



CONTRASTIVE ANALYSIS OF ENGLISH AND ARABIC PHONOLOGY

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ABSTRACT

Phonology is a wide area of study in any language, especially English & Arabic Language; it therefore needs books to cover every single part of these languages. This review paper aims at providing foreign learners of English and Arabic with concise awareness of these two languages in area of phonology, to ease their learning of English and Arabics as foreign or second language. This review paper provides learners with the main differences and rules of English and Arabic language alphabets that the researcher gathered during her teaching of both language to Hausa and Yoruba speakers. The information in this paper is presented in a comparative systematic order to be beneficial for researchers to add in the same area (Phonology) and to do further studies in the fields of: 1- Morphology. 2- Syntax .3- Super segmental.

Keywords: *Phonology, supra- segmental, germination, cluster, phonotactics*

Background of the Studies

Arabic is a Semitic language from the Afro-Asiatic Language Family. English, on the other hand, is a West Germanic language from the Indo-European Language family. Inevitably, these languages show many linguistic differences at all levels of linguistic analysis, i.e phonology, morphology, syntax, semantics, etc.

For this, we will take into consideration the segmental features and phonological processes only, i.e. the [consonant and vowel](#) system of the two languages. We divide this discussion into three sub parts, each covering all major points of difference between English and Arabic Phonology. To ease

our analysis, let's bring general autography and sound systems of both languages.

METHODOLOGY

Methodology used in this research is combination of observation and literature review. The researcher used his students of Yoruba and Hausa background, learning English and Arabic as foreign languages to determine level of contrasts between both languages, especially at level of phonology. To ease his analysis, he contacted literatures of some scholars who have written on Arabic and English. The Arabic orthographies used in this research is well glossed to assist readers of no or less Arabic background.

English Letters and Sounds

According to Pronunciation tips from bbclearningenglish.com

1- There are 26 letters in the English alphabet but there are over 40 sounds in the English language. This means that the number of sounds in a word is not always the same as the number of letters. For example: The word 'CAT' has three letters and three sounds but the word 'CATCH' has five letters but still only three sounds. If we write these words using phonemic symbols, we can see exactly how many sounds they have. CAT is written /k æ t/, CATCH is written /k æ tʃ/ In 'CATCH' the three letters TCH are one sound represented by one phonemic symbol /tʃ/.

2- English letters are divided to **21 consonants** letters and **5 vowels**.

3- There are **5 vowels** letter "a, e, I, o, u", but there are **20 sounds** for these vowels, short vowels, long vowels and diphthongs.

4- English letters can come initially, in the middle or finally in words.

5- The English Alphabet has 26 letters. In alphabetical order, they are: a b c d e f g h i j k l m n o p q r s t u v w x y z.

According to (English Alphabet English Club) , Five of these letters are "vowels". Twenty one are "consonants":

Arabic Letters and Sounds

Abubakar (2004) *in Arabic* showed that:

1- In Arabic there are 28 Alphabetical letters three of them are vowels, and 29 pronounced letters the 29th is in red

ل ا و ه ن ب و ل ك ق ي ف غ ع ظ ط ب ض ص ث ك ط ب ص س ر د خ ج د ث دة ا . ي
حَدُّ قَشِشْدُ عَنَقُضُ كَهْمُه حُطِي هَنَّصُ أَثْجُدُ
ضَطَّكُ

2- There are 29 Arabic letters in the Arabic alphabet each letter has three sound according to the mood () (there are three sounds for the letters () according to the mood.

3- Arabic letters are divided to:

A. 1- Sun letters, these letters are 14 letters (د - ث - ر - س - ص - ط - ظ - ض - ص - ن - ل - ظ - ط - ض - ص) these letters cause not to pronounce the (ل) in (ل) when it is written; the (ل); is silent when it precedes them, and the following letters to (ل) is always geminate as in: انشعِل - انزنت - اندجبد - انخشيب - انتحيند - اننس - انهجه - انظلاو - انطبع - انضجة - انصجبح - انشمنظ - انغلاو - انضمين

B. Moon letters, these letters are 14 letters (ا - ء - ة - ح - خ - ع - غ - ف - ق - ك - ي - و - ه - و - ك) these letters cause to pronounce the (ل) in (ل) when it is written preceding them, and the (ل) takes the () ; as in: انجم - انجش - الأض - انك - انسع - انهجشج - انمعجد - انكتبه - انقشان - انفقه - انغفهخ - انعقيدح - انخيش - انخدج - انيميه

English and Arabic Phonology: Consonant System

We start discussing some of the major differences between English and Arabic Phonology by looking into the consonant system of the two languages.

Number of Consonant sounds

Arabic sound system comprises a total of thirty-two consonants, while that of English has only twenty-four. There are quite a number of common consonant sounds in both the languages. However, there is also a considerable set of consonants restricted to each language. The table below can best state the differences between English and Arabic consonants as stated by Daniel (1996) and Aiman (2012) in Arabic

Arabic language is a consonant language, but vowels letters are more in English language

Plosive Consonants

According to Daniel (1996) and Aiman (2012) in Arabic

English Letter sound	Transcription	Arabic
P (pen)	/p /	پ
b (boy)	/b/	ب
t (tea)	/t/	ت

d (door)	/d/	د
k (king)	/k/	ك
g (goat)	/g/	غ
(general)	/dz/ /ž/	ج

Notes:

I. The sound of /g/ is not found in classical Arabic, but we find it standard Arabic such as جمال .

II. /t/ is alveolar but /ت/ is dental.

III. /t/ has different sounds sometimes is voiced when it comes:

a- Between two vowels e.g. (butter).

b- Between/n/ & /y/ e.g. (twenty).

c- Between two voiced vowels (at another).

d- Before syllabic /l/ e.g. (settle).

e- Before stressed vowel and preceded by /l/ e.g. (malted).

But /ج/ in Arabic has the same sound

3.2.3 Fricative Consonants

According Daniel (1996) and Aiman (2012) *in Arabic*

English Letter sound	Transcription	Arabic
Letter sound		
f (for) , ff (off), gh (cough), ph (philosophy)	/f/	ف
v (van)	/v/	—
th (the)	/ð/	ث
th (this)	/θ/	ث
s (see)	/s/	س
s (son)	/s/	ص
z (zoo)	/z/	ز
sh (wash)	/ʃ/	ش
ʒ (measure)	/dʒ/	—
r (road)	/r/	ر
h (hot)	/h/	هـ

Notes:

I. /ʒ/ sound is taken from French and it is not found in classical Arabic but at the end of some words in standard Arabic.

II. /f/ & /v/ sounds have only one phoneme in Arabic /ف/ not like English.

III. /ð/ sound stand for /ذ/ & /θ/ sound stand for /ث/, if not taught at schools, there will be a blinder between these two sounds and the sound /ð/ may stand for /ذ/ or /ص/, and /θ/ may stand for /ث/ or /ط/.

IV. /s/ sound can stand for /س/ as in (sun); /s/ can stand for /ص/ as in son. (Judy, 2011) defined that pair of sounds are formed in exactly the same place in the mouth are sister sounds such as:

Air Out (voiceless sound)		Air In (voiced sound)	
/p/	pen	/b/	big
/t/	to	/d/	do
/k/	came	/g/	game
/f/	fan	/v/	van
/s/	sip	/z/	Zip
/th/	thigh	/th/	they
/ch/	cheap	/j/	jeep
/sh/	shone	/zh/	genre

3.2.3 Nasal Consonants

Daniel (1996) and Aiman (2012) in *Arabic* identified

English Letter sound	Transcription	Arabic Letter
m (man)	/m/	م
N (near)	/n/	ن
Ng (bring)	/ŋ/	

Note:

ŋ sound is not found in Arabic

D- Lateral Consonants

Daniel (1996) and Aiman (2012) in *Arabic* postulates

English Letter sound	Transcription	Arabic Letter
Clear “l” (clear, leave)	/l/	ل
Dark “l” (feel, people)	/l/	ل

I. Clear “l” before vowel such as in (live) & (leave) and before j (jelly).

II. Dark “l” is only used before all consonants such as (cold) in (and finally such as (vessel).

III. Both clear “l” and dark “l” stand for the Arabic letter “ل”.

E- Semi Vowel

Daniel (1996) and Imtithal (2011) (*in Arabic*) claimed

English Letter sound	Transcription	Arabic
Letter sound		
“w”	/w/	و
“y”	/y/	ي

Notes:

1- “W” seems bilabial when make our lips round but it is velar sound.

2- We call them semi vowels because they behave as vowels.

e.g. a- go /gou/, /gow/ b- day /dei/, /dey/

Vowels

Daniel (1996) and Aiman (2012) *in Arabic* claimed

English Language vowels & sounds vs. Arabic Language vowels and sounds.

English main vowels are: “a” “e” “o” “I” “u” but Arabic vowels are: “ا” “ي” “و” “ة” “ي” “ي” .

1- Some English vowel sounds are exchanged by mood in Arabic such as: /, / // /.

2- /i/ such as in **bit**, it is difficult in Arabic.

3- /i:/ such as in **beat**, in Arabic it is higher sound.

/ε/ not found in Arabic but it can be compared to “ ”.

4- /e/ it is found in Arabic / bed/.

5- /e/, /e:/, /æ/ are various in English phoneme (separate phoneme) not like Arabic same Phoneme /æ/ .

6- /ʌ/ such as in “**cut**”, it looks like “ ” in Arabic.

7- /u/ stand for “ ” in Arabic.

8- /u:/ stand for “ ” in Arabic.

9- It is difficult for students to differentiate between /u/ like in “**book**” and /u:/ like in “**spoon**”.

10- /ɔ/ such as in “**hot**” not found in Arabic.

11- /ɔ:/ such as in “**tall**” not found in Arabic.

12- /θ/ most common sound in English but not found in Arabic.

/ə:/ not found in Arabic, instead mood is used in Arabic such as /a/ /u/ /i/
13- Stress is used in English language such as in "seat" but in Arabic there is gimation , / /

G- Contrastive Linguistic English Language Writing System to Arabic Language Writing System"

English Language Writing System	Arabic Language Writing System
--	---------------------------------------

- | | |
|--|--|
| 1- Writing from left to write. | 1- Writing from right to left. |
| 2- There are capital and small letters. | 2- One form and no capitalization. |
| 3- There is italic in writing. | 3- No italic in writing. |
| 4- There is difference between typing and writing. | 4- There is no difference between typing and Writing |
| 5- There are no identical letters. | 5- There are identical letters in forms but the |

PHONOTACTIC DIFFERENCES BETWEEN ENGLISH AND ARABIC

Phonotactics can be defined as the rules guiding a language to make an acceptable syllabic combination. The rules of combination of sounds to make syllable in English is apparently different from Arabic.

CONSONANT CLUSTER IN ARABIC AND ENGLISH

Consonant cluster is sequence of two or more consonants in a syllable. Here, the consonants follow each other without vowel inserted in between them. English permits consonant clusters at the beginning media and end of syllables, but in Arabic, consonant clusters can occur only at the end of syllable and at media in morpheme boundary. That too, only clusters made up of just two consonants.

Initial consonant clusters in English can be made of either two or three consonants and final clusters can be made up of two, three or four consonants. As a result, The Arabic has consonant cluster in only media, and final position while English has in initial, media and final position.

Arabic	gloss
/jadrib	he is beating
/jaktubu	he is writing
/rizq /	provision

(Abubakar:2004)

Examples of English consonant clusters are:

Initial	media	final
Bread	brilliant	Christ
Cry	hundred	fast
Prime	Christian	christ

Based on the examples of both languages under investigation given above, we can categorically state that consonant cluster is one of other major ways through which the languages can be differentiated.

The Syllabic Structure of English and Arabic

A—V
OF—VC
DO---CV
CAT—CVC
TRY—CCV
STEW—CCVV
STRAW --- CCCVV
LAST---- CVCC
FASTS---- CVCCC

But the syllabic structure of Arabic is just six as stated by S. al-ani. They are:

CV /bi/ “in, at”
CVV /ma:/ “what”
CVCC / dars/ “lesson”
CVVC / ba:/ “door”
CVVCC /ma:rr/ “passer-by”

PHONOLOGICAL PROCESS DIFFERENCES BETWEEN ENGLISH AND ARABIC

As discussed above, all languages passed through some phonological processes, especially when forming syllable or morphemes. Here, we will discuss just two of these processes and explain how they operate differently in both languages.

ASSIMILATION

Assimilation is a phonological process through which a feature of a sound is transferred in to another sound. When ever these features are completely given to another sound called COMPLETE ASSIMILATION. Examples of complete assimilation are common in English morpheme boundary:

Big boy / bib boy/

Bad boy / bab boy/

Examples of complete assimilation can be see

Germination in both Arabic and English

Germination is a phenomenon of doubling some sounds, particularly consonants, in certain positions in the word or in words boundary in phrases and sentences. The term has been defined by different scholars in terms of production or as a phonological phenomenon that can be applied to certain sounds.

Carr (2008, 62) defines the term gemination as "a process whereby a single, non-geminate, consonant undergoes lengthening to become a geminate consonant". Gemination can be seen in English in words such as *unnatural*, where the prefix [un-] is added to the root *natural*, resulting in the pronunciation /ʌn'nætʃrəl/, with what is called fake geminate. (Abubabakar: 2004).

Crystal (2008, 206) states that "gemination is a term used in phonetics and phonology for a sequence of identical adjacent segments of a sound in a single morpheme, e.g. Italian *notte* /nɔtːe/ means (night)".

Gemination in English

In English, gemination does not take place initially in a word, although there are some cases of double consonant letters which occur initially in some loan words that are used in English (llama, llano, Lloyd, Llewellyn). There is a group of consonants which are never doubled in any position in a word, they are /h, j, q, w, x/. Another important point is that the consonant clusters of any type are never geminated. Gemination in English is found mainly in total assimilation, across word boundaries, and in complex and compound words which are morphologically different from simple words in having some extra morphemes attached to them, such as (bell-like; stainless-steel) or (misspell, meanness, roommate). It can be stated that the main reason that leads some consonants to have the geminate feature is a morphophonological one due to the affixation that certain types of words might undergone

Gemination in Total Assimilation

Assimilation is a concept whereby a pronunciation of sound is influenced by the adjacent sounds. This happens due to the difficulty in pronunciation so speakers will tend to utter certain sounds in terms of the other neighboring sounds for ease. Crystal (2008: 39) defines assimilation as "a general term in phonetics which refers to the influence exercised by one sound segment upon the articulation of another, so that the sounds become more alike, or identical." He elaborates that it could happen partially such as in *ten bikes* which is pronounced as /tem baɪks/, not /ten baɪks/ in such a case no gemination happens, and "The assimilation is total in *ten mice* /tem maɪs/, where the /n/ sound is now identical with the /m/ which influenced it." In such a case the /m/ sound has to be doubled or geminated in pronunciation. Other examples could include phrases like *good girl* /gʊd gɜ:l/, *that kid* /ðæk kɪd/, and *dress shop* /dresʃɒp/. For more examples see (Web 4).

Gemination across Words without Assimilation

Gemination happens when a consonant is pronounced for a longer period than it is usually used to be pronounced. This happens only across word boundaries, this can be obvious in the following phrases:

- *Calm man* /ka:m mæn/
- *Black coat* /blæk kəʊt/
- *This site* /ðɪs saɪt

Briefly, germination in English is different from Arabic, major Germination in English is fake germination as it becomes germinated as a result of environment of occurrence, as given in the examples above. Germination in Arabic language is original and can appear in any position of the word. Germination in Arabic is explanatorily explained here below

Gemination in Arabic

Gemination in Arabic is symbolized by using a diacritic called (shadda) in "Arabic writing system" and this symbol is in the form of the letter " " but smaller, it is placed on the geminated letters in writing to mark gemination in pronunciation. In Arabic the "shadaa" () is used to indicate gemination. The reason for the use of shadda is the occurrence of two similar sounds next to each other. It is held that (tashdeed) gemination is an obligatory feature in Arabic writing and pronunciation systems since it has a contrastive feature, it can change the meaning or the grammatical category of a word (Abubakar: 2001).

Hassan (1983: 119) defines gemination (التضعيف) as "the lengthening of the continuant sounds and the plosion in stops". He divided gemination into two groups:

a- geminate consonants (المضعفة السواكن)

Geminate consonants are considered as identical clusters. When syllable boundaries are identified, the first constituent of the clusters whether identical or non-identical is the coda of the preceding syllable, while the second constituent will always be the beginning of the subsequent syllable, the following two examples are for illustration:

In Arabic, gemination can change the meaning of the word as in the following examples:

عَلَّمَ عَلَمًا

(With gemination, it is a verb: *he taught ...*) (without gemination, it is a verb: *he knew...*)

حَمَامَ حَمَامًا

) with gemination means *bathroom*) (without gemination means *pigeons*)

b- long vowels (الطويلة الحركات)

Long vowels are considered as monophthongs and not diphthongs. In comparison with the identical clusters they have the same importance in the pronunciation within the syllable. The vowels which are long could be considered as equivalents to geminate consonants. An example of illustration is in the following:

/kaa tib/ or /ka: tib/ = (means *writer* (- كاتب)(Hassan 1983: 120).

Germination is also defined by Muhammad (2001) as "the pronunciation of the sound twice or giving it more duration". All sounds in Arabic are either short or long in pronunciation; the duration of the long sounds is the double of that of the short. This phenomenon applies to all vowels and consonants (Muhammad, 2001: 75-76).

The duration of a sound is variant according to its position in a word, the number of words in a sentence, and the speed of the speaker. Thus, it is found that the difference of duration between a geminate and singleton sound is the half, where the duration of a singleton in a sentence is the half of duration of a geminate sound in the same sentence.

The /r/ sound of Arabic is a special case. When it is geminated it can be pronounced more than two times, but this characteristic is not due to the duration rather, it is related to the acoustic features of the sound. So,

gemination means the doubling of the sound represented in the emphasis, which results from the merging of two consecutive characters of the same type, one static and one moving.

CONCLUSION

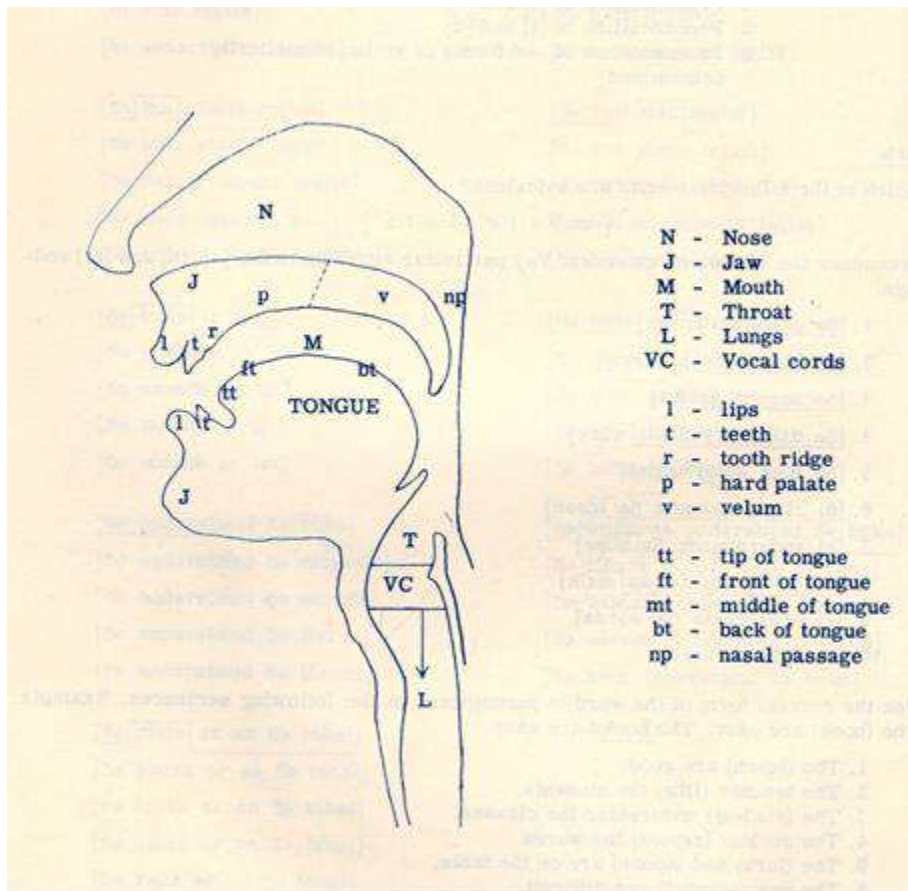
This paper may be a stem for learners of English and Arabic as second / foreign languages (ESL/EFL). However, the information in this paper seems to be as small as a fish in an ocean, but it may encourage researcher to add to phonology area of this paper and do further studies in the field of Morphology, Syntax, and Super segmental to have clear resources for learners of English Language and Arabic Language. So far, we have briefly gone through considered alphabets of both languages, Vowels and consonant sounds of both languages, syllabic structures of both languages, especially Cluster sequence and lastly, we discussed just two phonological processes because of their phonological processes because of their importance to the research.

RECOMMENDATION

From the foregoing, we have seen the importance of both languages in our society as students of different background are learning them, whether for social or religious reasons. We therefore recommend that government should support linguists of different specializations to do extensive research on phonology, morphology, syntax, semantics and pragmatics of both languages, so as to assist Nigeria students learning both languages, either as a second language or foreign language. .

REFERENCES

- Abubakar, D.A (2004) *Interplay of Arabic and Yoruba culture in South Western Nigeria*; Daruli-Ilm, 1wo.
- Aiman, S., 2012. *Altagwid almswar*. 2nd Edn., Damascus, Syria: Algazry Library, (In Arabic).
- BBC Learning English. Available from <http://www.bbc.co.uk/worldservice/le-arningenglish/grammar/pron/> [Accessed 15/2/2014].
- Crystal, David (2008). *A Dictionary of Linguistics & Phonetics*. Blackwell: Blackwell Publication.
- Daniel, J., 1996. *An outline of english phonetics*. Cambridge University Press. English Alphabet English Club. Available



APPENDIX 3
SHORT VOWEL

ɪ u ʌ ɒ ə e æ

LONG VOWELS

ɪː uː aː ɔː ɜː

DIPHTHONGS (DOUBLE VOWEL SOUNDS)

ɪə aɪ əʊ aʊ ɔɪ ʊə eə eɪ

VOICELESS CONSONANTS

p t tʃ k f θ s ʃ

VOICED CONSONANTS

b d dʒ g v ð z ʒ

OTHER CONSONANTS

m n ŋ h l r w j

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