private.

3. /e/

It represents the following spellings:

e set, bed, went

ea dead, head, breath

a many, names

4. /æ/

It occurs in the following spelling forms:

a sat, pat, cat, rash, marry

ai plaint, plaid

5. /a:/

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It occurs in the following spelling forms:

a pass, after, bath, tomato, father
ar part, car, march
ear heart, hearth
er clerk, derby, sergeant
al calm, palm, half
au aunt, laugh

6. /ɔ:/

The spellings in which it occurs are:

o dog, dock, holiday, sorry, gone
a was, what, swan, want, watch

7. /ɔ:/:

It occurs in the following ways in spellings:

or cord, horse, sword, born
aw saw, lawn, jaw, yawn
ou bought, ought
au daughter, fault, cause
ore before, more
oor door floor
oar board
our court, four

8. /u/

It occurs in the following forms:

u pull, full, sugar, cushion, butcher
o wolf, woman, bosom
oo good, book, wood, wool
ou could, should, would, courier

9. /u:/:

It occurs in spelling thus:

oo food, soon, moon, spoon
o do, who, move, lose
ou group, soup, wound, though
u rude, June, Susan
ew; ue; ui; oe chew, bleu, juice, shoe

10. /ʌ/

It is represented in spelling thus:

u hut, much, such, sun
o month, done, honey, front, son
ou touch, country, cousin, couple

11. /ɪ:/:

it occurs in the following forms:

ir; yr bird, first, girl, fir, myrtle
er; ur her, fern, fur, turn
ear earn, earth, hearth, heard
or word, work
our adjourn, courteous, journal

12. /ə/

It is represented in spelling thus:

a along, admit, salad, accept
or/er doctor, mother, over, water, razors

13. /ei/

It occurs in the following spellings:

a ape, late, make, waste, base
ai; ay waist, rail, aim, day, may, away
ei; ey eight, veil, weigh, they
ea great, steak, break

14. /əu/

It occurs in the following spellings

o so, old, home, both, folk
oa oak, foal, toast, soap
oe toe, doe, foe, hoe
ou; ow soul, though, shoulder, know, blow

15. /ai/

Can be found in the following spellings:

i; y; ime; write, bite, rider, cry, dry, by
igh, eigh high, light, fight, height
ie; ye die, lie, pie, dye
ei; ai; either, aisle

16. It occurs in the following spellings

ou house, sound, out, mouse, shout
ow cow, town, allow

17. /i/

It occurs in the following spellings

oi noise, voice, boil, point
oy boy, toy

18. /iə/

It occurs in the following spellings:

eer deer

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ear	<u>dear</u>
ere	<u>here</u>
eir	<u>weird</u>
ier	<u>fierce</u>
ea	<u>idea</u>

19. /eɪ/

It occurs in the following spellings:

are	<u>care</u> , <u>rare</u> , <u>share</u> , <u>mare</u>
air	<u>air</u> , <u>fair</u> , <u>pair</u> , <u>chair</u>
ear	<u>bear</u> , <u>pear</u> , <u>wear</u> , <u>tear</u> (v)
eir	<u>heir</u> , <u>their</u>

20. /ʌɔ/

It occurs in the following forms:

oor	poor, moor
ure	pure, endure, cure, sure
our	tour, dour, gourd
ur	curious, during, security

English Consonant Sounds

/p/	pat, put, pack
/b/	book, baby, blood
/t/	tea, tick, tap
/d/	drive, dame, dog
/k/	cap, keg, king
/g/	guy, guide, guard
/f/	food, first, fan
/r/	reek, ran, rat
/s/	sit, seek, sat
/m/	money, mother, mouth
/n/	knock, noon, nest
/l/	little, lest, lame
/h/	hen, house, help
/v/	van, vast, valley
/w/	window, west, wasp
/j/	yes, yet, young
/z/	zip, zebra

The unfamiliar ones are the following

//	sing
/θ/	thrive
/L/	they
/ʃ/	shield
/ʒ/	pleasure

/tʃ/ church

/dʒ/ jug

English Consonant Sounds: Classification

Classes	Example	Characteristics
Plosives	/p/ as in port	These are sounds by completely closing the air passage and suddenly removing the obstacles so that air escapes making expensive sound
	/b/ as in broom	
	/t/ as in tap	
	/d/ as in dog	
	/k/ as in cat	
	/g/ as in girl	
Fricatives	/f/ as in first	Sounds formed by removing the air passage at same point so that air escapes making a sort of hissing sounds
	/v/ as in van	
	/s/ as in sun	
	/z/ as in zebra	
	/θ/ as in thrive	
	/ ð / as in then	
	/ʃ/ as in sheep	
	/ʒ/ as in pleasure	
	/h/ as in	
Affricate	/tʃ/ as in church	These are sounds which are like plosives, but in their own case the separation of organs of speech is performed less quickly.
	/dʒ/ as in jug	
Nasal	/m/ as in money	These are sounds which are formed with the complete closing of the mouth at one point so that air is forced through the nose.
	/n/ as in knock	
	/ ŋ / as in English	
Lateral	/l/ as in land	These are sounds formed by an obstacle in the middle of the mouth
	/r/ as in river	
Approximant	/w/ as in woo	These are consonant sound formed without the organs speech touching one another
	/j/ as in yawn	

Factors influencing Pronunciation

1. Linguistic Similarities and Contrasts

Because human languages are drawn from a common pool of the sounds of language, many similarities exist between the sounds of one language and the other. However, each language selects only a limited number of sounds from the common pool and organizes the sounds according to its own phonological rules. The phonological rules then impose phonetic constraints which differ from

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language to language. The selection of sounds by each language and the peculiar organization of the sounds into meaning units lead to two major consequences for languages. A number of languages may have some sounds that are similar in phonetic characteristics. One language may also use some sounds which do not exist in the other language. Arabic language, for example, has no /p/ phoneme. The likelihood is that Arabic speakers have difficulty in pronouncing words that have the sound.

The second consequence is that because these sounds are organized differently in utterances by each language, even those sounds that appear to be similar in two languages, are not exactly so because of the environment in which they occur in relation to other sounds. For example English uses consonant clusters e.g. speak /spi:k/, stop /sto :p/, stem /stem/, Arabic language has no such sounds. In fact, vocalization of words makes a significant difference between Arabic and English languages.

2. Exposure

Another factor that influences pronunciation is the length of exposure and the intensity to the sound and the sound combination in the second language. The advantage of immersion in a second language-learning setting is that the learner is compelled by environmental circumstances and survival as to listen and get returned to the language in all his working moments. A Nigerian child or adult in the streets of London is more exposed to English than the same person who spends only a few hours in the Nigerian classroom listening to English and the rest of each day, reverts to his mother tongue. The underlying principle of language acquisition being enunciated here is that the more exposed one is to the foreign language, and the more intense the exposure, the more practice one has in the language and the more refined one becomes in the pronunciation and general usage of the language.

The Pronunciation Problems of Nigerian Learners of Arabic

Almost everyone has problems of accurate pronunciation of the second language. Therefore, the learners of Arabic as a second or third language in Nigeria cannot be an exception. Jones (1978) observes that “many foreign people of a language generally fail to lengthen properly final consonants preceded by short vowels”. He further emphasized that “the foreign people of a language are in a line to shorten long vowels when pronouncing words that are with long vowels. for example in Arabic language, the English learners of the language may pronounce the words فِيلٌ – filun (an elephant) as فِلْ filun which has no bearing in Arabic word أَنْ – āna now as أَنْ which is meaningless as they may pronounce أَبُو – abū (father) as abu. Jones further observed that “it is a common problem among the learners of foreign language to place stress wrongly on some words. He says: many foreign language learners place stress wrongly in many words. Therefore, there is tendency for some of English learners of Arabic to pronounce a word like يَوْسُف – Yūsuf as يوسوف – Yusuf, يَاسِر - Yāsir as يسير – Yasir and عَاقِب – ‘āqib as عقيب – ‘aqīb.

In learning a second language, over stressing weak syllabus in our commonest error and we can overcome this by specific learning about speech or specific practice. If any Arabic language learner used a word like قاتل /qatala/ (he killed) when he meant to say قاتل /qātala/ he fought, this syllabic over stressing has disorganized both the meaning and the arrangement of the messages interacted by the speaker.

Critically, studying the above given Arabic letters and their phonetic symbols, the phonological and phonetically structure of English learner of Arabic language can be easily traced back to their first acquired language.

The difficulties are due to the interference by the first language. Malik (1997) enumerated the possible difficulties as:

- i. Where the same sounds occur in Arabic but English language has different phonetic realization. For example, the /r/ which is phonetically realized as a voiced alveolar rolled in Arabic. There is tendency for the English learners of Arabic to substitute the English for Arabic /r/ e.g. /da:/ home for /da:r/. Although, this error does not reduce understanding since the English sounds substituted does not contrast with any other sounds in Arabic.
- ii. Where some Arabic sounds are not found in English, inhibition occurs in the learning of the other language. For example, Arabic language has three long vowels ا و ى whereas, English has five long vowels: /i:/, /a:/, /ɔ:/ and /ɜ:/. A common error committed here by the English learners of Arabic is to substitute those ones that occur in their language for Arabic, and this impedes the pronunciation and meaning of such words. It neutralizes important contrast in the sound system of Arabic. This results in confusion between such words and expression as following:
 - a. دَلّ – Dalla (he guided), ضَلَّ - ḍalla (he went astray), دَرَّ – darra (pour), ضَرَّ - ḍarra (harm)
 - b. كَلَّمَ – Kul (eat) and قَلَّ – qul (say), سَبَّحَ - sabaḥa (he swan), ذَبَحَ - dhabaḥa (he's laughter) اِسْمَ – Ism (name) and اِثْمَ – Ithm (sin)

The glottal stop /ħ/ is not present in English language. There is a tendency for the English learners of Arabic to substitute /h/ for the Arabic /ħ/, thus confusing such words is طاهر - /ta:hir/ (pure) and طائر - /ta:'r/ (bird).

Conclusion/recommendations

Language as a medium of communication serves a vital role in the life of human beings. However, the roles of language in communication cannot be over-emphasized. Students should master the way by which Arabic sounds are pronounced with proper attention to their places of articulation.

Teachers should motivate the students to develop natural and rapid assimilation. As there are science laboratories in some schools and colleges, there

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is every need for Principal or Provost of institutions to find means of providing a separate building to serve as the Language Laboratory with necessary equipment for effective teaching of Arabic phonetic and phonology alongside with English. Adequate provision of the teaching aids, tape recorder and empty cassettes for effective learning of Arabic and English should be made students should be encouraged by their instructors to take part in debate and quiz activities where they will be activities where they will be required to make use of the correct pronunciation of Arabic and English Language sounds.

The federal government should see to the appointment of some foreign Arabic and English Instructors for the students to have good interaction with them so as to imitate them.

Students should be interested in taking part in the Language Laboratory tests like oral reading, listening to the already recorded cassettes by the Arabic and English Language experts e.t.c. so as to bring real life situation into the classrooms.

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