The Impact of Students' Realization of Stress Placement on Identifying the Class of the English Word and Its Meaning

¹Muslih Shwaysh Ahmed

ABSTRACT--The present study is an attempt to show the effect of the university students' realization of stress placement on the identification of the class of the English word and its meaning. The study postulates that most Iraqi University students who study English as a foreign language know that the syllable should be stressed to give the intended class or meaning of words. To achieve the aim of the study, a written test which consists of twenty words and phrases distributed over three questions was prepared by the researcher. Before the final administration of this test, its validity and reliability have been proved. The participants involved in the study who were chosen randomly are asked to transcribe the words and phrases phonemically and put the primary stress ['] on the proper syllable as required in the test. The participants are 48 and they represent 37% of the population of the study. All of them studied phonetics and phonology at the Department of English, College of Education for Humanities, University of Anbar and their native language is Arabic. The analysis of the test reveals that the correct answers of the students in the three questions of the test are less than the wrong ones. The percentages of the correct answers of these questions are 44%, 31% and 26%, respectively, whereas the percentages of the wrong answers are 54%, 67% and 62%, respectively. These findings invalidate the hypothesis of the research. In the light of the findings of the study, the researcher comes up with a number of conclusions among them, stress is a problematic area that faces Iraqi university students due to certain factors such as the great influence of the firmly established linguistic habits of the learner's native language on the process of learning a foreign language.

Keywords--Stress, sress placement, prominence, word class, meaning

I. INTRODUCTION

Stress as defined by Roger (1970: 1) is "the relative degree of force used by a speaker on the various syllables he is uttering". It refers to the prominent part of a syllable or a word. This means that greater force is "exerted in the articulation of one part of an utterance compared with another" as stated by Hartmann and Stork (1976: 220). According to Ladefoged and Johnson (2011: 249) stress is "a suprasegmental feature of utterances. It applies not to individual vowels and consonants, but to whole syllables". In phonology, two main kinds of stress are distinguished, sentence stress and word stress in which "the stress pattern is part of the phonological structure of a word", (ibid). For example, 'collect' /kə'lekt/ (verb) as opposed to 'collect' /'kəlekt/ (noun). This type of stress is the main concern of the present study. The problem that this study seeks to tackle is concerned with Iraqi university

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¹ Prof. Ph.D. University of Anhar

students who study English as a foreign language who may ignore that English stress plays an important role in determining the class of word and meaning.

The placement of stress on the proper syllable is something crucial. Incorrect stress placement, as mentioned by Roach (2009: 79), is "a major cause of intelligibility problems for foreign learners, and therefore a subject that needs to be treated very seriously". O Connor (1980: 91) agrees with Roach about the improper use of stress when he claims that one of the problems that lies behind stress is when non-native speakers improperly produce English words, a matter that leads to misunderstanding by English listeners. The fact is that wrong placement of stress on the syllable causes damage to the word form and makes difficulty in hearing and understanding the intended word meaning.

Thus this study aims at investigating the effect of students' realization of stress placement on the identification of word class and its meaning. It is hypothesized that most Iraqi students who study English as a foreign language know stress placement on the suitable syllable to identify the intended class of words and meaning. This paper is concerned with Iraqi university students studying English as a foreign language, namely, those who studied phonetics and phonology for the previous two years at the Department of English, College of Education for Humanities, University of Anbar, Iraq for the academic year 2019-2020. The main concern of this paper is English syllable and stress. This research is expected to be of value to university students of English, teachers, syllable designers and text-book writers because it is going to highlight areas of difficulty in studying suprasegmental phonemes particularly stress and syllable.

II. STRESS IN ENGLISH

Stress, intonation, rhythm and juncture are called suprasegmentals or supersegments which are sound features that are not connected with one specific segment and which may prevail over a syllable, a word, a sentence or even a whole utterance (Hassan and El-Shayib, 1987:144). Stress as stated by Jones (1979:245) is defined as "the degree of force with which a sound or a syllable is uttered". Al-Hamash(1984:93), in conformity to others, states that stress is "the degree of mascular effort exerted in the production of a sound or sounds of a syllable". This definition of stress conforms to the viewpoint of the speaker. As regards the perceptual aspect of stress, i.e., the viewpoint of the listener, it is defined as "the degree of loudness with which we hear a sound or sounds by comparison to other adjacent sounds"(Ibid.,93-94). In other words, stress could be studied from the viewpoint of production and of perception(Roach,2009:73).

The main types of stress are; word stress to mean stress in isolated word and sentence stress to mean stress in connected speech. The main concern in this study is word stress. Stress refers to the prominent part of a syllable or a word; if a syllable is prominent, it may be stressed. Stressed syllables, are more prominent than weak ones. "Stress is a relational concept: a stressed syllable is more prominent than unstressed". (Katamba, 1989:225). As claimed by him (Ibid.,221), "Linguists have an intuitive understanding of the phonetic properties of stress although they find formulating a precise description of these properties problematic". He adds that "stress is primarily as matter of greater AUDITORY PROMINENCE".

The Factors that Make a Syllable Prominent

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A remarkable claim by Roach (2009:73-74) indicates that prominence represents the essential characteristic of the stressed syllable. Stressed syllable can be recognized as stressed because of being more prominent than

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unstressed. In English, the four phonetic variables which appear most significant as indicators of stress as mentioned by Collins and Mees (2008:24) among others are: intensity, pitch variation, vowel quality and vowel duration. Roach (2009:74) states the same above points, but he calls them factors that make a syllable prominent. They are the following:

- 1- Most people seem to feel that stressed syllables are louder than unstressed, in other words, loudness is a comparison of prominence.
 - 2- The length of syllables has an important part to play in prominence.
- 3- Every voiced syllable is said on some pitch; pitch in speech is closely related to the frequency of vibration of the vocal folds and to the musical notion of low and high-pitched notes. It is essentially a perceptual characteristic of speech. To place some movement of pitch (e.g. rising or falling) on a syllable is even more effective in making it sound prominent.

4-A syllable will tend to be prominent if it contains a vowel that is different in quality from neighbour vowels.

Levels of Stress

There are three distinct stress levels in English; they are primary stress, secondary stress and weak (unstressed). Some linguists and phonologists add another level of stress which is called tertiary which is weaker than secondary stress and stronger than weak. Below are these three distinct levels of stress.

Primary Stress

As mentioned by Roach(2009:75) the primary stress is represented by the more prominent syllable which is the strongest syllable of the word. It represents the maximal prominence of a syllable in a word (Collins and Mees, 2008:306). The syllable which carries the primary stress sound louder and longer than the unstressed one with a vertical mark ['] placed above and in front of the syllable. For example, the word 'father' / fa: ðə/

Secondary Stress

Secondary stress reveals the second degree of prominence of a syllable. It is weaker than primary, but stronger than tertiary. It is usually represented

in transcription with a low mark[.], for example, the word 'photographic' / fauta græfik/ (Roach, 2009: 75).

Unstressed (Weak)

Any syllables which are unstressed or weak are referred to as weak syllables. This level of stress represents the weakest degree of stress. We usually don't use any mark to indicate weak syllables, for example, the word 'behind' /bi 'haind/ (Hassan and Al-Shayib, 1987:149).

Stress Placement and its Relationship with Word Class andMeaning This section sheds light on English stress placement which should be paid great attention since in certain words, one can decide the class of the word, noun, verb, adjective or adverb and the meaning depending on the placement of primary stress on the proper syllable. As mentioned by Roach (2009:87), "there are several dozen pairs of two-syllable words with identical spelling which differ from each other in stress placement, apparently according to word class" as in the words 'object' /'obd3ekt/ (n.), 'object' /eb'd3ekt/ (v.); 'abstract' /æb'strækt/ (v.), 'abstract' /'æbstrækt/(adj.). Stress in the words given above in a minimal pair is phonemic. The segmental phonemes are identical and that the two words differ only in the position of primary stress. This stress distinguishes them as signifying a verb, a noun and an adjective (Stageberg, 1981:45). In other words, "the accentual pattern of a word establishes the contrastive relationship of its parts; it may also have a distinctive function in that it opposes words of comparable sound structure (and identical spelling)"(Gimson, 1980:232). Also there are compound words which we should know when to place the primary stress on the first constituent word of the compound and when on the second. For example, 'typewriter' /'taipraite/ (n.); 'bad-tempered'

/bæd'tempəd/ (adj.); 'head first' /hed'fə:st/ (adv.).

Although the placement of stress on syllables of words in English often follows no fixed rules, phonologists give some general patterns that may afford some help including the words that are given as examples (Al-Hamash,1984:99). Collins and Mees (2008:132), for instance, state that the primary stress is on the second element of the compound words when they refer to name of cities as seen in 'New York' /nju:'jɔ:k/; it is on the second

element of the compound words when they refer to the part of the building as in 'black door' /blak'do:/; the names of magazines and newspapers have the primary stress on the second word as in 'Daily Post'/deili'pəust/. Roach (2009:86) also suggests rules for compound words, among them, compound words have primary stress on the second word if the first word is number as in 'second class'/sekənd 'kla:s/; compound words have a primary stress on the second word if the compounds function as adverbs as in 'North- East'/nɔ:θ'i:st/; when compounds function as verb and has an adverb, then stress is on the second word as in the example 'down grade'/daun'greid/.Of course, Roach (2009) and others like Jones (1972); Davenport and Hanaas (2010) and Gimson (1980) give more stress patterns regarding complex words including compound ones. Roach(2009:85) agrees with Al-Hamash's viewpoint when he states that few rules are given regarding the placement of stress, but they are not completely reliable.

Sometimes we have compound words which are identical with certain modified nouns (phrases) in spelling when we pronounce them the meaning needed is not clear unless we know which syllable or word to be stressed as in 'greenhouse'/'gri:nhaus/ which means a building with sides and roof of glass used for growing plants and 'green house' /gri:n'haus/ which means a house painted green (Hassan and El-Shayib,1987:152). The distinction between compound noun and modifier-plus-noun as claimed by Stageberg (1981:49) cannot be constituently maintained in English. The meaning of the compound nouns and modified nouns which have identical spelling is distinguished by the correct stress placement. This supports Katamba's (1989:234) claim that the stress system of English is extremely complex. In English, "stress position may vary because of two reasons: either as a result of the stress on the other words occurring next to the word in question, or because not all speakers agree on the placement of stress in some words" (Roach, 2009:86).

Languages as stated by Al-Hamash (1984:94) differ in the placement of stress on syllables since some languages have fixed stressed positions as in Zech and Finnish; other languages like English and Russian have freer stress. Ladefoged (2006:243) asserts that "English and other Germanic languages make far more use of differences in stress than do most of the languages of the world". He (ibid.) divides languages into those that have variable word stress such as English; those that have fixed word stress like Czech and those that have fixed phrase stress as in French. In Arabic which is the native language of Anbar University students who represent the sample of the present study, "stress is mechanical and predictable. It is usually determined by the length of the syllable and the occurrence of long vowels or double consonants in the utterance". In languages that have free stress such as English, stress is usually distinctive, i.e., it conveys meaning. Thus, change in stress placement may change the grammatical function of the word and its meaning as in the examples given above. However, in Arabic "words are never distinguished from each other by sheer shift of stress" (ibid.:95).

III. METHODOLOGY

Population and sample of the study

The total population of this study includes 130 students who study English as a foreign language at Department of English, College of Education for humanities, University of Anbar. The population represents the third grade students who have studied phonetics and phonology in the previous two years. The sample has been randomly

chosen. It involves 48 students who represent 37% of the population of the study. Also 33 students were chosen to be the sample of the pilot and the extracted students are 49. See Table (1) below.

Table (1) The Population and Sample of the Study

population	pilot study sample	selected sample	extracted sample	
130	33	48	49	

The Instrument of the Study and its Validity

To achieve the aim of the study, a written test which consists of 20 words and phrases (Modified Nouns) distributed over three questions was prepared by the researcher. These words were selected from Roach (2009:87) and Hassan and El-shayib (1987:152-153). The items of the test are chosen to show the effect of stress placement on the proper syllable on identifying word class and meaning.

The first question consists of ten words that can be verbs or nouns depending on the syllable stressed. The second question includes five items which can be verbs or adjectives depending on the proper placement of stress on the first or second syllable of the word. However, question number

(3) includes five compound words/phrases which their meaning is decided by the placement of stress. The participants are asked to transcribe these words phonemically and put the primary stress [']on the appropriate syllable. The total mark of the exam is 100. This means that five marks are given to each item that is correctly answered and zero to the incorrectly answered or neglected item, (see the written test in the appendix).

As regards the validity of the written test, the researcher submitted it to experts in the field who are requisted to give their comments and suggestions. The jury consists of eight members who are specialized in linguistics and methodology. All of them agree on the validity of the written test and this means that the instrument measures what is supposed to measure(Pallant, 2010:7).

Reliability

Reliability in testing means that a test is said to be reliable if it gives the same results when it is given on different occasions or when it is used by different people (Richards and Schmidt, 1992:425). The researcher used test-retest method to find out reliability and results show that Pearson Correlation Coefficient value is 0,85 and this value is accepted and reliable.

The Pilot Study

The Pilot study was administrated in the 2nd of February 2020. Thirty-three students participated in it.

Item Difficulty and Discrimination Power

Item difficulty is the proportion of students who answered the item correctly. The value of item difficulty is commended to be ranged between

0.25 to 0.75 (Blerkom,2009;127). Results show that the test items in the present study range between (0.41) and (0.68). Item discrimination is the

degree to which a test or an item in a test distinguishes among stronger and weaker test takers. The recommended discrimination value ranges between

0.35 to 1.0.(Ritchards and Schmidt, 1992:163). Results show that the discrimination power of test items is from 0.48 to 0.82. This means that all items are statistically accepted.

3.5 The Final Administration

The final administration of the written test was applied on the 16th of February 2020 at the Department of English College of Education, University of Anbar. Forty-eight students submitted to the written test. Before applying this test, the researcher informed the participants about the aim of the study. They were asked to read the instructions of the test and determine if there is anything which is unclear in the test. Also, the researcher was careful about providing an equal and convenient atmosphere for all exam takers. Finally, the test was applied successfully and all the examinees finished it without any trouble.

Test Analysis and Findings

Test Analysis

As shown in Table (2) below, the total answers by students are (470), where (212) are correct answers and (258) are wrong answers. Ten items were not answered. These answers are distributed as follows: (34) out of (48) participants answered correctly, the first selected word 'collect' is represented by (70,83%), whereas the rest (14) answers are wrong which score (29.16%). As concerns the second word 'conduct', it has got (24) correct answers and (24) wrong answers, therefore the percentage is (50%) for both. The third word 'contract' is answered correctly by (20) students and this represents (41.66%), whereas (58.33%) represents the (28) wrong answers. The fourth and sixth words 'decrease' and 'export' have got the least correct answers (14) which represent (29.16%) and the wrong answers are (34) i.e (70.83%). The fifth word 'desert' is written correctly by (16) students while the wrong answers are (32), which represent (33.33%) and (66.66%), respectively. Both the seventh word 'contest' and the eighth word 'import' have got (24) correct answers which represent (50%). On the other hand, the seventh word 'contest' is answered (22) times incorrectly and this represents (45.83%), but the eighth word 'import' is answered incorrectly (20) times, these wrong answers represent (41.66%). The seventh word is left with no answer twice and this represents (4.16%), whereas the eighth word is left out for four times which represent (8.33). There are (22) correct answers for the ninth word 'object' where they represent (45.83%), while the wrong answers are (24) which score (50%), yet two answers are left out and thse represent (4.16%). The last word 'produce' has got (20) correct answers which represent (41.66%), whereas the wrong answers are (26) which represent (54.16%); the tenth word 'produce' has not been answered by two students and this represents (4.16%).

Table (2) Word Class: Verbs and Nouns

No.	Word(V.)or (N.)	Correct	%	Wrong	%	No answer	%
1.	Collect	34	70,83	14	29.16		
2.	Conduct	24	50	24	50		
3.	Contract	20	41.66	28	58.33		
4.	Decrease	14	29.166	34	70,83		

5.	Desert	16	33.33	32	66.66		
6	Export	14	29.16	34	70,83		
7	Contest	24	50	22	45.83	2	4.16
8	Import	24	50	20	41.66	4	8.33
9	Object	22	45.83	24	50	2	4.16
10	Produce	20	41.66	26	54.16	2	4.16
Total	10	212	44%	258	54%	10	2%

For more illustration, the following figure shows the total correct and wrong answers with their percentages.

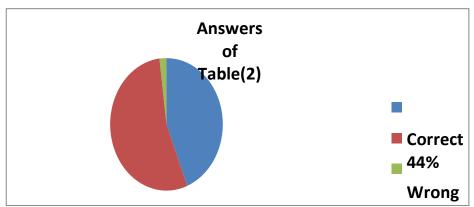


Figure (1) The Percentage of the Total Answers

As shown in figure (1), the correct answers have scored (44%) while the wrong ones have scored (54%) and the rest which have not been answered have scored (2%).

As concerns table (3), it reveals that there are (234) total answers, where

(74) are correct answers while the wrong ones are (160). Those answers are distributed as follows:14) participants out of (234) have answered the first word 'abstract' correctly, which represent (29.16%), whereas the wrong answers are (32) which represent (66.66%). Two participants have left the first item without answer and this scores (4.61%). The second word 'present' has got (10) correct answers, (36) wrong answers and two have been left out where they have scored (20.83%), (75%) and (4.16%), respectively. The third word 'record' is answered correctly by (22) students and wrongly by

(26) students, so (45.83%) stands for the correct answers and (54.16%) stands for the wrong ones. The fourth word 'refuse' scores (6) correct answers which represent (12.5%) and (40) wrong answers which represent (83.33%), while (4.16%) stands for the two answers that have been left out. The last word 'perfect' has scored (22) correct answers and (26) wrong ones, i.e., their percentage represents (45.83%) and (54.16%), respectively.

Table (3) Word Class : Verbs and Adjectives

	Word (V.)		%		%	No	%
No	or	Correct		Wrong		answer	
	(Adj.)						
1.	Abstract	14	29.16	32	75	2	4.16

2.	Present	10	20.83	36	75	2	4.16
3.	Record	22	45.83	26	54.16		
4.	Refuse	6	12.5	40	83.33	2	4.16
5.	Perfect	22	45.83	26	54.16		
Total	5	74	31%	160	67%	6	2%

The following figure illustrates what has been mentioned above, where the correct answers represent (31%) and the wrong ones represent (67%),

whereas those that have been left out represent (2%) of the total answers.

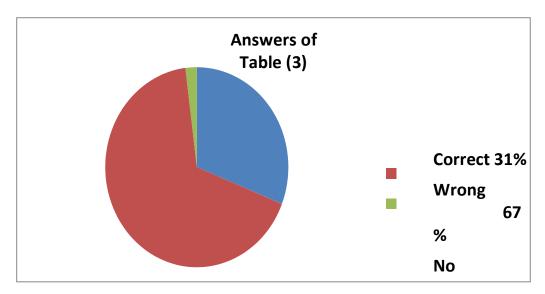


Figure (2): The Total Answers Percentage of Verbs and Adjectives

On the other hand, Table (4) shows that there are (214) total answers where(64) are correct answers and (150) are wrong ones, however, there are (26) left out. The answers are distributed as follows: The first item 'green house'/'greenhouse' has been answered correctly by (18) participants which represent (37.5%), whereas the wrong answers are (22) which represent (45.83%),yet, (8) participants have left out this item without answer and the percentage is (16.66%). The second item 'a black bird' / 'blackbird' which scores (20) correct answers which represent (41.66%) and (24) wrong ones which represent (50%) while there are (4) left answers which represent (8.33%). The third item 'light ship'/ 'lightship' is stressed correctly by (8) participants, this represents (16.66%) and wrongly by (36) participants to score (75%), yet, (4) participants have left out this item and the percentage is (8.33). The fourth item 'cross word'/'crossword' scores (10) correct answers,

(34) incorrect ones and, (4) left out answers and their percentages are (20.83%), (70.83%) and (8.33%), respectively. The last item 'white house'

/'whitehouse' is answered correctly by (8) participants and this represents (16.66%), and wrongly by (34) participants, this represents (70.83%) while

(6) are left out which represent (12.5%).

Table 4: Compound Words and Phrases (Modified Nouns)

No	Compound	Word	Correct	%	Wrong	%	No	%
	phrase	or					answer	
1.	green house greenhouse		18	37.5	22	45.83	8	16.66
2.	black bird blackbird		20	41.66	24	50	4	8.33
3.	light ship lightship		8	16.66	36	75	4	8.33
4.	cross word crosswor d		10	20.83	34	70,83	4	8.33
5.	white house whitehouse		8	16.66	34	70,83	6	12.5
Tota l	5		64	%26.70	150	%62.50	26	%10.80

As shown in the figure below ,the correct answers have scored (64) which represent (26.70%) ,whereas the wrong answers are (150) which represent (62.50%); however, there are (26) items left out where the percentage is (10.80%).

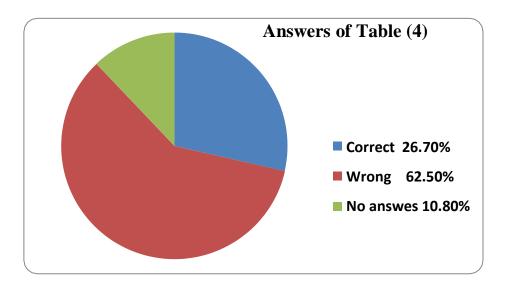


Figure (3): The Total Percentage of Compound Words and Phrases (Modified Nouns)

IV. FINDINGS

Throughout the analysis of the test given in the previous section, it becomes clear that in the first question, the word 'collect' has got the highest percentage of correct answers, i.e., most participants put the stress on the right syllable to differentiate the class of the word whether it is a verb or a noun. On the other hand, the lowest percentage of correct answer is in the two words 'decrease' and 'export' where they both scored (29.16%) which reveals the

least level of the correct answers among the rest of thewords. The percentage of the correct answers of all items in this question is only 44% vs. 54% which represents the wrong answers. The percentage of no answers is 2%. This shows that the students need more practice to be able to distinguish the word class by having proficiency upon the use of stress.

As concerns the second question of the test, i.e., Table (3) which focuses on the distinction of the word class, here verbs and adjectives, the word 'refuse' has the percentage (12.5%) which represents the lowest correct answers. However, the words "record' and 'pefect' have scored (45.83%). The percentage of wrong answers of all items is (67%) which is higher than the percentage of the correct answers which is (31%). These percentages show that the student's performance is weaker than that of the students' first question.

The third question of the test concerns the role of stress in the distinction of the meaning of compound words from that of the modified nouns which have the same spelling. According to Table (4), the item 'black bird'

/'blackbird' has scored the highest degree of the total correct answer, i.e., (41.66%). On the other hand, the items 'light ship'/' lightship' and 'white house'/'whitehouse' have got the lowest percentage of the correct answers, i.e., (16.66%). The low percentage of correct answers in the third question (26.70%) compared to (62.50%) which represents the wrong answers and (10.80%) the percentage of the items which are not answered, shows that the university students participated in this study face a real problem in the placement of stress on the correct constituent of the compound words or the modified nouns to differentiate meanings.

Comparing the percentages of the correct answers in the three questions included in the test (44%, 31% and 26%, respectively with those percentages of the incorrect answers (54%,67% and 62%, respectively) reveals that the incorrect answers are higher than the correct ones. Despite the researcher's instructions about the necessity of answering all the items of the questions, some participants left out some of them.

V. CONCLUSIONS

The study comes up with the following conclusions:

- 1. The analysis of the answers of the students has shown that the incorrect answers in general are the most apparent. Most of them fail to place stress on the proper syllable after transcribing the word phonemically to identify the word class or its meaning. The poor performance of the students refers to their poor awareness and knowledge of stress placement.
- 2. The low percentage of the correct answers given by the students regarding the three questions, 44%, 31% and 26%, respectively, invalidate the research hypothesis which states that most students know which syllable to be stressed to give the word class required or its meaning.
- 3. It is concluded that suprasegmentals in general and stress in particular are problematic to the Arabspeaking students who study English as a foreign language. This is something expected because in any foreign language learning situation the process of learning is strongly affected by the firmly established linguistic habits of the learners' native language. Stress in English often follows no fixed rules; it is unstable and it has freer stress, whereas in Arabic stress is mechanical and predictable. They have two different systems. To avoid the influence of Arabic on English, i.e., interference, Arab learners of English need not think of stress rules of Arabic when they study English.

4. The results of test which highlight areas of difficulty in studying and learning of suprasegmental phonemes in general and stress in specific, prove that there is lack of practice in the pronunciation of words that have two syllables or more, i.e., complex words, particularly those in which stress placement on the correct syllable can decide their class or meaning. One can also conclude that there is insufficiency of pronunciation teaching courses.

Finally, the researcher recommends that Iraqi university students have to get more oral/aural work concerning English stress in general and stress placement in specific to be competent in English.

REFERENCES

- Al-Hamash, Khalil I.(1984). English Phonetics and Phonology. Baghdad: The Institute for the Development of English Language teaching in Iraq.
- 2. Blerkom, Malcomlm L. Van.(2009). Measurment and Statistics for Teachers. UK: Taylor and Francis.
- Collins, B. and Mees, I. M. (2008). Practical Phonetics and Phonology: A resource book for students (2nd ed). London: Routledge.
- Davenport , Mike and Hannahs, S.J.(2010). Introducing Phonetics and Phonology. (3rd ed). London: Hodder Hannas.
- Gimson, A.C.(1980). An Introduction to the pronunciation of English(3rded). London: Edward Arnold Ltd.
- Hartmann , R.R. and Stork , F.C.(1976). Dictionary of Language and Linguistics. London: Applied Science Publishers Ltd.
- 7. Hassan, Zeki Majeed and El-Shayib, Mahmood, M.(1987). English Pronunciation for Student Teachers. (1st ed). Baghdad: Ministary of Education.
- 8. Jones , Danial.(1979). An Outline of English Phonetics. New Delhi: Kalyani Publishers.
- Katamba , Francis.(1989). An Introduction to Phoology. London: Longman. Ladefoged, Peter.(2006). A Course in Phonetics.(5th ed). Boston: Thomson Wadsworth.
- 10. Ladefoged, P. and Johnson, K.(2011)...A Course in Phonetics.(6th ed).Boston:Michael Rosenberg.
- 11. O'Connor, J.D.(1980). Better English Pronunciation. Cambridge: Cambridge University Press.
- 12. Pallant, Julie.(2010).SPSS Survival Manual.(4th ed).England:Markono Print Media Pte Ltd.
- 13. Richard, Jack C. and Richard, Schmidt (2002).Longman Dictionary of Language Teaching and Applied Linguistics.(3rd ed).England:PearsonEducation Limited.
- 14. Roach,Peter.(2009).Englishphonetics andphonology:APracticalCourse.(4th ed).Cambridge: Cambridge University Press.
- Roger , Kingdon. (1970). The Groundwork of English Stress. London: Longman. Stageberg , Norman C. (1981). An Introductory English Grammar. (4th ed). U.S.A: Holt , Rinehart and Winston.