



**Sudan University of Science and Technology**

**College of Graduate Studies**

# **Impact of Listening to Recorded Material by Native Speakers on ELT University Students on Placing and Producing Word and Sentence Stress**

**“A Case Study: Omdurman Islamic University”**

**أثر الإستماع إلي مادة مسجلة من متحدثي اللغة الإنجليزية لغة أم علي  
دارسي اللغة الإنجليزية بالجامعات في التعرف علي موضع النبرة ونطقها علي  
مستوى الكلمة والجملة**

**(دراسة الحالة: جامعة ام درمان الإسلامية)**

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# **Dedication**

This work is dedicated to

The souls of my parents

My sisters and brothers

My loving nuclear family: my wife and two kids

A very close and good hearted friend Dr. Mahir Arofaai Ibrahim Babikir

My sister in- law Hiba Muhammad Ahmed

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## **Abstract**

This study aimed at investigating the impact of listening to recorded material by native speakers on production and placement of word and sentence stress by English as foreign Language (EFL) University students. Then, two objectives among others were stated as follows: 1- To enhance EFL Learners ability to place and produce word and sentence stress correctly. 2- To draw EFL Learners attention to the role of word and sentence stress on enhancement of pronunciation. Also, two of the questions of the study were stated as follows: 1- How far do (EFLs) make mistakes in producing and placing word and sentence stress? 2- To what extent is there a significant impact of listening to recorded material by native speakers on placement and production of word and sentence stress? The present study applied experimental, descriptive and analytical method. The sample of the study were 140 subjects formally registered for the academic year 2019- 2020 in the Faculty of Arts, Department of English language and literature Omdurman Islamic University (O.I.U). Based on the experience of the researcher as their class teacher this group was selected as sample of the present study because they have studied phonology as a prescribed course. The test was used to collect data from the subjects. The study came out with the following findings: 1- There was a positive impact on placement and production of word and sentence stress due to Classroom interventions. 2- Providing audio- visual aids in a classroom were recommended by the researcher to help students emphasize word and sentence stress. Finally, the researcher suggested some further topics to be investigated by ELTs in the future.

## مستخلص الدراسة

هدفت الدراسة إلى التقصي في تأثير الإستماع إلى مادة صوتية مسجلة من متحدثي اللغة الإنجليزية كلغة أم علي دارسي اللغة الإنجليزية بالجامعات في التعرف علي موضع النبرة ونطقها علي مستوى الكلمة والجملة. من أهداف الدراسة: 1- تعزيز مقدرة الطلاب علي وضع ونطق النبرة علي مستوى الكلمة والجملة. 2- لفت انتباههم الي دور النبرة علي مستوى الكلمة والجملة في تحسبن النطق والجدير بالذكر أن الدّراسة أجابت علي الأسئلة التالية: 1-الي أي مدى يرتكب دارسو اللغة الإنكليزية كلغة أجنبية أخطاء في وضع علامة النبرة ؟ 2-هل من تأثير إيجابي للإستماع إلى مادة صوتية مسجلة لمتحدثين للغة الإنكليزية لغة أم في وضع علامة النبرة ؟ تطبق الدراسة المنهج الوصفي، التجريبي والتحليلي. تم إختيار عينة الدراسة من طلبة وطالبات السنة الثالثة جامعة أمدردان الإسلامية كلية الآداب شعبة اللغة الإنكليزية والذين هم مقيدن للعام الأكاديمي (2020- 2019) وكان عددهم مائة وأربعون. أختير طلاب وطالبات السنة الثالثة كعينة للدراسة لأنهم درسوا مقرر علم الصوتيات الذي يهدف إلى تحسين النطق. أوجزت الدراسة النتائج التالية: 1- الإستماع إلى مادة صوتية مسجلة لمتحدثين للغة الإنكليزية كلغة أم لها أثر إيجابي على وضع علامة النبرة ونطقها في الكلمة والجملة. 2- التدخلات الصفية مثل الإستماع إلى مادة صوتية مسجلة لمتحدثين للغة الإنكليزية كلغة أم وأوراق العمل التي وُزعت للطلبة أثناء الدراسة لهما الأثر الإيجابي علي سهولة ووضوح المخاطبة بين الطلبة وأوصي الباحث بإستخدام معينات سمعية وبصرية لتساعد الطلبة في وضع علامة النبرة ونطقها علي مستوى الكلمة والجملة. وأخيراً يقترح الباحث بعض الأطروحات يمكن أن تُجرى في المستقبل

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# **CHAPTER ONE**

## **Introduction**

### **1.0 Overview**

English language becomes an international language. Therefore, it is a must to be studied as foreign language learners (EFLs hereafter). Learning a language means to cover four skills; which are listening, speaking, reading and writing. Learning English language does not only mean that EFL Learners master syntax which means how words grammatically arranged to a sentence that gives a sense or getting a wide range of vocabulary. Of course, knowing and acquiring grammatical rules are important elements for EFL learners to learn a language. But unless they know how to pronounce words correctly, it will be difficult for them to communicate with others since a language is defined by some linguists as a means of communication (Field, 2005).

So, English language has dominated the areas of education because of globalization at the end of last decade of 21<sup>st</sup> century. It is the language of instruction in many universities, whether arts, science, business, ESP and EAP. Moreover, word and sentence stress are extremely important parts of English language learning, both in terms of understanding spoken English and increasing oral intelligibility. However, word and sentence stress can be difficult or even problematic area for EFL learners to master successfully. As pronunciation teaching has become more focus on intelligibility rather than imitating native –like accent as it is stated by (Levis, 2005), to that faulty production of word and sentence stress has been found to significantly decrease intelligibility.

It is worth mentioning here that, since the 1980s interest in pronunciation has been reemerged particularly, for use in academic and occupational contexts. There have been many newspapers articles and books about pronunciation produced since 1980s. The focus of pronunciation instruction is to empower EFLs to become effective and competent communicators. Celce- Murcia et al, (1996) state that communicative approaches have become increasingly popular, pronunciation instruction has been emerged from its unimportant or marginalizing place because some linguists come to a point and realizes that perfect grammar is not enough for EFLs. Hence, the feeling and flow of English are acquired through natural sound accent. A pronunciation method has been developed for EFLs to address two major aspects in achieving effective communication skills: word and sentence stress. Therefore, listening to audio materials by a native speaker is chosen as a channel to help EFLs experiment and practice vocalization of word and sentence stress.

In a study designed to investigate L2 stress perception, Altmann and Vogel, (2002) examined the ability of L2 learners of English from different L1s to locate primary word stress in English words. In this study, 320 items were tested, consisting of words between two and four syllables length with systematically varied syllables. The syllables were not only classified as light or heavy, but were also distinguished with regard to the kind of vowel (schwa, lax, tense or diphthong) and the absence or presence of a coda. It was found that speakers of L1 without stress did as well as English native speakers. Learners whose L1 had phonologically predictable word stress performed badly. The area which is not covered here in Altman and Vogel is the placement of sentence stress. It is a gap area which encourages the researcher to carry out the present study.

## 1.1 Statement of the Problem

Decades ago witnessed an increasing interest in and concern with listening knowledge which had been neglected in many text books. (Archibald, 1997). Listening is related to a factor which is very important; what the researcher means here is intelligibility. But, there are few studies which emphasized this interest and concern. Some of these studies concern and focus on issues that related to segmental features. However, a few studies have investigated and examined the effectiveness of the implicit or explicit teaching of listening skill. This neglected skill has not been given more attention and care in many text books which are related to English as foreign language learners (hereafter EFLs). (Celce- Murcia et al, 2005) also advocate for classroom activities that address Meta cognitive skills. The rap method developed for the study designed to investigate the effect of rap music on production and placement of word and sentence stress, explicitly teaches content versus function words, functional shift of homographs (a word that is spelled the same as another but is different in meaning, origin, grammar or pronunciation. For example, the noun “record” is a homograph of the verb “record”).

Youssef and Mazurkewich (1998) investigated the ability of Egyptian Arabic learners of English to perceive L2 stress in real words in addition to their ability to produce stress. The subjects were required to mark stress a pre-printed list of English words that were auditory presented. The stimuli consisted of words with four different stress patterns: a) stress on super heavy final syllable (CVVC or CVCC) (e.g. comprehend) b) stress on antepenult syllable (e.g. recognize) c) stress on a heavy penult syllable (e.g. agenda) or d) exceptional stress on the antepenult syllable (e.g. calendar)

In addition, it has been supported and approved in the literature review that mastering word and sentence stress is extremely important and necessary to communicate naturally and without hesitation. It is worth mentioning here, teaching word and sentence stress has been neglected by many teachers either because text books have neglected this concern or because some teachers do not give much attention to teaching word and sentence stress. Thus, listening to native speakers can improve pronunciation as well as intelligibility.

Based on the researcher observations during teaching English as a foreign language in (O.I.U) and Nile College from 2012- 2021; the problem of the present study is generally seen or noticed in the struggle of Sudanese EFL learners (hereafter SEFLs) university level to deal with word and sentence stress properly. Moreover, (SEFLs) encounter a real difficulty in communicating due to unintelligibility. Therefore, poor performance in pronunciation causes hesitation in speaking and it is a problematic to them. In addition to this, they become completely unable to communicate with each other in real situations because of their poor pronunciation. In fact, during teaching at different Sudanese universities, the researcher observed that university students do not pay enough attention and care to how stress falls in English words and how a speaker gives more prominence to specific words in a sentence. So, they made mistakes when dealing with words and sentence stress because they do not know how stress falls in different words. So, the researcher decided to carry out the present study to overcome as far as possible difficulties that might encounter SEFLs to deal with word and sentence stress properly. During teaching in Omdurman Islamic University the researcher observed that the students encountered difficulties in placement and production of word and sentence stress. Based on these classroom observations, the researcher formed

general understanding of the problem. For example many (SEFLs) who have attained advanced English proficiency levels are still having difficulties in communication due to low intelligibility. Thus, it is stated that placement and production of word and sentence stress are essential components that contribute greatly to intelligibility. And some of these students become frustrated due to inability to pronounce words correctly which result in inability of communication because they are not easily understood by others or those who listen to them.

Although EFLs gain grammatical or syntactic knowledge of English and wide range of vocabulary ,they become frustrated and de- motivated due to unintelligibility which causes failure of communication and learning process. Therefore, students seem to be untrained in how to pronounce words correctly to overcome such problematic areas which is how to place and produce word and sentence stress correctly. They need direct or indirect orientations to know how word and sentence stress fall in different English words whether they are two- syllable words, three- syllable words etc. and which words in a sentence that a speaker gives prominence. By doing so, they build confidence and keep their motivation strong and raise their self- esteem to develop their pronunciation knowledge which constitute the basic component of their linguistic competence.

## **1.2 Objectives of the Study**

The basic aim of this study is to examine the impact of listening to recorded material by native speakers on placement of word and sentence stress.

The following points are considered to be the objectives of the present study:

- 1- To find out whether EFLs are able to mark stressed syllable when dealing with word stress and to know which words in a sentence are given more prominence by speakers.

- 2- To investigate whether listening to audio materials (record speech) have positive impact and effectiveness on word and sentence stress placement.
- 3- To enhance EFLs ability to place and produce word and sentence stress correctly.
- 4- To draw EFLs attention to the role of word and sentence stress on enhancement of pronunciation.

### **1.3 Questions of the Study**

The study answers questions that related to the impact of listening to record speech on placement of word and sentence stress. So, questions of the study have been stated as follow:

- 1- How far do SEFLs make mistakes in producing and placing word and sentence stress?
- 2- To what extent is there a significant impact of listening to audio- material by native speakers on placement and production of word and sentence stress?
- 3- To what extent are there significant differences between experimental groups and control groups which concern with listening to record speech by a native speaker and developing EFLs pronunciation?
- 4- To what extent are there significant gender differences between male and female subjects of the experimental groups?

### **1.4 Hypotheses of the Study**

- 1- SEFLs make mistakes when they produce and place word and sentence stress.
- 2- There is a significant positive effect of listening to audio materials by native speakers on SEFLs' production and placement of word and sentence stress.
- 3- There are significant differences between the experimental groups and control groups concerning listening to record speech by native speakers.



4- There are significant gender differences between male and female subjects of the experimental groups.

## **1.5 Methodology of the study**

The present study is descriptive, analytical as it applies experimental design as the major method. Here, subjects are assigned to control and experimental groups based on random criteria. It has certain sample which is third year students who study English as a foreign language . They are one hundred and forty subjects; sixty- four male subjects and seventy- six female subjects who formally registered for the academic year 2019-2020 at Faculty of Arts Department of English language and Literature in Omdurman Islamic University. The tools of the study are written, listening and oral tests.

## **1.6 Significance of the Study**

The significance of the present study can be stated as the following several things.

Firstly, word and sentence stress which are part of phonology have been neglected and abandoned by some teachers , syllabus designers and parents. They do not give them enough attention, care and emphasis on pronunciation. Furthermore, EFLs should be clearly and explicitly taught that word and sentence stress convey meanings that can be even more informational rather than the actual words used.

Secondly, it is the observation of the researcher during teaching English as a foreign language that many EFL textbooks lack an emphasis on pronunciation.

Thirdly, since word and sentence stresses are such salient and very important factors of intelligibility; this present study is almost entirely directed to

pronunciation features. In addition to that, EFLLs with poor pronunciation skills tend to avoid speaking or communicating with others which deprived them of the necessary practice they need to improve and enhance their speaking skill.

Finally, this study suggests that EFL learners can be explicitly trained to learn how stress falls on different words and how a speaker gives more prominence to certain words in a sentence. Whereas, teachers should concentrate on training their students through direct orientations on how to use word and sentence stress to help them enhance their pronunciation skills and build self-confidence so as to speak in front of their classmates without hesitancy. What is worth mentioning here is that EFLLs desperately want to be clearly understood the first time they speak. In the absence of reasonable intelligibility effective communications cannot take place. (Morley, 1999) argues that pronunciation difficulties put EFLLs at considerable educational, professional, occupational and social risks. Furthermore, EFLLs with poor pronunciation skills tend to avoid speaking with native speakers, which prevent them of the necessary practice they need to improve their speaking skills. Therefore, they must be explicitly taught that word and sentence stress convey meaning that can be more informational than the actual words used. On the other hand, syllabus designers can get benefits from the present study in tailoring or designing a syllabus that covers word and sentence stress widely.

### **1.7 Limits of the Study**

The present study is so far limited to investigate the impact of listening to audio materials on SEFLLs' production of word and sentence stress at university level to enhance their pronunciation knowledge. It is worth mentioning that the study has limitations which related to its sample that represents third year students who study English at the Faculty of Arts English

Department and literature in O.I.U, timing factor which is four weeks and the treatment factors which include classroom interventions and classroom observations. All these factors may influence generalizations of predicted impact of the study. Therefore, these mentioned factors may limit the study.

# **CHAPTER TWO**

## **Literature Review**

### **2.0. Introduction**

This chapter is devoted to theoretical background and framework of the study, reviewing related literature and previous studies that related to this study.

### **2.1. Theoretical Background and Framework.**

Roach, (1983) defines stress as a supra segmental property that begins at syllable level. This property or quality is composed of both increased duration and volume when compared to other syllables within the words. Stress placement often related to rising intonation. Likewise, certain words within a sentence are given prominence. For examples, nouns, verbs and adjectives are given prominence, since they carry the most important information within a sentence. (The BIG RED BALL was THROWN by the BOY.) Words in capital letters are stressed because they carry important information. New information is also given more prominence than old information in an utterance. Note the shift in prominence evident in the following lyric (a poem, usually a short one, written in a lyric style). (More information is enough shown when reviewing sentence stress.)

I LIKE PIZza HOT.

I LIKE my PIZza HOT.

I LIKE my CHEEzy pepperoni pizza HOT.

These stresses shift as new information is added. Pepperoni (an Italian sausage with strong taste) and cheesy are both content words adjectives in this case. However, cheesy receives more prominence in the final sentence because it is newer information. But, how stress in English works. The English stress system is based on the contrast between stressed and unstressed syllable: this is related to word stress, and stress and unstressed word which is relevant to sentence stress. Stressed syllables are louder and longer than unstressed ones. Moreover, they have pitch or movement of the voice up or down. What will happen if EFL learners do not use stress? Of course a message that is sent by a speaker will not be clear enough because of lack of intelligibility since stress conveys meaning.

There is a general lack of agreement among scholars about whether actual English stress rules even exist. (Garnes & Bond, 1980) insist that stress is merely a part of the mental lexicon. In other words, a speaker automatically attends to stress patterns according to a previously constructions, which is based upon previous knowledge. (Halle & Keyser, 1971) and (Cruttenden, 1986) embrace the theory that English word and sentence are indeed rule-governed, and these rules should be explicitly taught. Nevertheless, Gimson, (1980) believes that EFL learners need to learn stress placement of each word individually because of the complexity of rules. Whether or not the rules exist, most of these experts agree that word and sentence stress are important phonological features for both production and perception.

Celce-Murcia, Brinton, and Goodwin, (1996) confirm that if English stress placement is even rule-governed, these rules should be directly taught to EFLs. Fudge, (1984); Cutler, (1984) imply that the exact use of stress plays a major role in speech processing and serves to enhance understanding of

Vocabulary      VOCabulary                      and   not   as   vocCABulary  
/

To clarify above point, let us give some examples which show how stress has strong effect on syllable structure, word forming, grammar and meaning

of words. With regard to segmental effects of stress, segments mostly and mainly depend on their positions with the consideration of stress. The particular case is the relationship between stress and vowel quality. Stressed vowels have their full vowel quality, while the same vowels in unstressed position will be reduced to schwa [ə] or the reduced vowels e.g.

“present (n)” / PREsent                      / vs present (v) / preSENT

Consequently, consonants undergo significant reduction processes due to stress. Here, are some examples which illustrate how stress affects on consonants. The voiceless [p, t, k] are aspirated in the words apart, take and come. But, are not aspirated in the words polite, tonight and baking. Hence, realization of [p, t, k] in the two sets of words differs because of placement of stress. /p, t, k/ are aspirated if they occur as initial component in a stressed syllable and they are not aspirated in an unstressed syllable. The fricatives [v, f] in the words “divine and fine” have the more friction noise than in the words “ivy and dolphin” because in the first set of words they occur in a stressed syllable. English syllable structure is a controversial issue. However, currently theories recognize the role played by stress in determining syllable structure and syllable boundaries. (Levis, 2007)

Thus, English consonants tend to be syllabified with the more strongly stressed syllable. In the following example, observe how the stress shifts involves a change a syllable boundary and syllable join of / t / and / d / in the following words.

Atom / ATom                      /      dolphin /      DOLphin

Adapt / aDAPT                      /                      adaptation /                      adaptaTION

/

There are many morphological changes that influence stress and pronunciation of words. Morphological derivation may involve a change in stress because many suffixes which are added to derivative words have an effect on stress such as: politics / POLitics / /political/ poLITical politician / politiCIAN /.

In addition to that, stress has syntactical functions which indicate whether a word is verb, adjective or noun. The following examples show how stress indicates the syntactic category words of words such as

present (adj) / PREsent / to present (v) / preSENT

record (n) / REcord / to record (v) / reCORD /

The noun and adjective always have stress on the first syllable but the verb has stress on the second syllable. If EFL learners do not use stress, they may confuse listeners due to unintelligibility so listeners may not recognize even a simple word if syllables are equally stressed or there is incorrect of word stress due to predictable stress patterns in LI. Therefore, stress is essential and presenting information clearly.

In addition to above point, (Bansal, 1969 and Banrabah, 1989) state that there is data presented which indicate that misplaced stress resulting in miscommunication. These studies support the present study question since the researcher investigates ways to improve placement and production of word and sentence stress. In addition, word stress is a golden key to achieve and understand English pronunciation because it is the best way to understand spoken English particularly by those native speakers who speak very fast. Word stress is a magic key to understanding spoken English because it is not easy to follow up speakers who make mistakes in placement of stress.



Ladefoged and Johnson (2011: 128) state the functions of stress as follow “Stress has several different functions in English. In the first place, it can be used in sentences to give special emphasis to a word or to contrast word with another. Another major function of stress in English is to indicate the syntactic category of words. There are many nouns – verb oppositions, such as an insult, to insult; an overflow, to overflow; an increase, to increase.”

Native speakers use word stress naturally. Word stress is natural for them. Thus, they do not even know they use it. But, non- native speakers, who speak English to native speakers without using word stress, encounter two problems:

- (1) They find it difficult to understand native speakers especially those who speak very fast.
- (2) The native speakers may find it difficult to understand them.

Moreover, the present study hypothesizes that there is a direct link between knowledge of placing of word and sentence stress that EFL learners had and their ability to communicate. Therefore, EFL Learners do not only need to master grammatical rules and structures of a language but they also need to know how to produce and place word and sentence stress correctly. Hence, without syntax, vocabulary and grammar a message between a speaker and listener can be conveyed but without accurate pronunciation nothing can be conveyed.

### **2.1.1 The Status of Knowledge of Phonology in EFL**

Knowing a word in English means EFL learners acquire or get different factors including morphological, phonological and lexical aspects. What is concerned here is phonological factor. It is known that English language

orthography or spelling system is abstract and involves lexicon which deals with meaning, vocabulary and morphology which studies affixes or derivative suffixes and prefixes. Hence, lacking words and sentence stress may delimitate the comprehension and production process of language because here EFL learners are more hesitant about the correct pronunciation. They are not sure enough about correct pronunciation of words. Segmental features mistakes are remediable; they can be easily repaired. In other words mistakes in segmental features are repairable which are somehow different from supra- segmental features since making mistakes on supra- segmental features change the meaning and they are irremediable.

Thus, have a look to below conversation between a mother and her young daughter who took and swallowed a pill and a native speaker who engaged in the conversation; to notice how segmental features, which is different from supra- segmental features, can be remedied. (Celce- Murcia et al, 2005)

“He swallowed a pill,” she says.

“What kind of peel?” asks a native speaker who engaged in the conversation?

“A aspirin,” she replies.

”Oh, a pill! I thought you said peel,” responds the native speaker.

In the above conversation non native speaker gives wrong pronunciation of the word “pill” which is pronounce/pi:l/ instead of /pil/ by giving tense vowel sound which is /i:/. But, here the native speaker got the meaning because segmental features mistakes no longer affect the meaning. Therefore, the conversation continues because, mispronunciation of a segmental feature lead to minor repairable misunderstanding.

It is worth mentioning that, the importance of word and sentence stress on intelligibility explores studies revealing the most important impact which being considered of word and sentence stress upon perceived intelligibility. As it is stated in the above dialogue between a native English speaker and nonnative speaker; misplaced stress resulting in miscommunication. Word stress is an imperative part of English language learning, both in terms of comprehending spoken English and increasing oral intelligibility (Celce- Murcia, et al 2005).

However, word stress can often be a difficult area for learners of English to master successfully and one which is a challenging for teachers of pronunciation to enthusiastically accept in their teaching. Hence, this literature review presents an overview of what word stress is and its importance in intelligibility. Additionally, some reviews discuss and critiques the teaching methods of word stress which are found in some textbooks and that provides theoretical knowledge for teachers to include into their classroom teaching are useful.

Levis, (2005) states that as pronunciation teaching has become more focused and concerned much on increasing intelligibility rather than copying a ‘native-like’ accent, faulty production of word stress has been found to significantly decrease intelligibility.

### **2.1.2 English Word Stress**

English, along with other languages belongs to a group of languages which are described as ‘stress-timed’ languages (Abercrombie, 1967). In this languages syllables are not equally stressed: some are more prominent, others have less prominence and some have none at all; and this system of stress-timing lies at the root of the whole supra segmental system of English. In English, the duration of syllables varies according to the context. The actual

number of syllables does not correspond closely to the duration of the utterance. English rhythm is largely consisted of the regular pattern beats of word and sentence stress. These patterns are similar to musical patterns with regular rhythmic beats regardless of how many unstressed beats fall in between. (Crystal, 1994) affirms that syllabic duration is the same like the sound of a machine gun.

Roach, (1982) and Crystal, (1994) oppose the above point which had been raised by some linguists; they affirm that there is no language can be described as completely stress- or syllable- timed.

Mitchell, (1969) states that, it has been shown that there are times when English speakers use more syllable- timed patterns, such as when using baby-talk, sarcasm. In addition, some speakers who have English as L2 use more syllable stress patterns. As part of the stressed-timed pattern, words with two syllables will have one syllable stressed more than others.

Ernestus and Neijt, (2008) confirm that multisyllabic words may also have a secondary stressed syllable which usually precedes the primary stressed syllable. The acoustic features of word stress are that the primary syllable has higher pitched and louder vowel quality. Experimental and elongated results have shown that duration and intensity ratios are both cues for judgments of stress and that vowel length is more effective cue than intensity ratio. The position of the main stress in bi syllabic (two syllable words) is often placed on the first syllable (the left one) e.g., mother / <sup>m</sup>ʌðə/ mountain / <sup>M</sup>ʌntəɪn / content / <sup>K</sup>ɒntənt /.

Dickerson (2007), states that the position of stress in words, that has more than one syllable, is controversial. That is to say the position of stress in words that

have more than one syllable may vary.

The acoustic properties of the stressed syllables in English are different to those of the unstressed syllables. Scarborough et al, (2009) claim that the unstressed syllables have a weaker vowel and often include the *schwa*. Visually, when word stress is produced lips and chin move more because of strong, loud and pitched stressed syllable. Accordingly, the vowel is further than in non-stressed syllables where it is weaker and therefore, requires less mouth opening. It is important to note this and give students signal to place or mark stress when observing models of words stress or using reflection while practicing.

Kenoe, Stoel- Gammon (1995) state that one important study showed that, in a group of infants aged from 18- 30 months, although develop fundamental frequency, amplitude and duration were controlled to the text that controlled to the extent identifiable stress contrast could be perceived. When they are about twelve years old that children have completely mastered the complexities of word stress. However, it has also been suggested that it is more difficult for English nonnative speakers to identify word or sentence stress without consulting acoustic dictionaries or see models from their teachers. In principle, stress alone could serve to distinguish parts of speech, but in reality it seldom does. Minimal pairs in English which are distinguished by word stress, such as ‘insight/incite’. /'insait/ in'sait/

therefore, (Celce- Murcia et al, 2005) claim that faulty in word stress which constitutes a significant part of supra segmental speech can negatively impact on intelligibility. There is evidence indicates that intelligibility and comprehensibility are undermined specifically by faulty word stress. Faulty prosodic features including word stress may affect comprehension more

adversely than segmental errors. This misplacement of word stress can have significant negative impact of intelligibility.

Gee, (1994) states that, although not fully understood, possibilities of how word stress can be so detrimental to intelligibility have been discussed; it is known foreign accents trigger delay in word identification processes. It may be that the English listener relies on word stress to decode the word and locate the word in their mental lexicon. (Field, 2005) states that if stress is wrongly distributed, it might have serious consequences for the listener to locate words within a piece of connected speech. Lexical stress plays central role in determining the profiles of words and phrases but misplaced word stress appears to be more perceptually important to native speakers and listeners than are instances of mispronounced phonemes.

Field,( 2005) claims that word stress errors in which the stress is shifted to the following syllables (e.g.‘TURbine’ changes to ‘TurBINE’) have been shown to more detrimental than vice versa and even more so if combined with a phonemic error. However, there is lack of evidence which describes whether faulty word stress is detrimental to intelligibility in non-native to non-native interactions. Archibald, (1992) and Guion, (2006) state that many students may transfer their mother tongue word stress patterns to English which is perhaps based on whether they can or cannot detect phonological features such as weaker vowels. However, it is not assumed that just because a student speaks another stressed-timed language that they do not make stress errors. (Benrabah, 1997) claims that vowel quality of the unstressed syllable may not be as weak as in English for example in Arabic.

Regardless of the errors, due to the complexities of English word stress, many students would benefit from working on improving their command of

English word stress. Altmann, (2006) describes a phenomenon of ‘word stress deafness’ as when non-native speakers of English cannot identify differences in words that differ only in word stress.

Contrary to this deafness belief, non-native English speakers including students from non-stress language backgrounds were able to hear stress placement on spoken English words at near native levels and that length of stay or age were not closely connected or correlated in this and that, furthermore, they were able to learn differences in word stress. (Field, 2005) states that Lexical stress is specifically significant to individual words. So, there lies a responsibility for presenting stress patterns while teaching vocabulary and the oral practice of new words should most definitely include word stress practice. Slow learners of English may rely more heavily on word-by-word learning of stress patterns. This word-by-word learning may occur while learning new vocabulary. It is important to be reminded that word stress learning cannot be taught in isolation; it is clearly linked to other aspects of pronunciation, vocabulary learning and grammar.

Hubicka, (1981) and Baptista, (1989) claim that although English word stress has been demonstrated to have certain regularity it is still more complex than in other stress-timed languages, a fact that discourages many teachers and textbook writers from teaching stress prediction techniques.

Although these observations were made decades ago, it is unfortunate that pronunciation textbooks still offer limited resources in terms of aspects of word stress such as depth, accuracy, variety or real functional communication. Celce-Murcia et al, (1987) state much-cited work encourages communicative approach to teaching pronunciation, but she has herself stated that teaching word stress in its communicative way is more difficult than teaching phonemic aspects of pronunciation.

However, in a more recent co-authored study ( Murcia, 1987) suggests methods for presenting word stress to students through listening discrimination activities, to enable EFL learners to recognize differences between stressed and unstressed syllables which related to word stress and give prominence to a certain word in a sentence stress followed by guided practice and then communicative practice using games. As this is the case, then due to the variance and less predictive patterns of English word stress, it has been recommended to teach word stress rules. But, there is controversial matters related to placement of word and sentence stress. Therefore, some phoneticians state that it is of no use teaching EFL learners some rules of word and sentence stress because of stress rules complexity.

Three main rules have been reviewed in the literature. The first of the three is phonological similarity. This is when students use known stress patterns from other similar words and transfer them to new words. For example, a student may know the word stress pattern of ‘humanity’ and apply its word stress structure to vocabulary item such as ‘absurdity’. It is particularly of note that EFLLs rely most on the stress patterns of phonologically-similar known words.

But, the placement of certain suffixes in English can alter a stress pattern. For example, adding “- ian “to a root word changes the stress (consider LIbrary and LibrARIan), while other suffixes do not have this effect (evident in ‘FRIEND’ and ‘FRIENDship’ where both place stress on the same syllable (see Yavas, Martin Checklin 2006), for full review.

Ghorbany, (2011) suggested that this feature of stress patterns in English should be explicitly taught and practised in the classroom. The explicit teaching of suffix rules may assist in accessing the students’ ability to learn stress through the use of phonological similarity.



Additionally analogy exercises where students group words with similar stress patterns or find the odd one out again rely on phonological similarity (Field, 2005).

The second rule relates to word class. Approximately 80% of two- syllable nouns and adjective place stress on the first syllable, e.g., ‘KITCHen’ and ‘EXTra’. However, verb stress works in the opposite manner (consider ‘achIEVE’ and ‘agREE’). It was observed that the word class rules appear in many English teaching textbooks but there is little evidence for the effectiveness or transfer of this rule. (Hammond, 1999)

An important third rule concerns the syllabic structure of words. (Chomsky and Halle, 1968) claim that English stress tends to fall on syllables with longer vowels or when the word ends in two or more consonants. Guion, (2006) states that bilinguals can pick up more complex patterns learning stress rules such as syllabic structure rules. But still show some slight shortfalls in this area. Whatever rule is decided upon, they have one thing in common; all of these explanations take time and need to be broken down to teachable concepts. Mastering a linguistic rule may occur or happen but internalizing the stress patterns for specific words is not the same. The use of audio prompts to support students’ learning processes in language acquisition is well documented for both segmental and supra-segmental aspects of pronunciation learning.

Providing clear visual aids to students in classroom help them to emphasize word stress, such as underlining, using bold type, uppercase, circling or using ticks. Clapping or tapping the relevant word stress by the teacher or in student-led small groups has also been recommended. Also a piece of elastic is stretched by a teacher while modeling to emphasize the stressed syllable which additionally adds acoustic dimension to the learning process.

Hence, EFLLs struggle with hearing stress falls as they focus on trying to

grasp different sounds, word meaning and grammar. Developing EFL learners' awareness of word and sentence patterns in English can be increased by providing auditory cues. (Gilbert, 2001) describes the kazoo (a small musical instrument) as the best tool of pronunciation teacher can have. Gilbert (1978) claims that by humming the word shape into the kazoo, students can hear the word stress pattern of the syllables without worrying about the sounds. Another similar way to this could be using nonsense words so students focus on acoustic patterns rather than semantics. Fischler, (2005) reported that during a four week project involving six students in an intense program of learning both sentence and word stress using rap music that students were perceiving as having improved oral performance. The course was designed to include adequate and appropriate audio- discrimination and controlled, guided and communicative practice.

While this innovative approach is to be applauded or strongly approved, which means students show enjoyment as performance or speech by clapping hands repeatedly to make noise, it is unclear whether using rap music is any more beneficial than using other word stress teaching methods in an intensive program. Certainly it may appear to be motivational to certain student groups because motivation is critical to language acquisition. Technological advances have widened computer-assisted language learning (CALL hereafter) practices but technology is only as good as the practitioner or user. It has been shown that the use of computerized material for pronunciation learning is good and beneficial but it should include findings that based on experiences rather than on theories to provide worthwhile training for learners.

Levis, (2005) further notes that teachers need to be more aware of computerize- assisted language learning (CALL) and they need to know what exercises are effective using CALL, understand its strength and limitations and

overall be familiar with available CALL tools and associated terminologies. The evidence for CALL and word stress acquisition is very limited. It is noted that using a program called Wave surfer which allows acoustic visualization of sound, found that students were enthusiastic and were able to make long-term acquisition of particularly difficult words including polysyllabic words. However, it was also found that this practice was not generalized to a large amount of vocabulary and was time-consuming. Thus, when targeting phonemic accuracy, EFLs should aim to use words where the target phoneme is contained in a stressed syllable. For example, if refining a student's pronunciation of 'I', it is better to practice with words like 'allow' or 'aloud' than 'follow' or 'bellow' so that students do not pause before the stressed syllable. EFLs tend to give prominence to many words in a sentence; however, this confuses the English listener.

So, Word stress plays an important role in intelligibility and deserves to be studied in all English classes – not just pronunciation classes and by all students without being affected or influenced of their general language proficiency levels. Teaching word stress can occur as part of any lesson provided that the teacher is empowered with the theoretical knowledge of word stress and the enthusiasm to teach it. Less proficient learners should be made aware of word stress whereas more experienced learners can better cope with learning rules associated with word stress. Of the rules reviewed in this study, phonological similarity may be the best one to start with bilingual picks this up well. The teaching of new vocabulary and word stress are closely entwined. Stress patterns have been presented. Despite this, the studies in the review present little evidence to support their claims which have not been any meta-analysis or randomized control trials investigating how students' best learn word stress.

Although a few some studies were carried out in pronunciation, they had low

numbers of participants. Additionally, some of the techniques outlined date back over years and more recent studies, including those using computers- assisted language learning (CALL), are limited. (Altamnn, 2006). While there are significant studies confirming the importance of word stress accuracy, further research is required. Miscommunication due to word stress errors has mostly been investigated using native English speakers listening to non-native speakers. Further studies are required to investigate whether word stress is as detrimental to intelligibility in non-native speaker interactions where English is used as a lingua franca (a language used between people whose main languages are different.)

The results of such researches may have a significant impact on classroom teaching word and sentence stress. So, knowing the importance of word stress in non-native to native interactions, a teacher may choose to focus on word stress. On the other hand, a teacher of students who require English to speak to other non-natives may less importance on word stress if it is shown that word stress is not detrimental to non-native to non-native intelligibility. But, there is limited comparison within reviewing literature of methods used to teach word stress rules.

Although there are some ideas of which word stress rule better to be learnt. One further direction may be to investigate whether (CALL) can increase or even replace traditional classroom methods for teaching word stress. With the shift of focus onto intelligibility and communicative practice, any future research comparing techniques should include outcome measures of intelligibility, perceived understanding and reports communication in real-life situations (as also suggested by Pickering, 2006). Some techniques of teaching word stress in the review are dated; it would be advantageous for researchers to survey and collect data from teachers to investigate what the current classroom

activities are regarding word stress teaching practices and beliefs. Fischler (2005) states that absorbing supra segmental features contribute to intelligibility which means the ability to be understood well, more than mastering segmental features.

Brinton (1996:131) states that many teachers would claim that a learner command of segmental features is less critical to communicative competence than a command of supra segmental features, since the supra segmental carry more of the overall meaning load than do the segmental.

### **2.1.3 Placement of Word Stress.**

Word stress plays an important role in intelligibility and deserves to be studied in all English classes—not just pronunciation classes— and by all students regardless of their general language proficiency levels. Teaching word stress can occur as part of any lesson provided that the teacher is encouraged with the theoretical knowledge of word stress and the enthusiasm to teach. Less proficient EFL learners should be made aware of word stress whereas more experienced learners can better cope with learning rules associated with word stress. Rules of stress placement which discussed in this study, phonological similarity may be the best one to start with bilinguals can develop and improve this well. The teaching of new vocabulary and word stress are closely entwined. Several ways to teach word stress have been presented. Additionally, some of the techniques outlined date back over, and more recent studies, including those using Computers- assisted Language Learning CALL, are wide- ranged. When a word has more than one syllable in English, one syllable receives more importance than the others when it is pronounced. This is the syllable that receives the primary word stress. This means that compared to the other ones;

the vowel sound of that syllable is slightly louder, longer and at a higher pitch. For example the word chapter is stressed on the first syllable, (chap-), is louder and slightly longer than the second syllable (ter).

Moreover, variations in stress are used to differentiate between a noun and a verb as in report (n) / rePORT / and to report (v) / REport /. Here, EFL learners should notice that in the noun the stress falls on the first syllable. But, in verbs, it falls at the second syllable. But this rule is controversial because there are some verbs on which stress falls in the first syllable. This stress has a grammatical function. In other words, it can be said that it is a lexical stress which states whether a word is a verb, adjective, adverb or noun.

Hammond, (1999) states that over 80% of two syllables nouns and adjectives place stress mark on the first syllable while, e.g. ,” KITCHen and EXTra”. But, verbs stress works in the second syllable (consider achIEVE and agree). The word class rules appear in many English teaching textbooks but there are exceptions for this rule. English stress tends to fall on syllables with longer vowels or when the word ends with two or more consonants. However, it may that consonant clusters are less important than vowel length but there are many exceptions which are relevant to the above rules. So, providing clear audio and visual cues to EFL learners help them emphasize word stress, such as underlining using bold type, uppercase, listening to record speech by native speakers, circling or using ticks.

Murcia et al (2005) state that relevant circumstances which control the placement of prominence is emphatic stress when the speaker wants to give special emphasis on a particular element. In fact, the element that receives emphatic stress usually exchanges new information within the sentence however it is different from normal prominence by the greater degree of

emphasis placed on it by the speaker. In the phrase “I’ll NEVer eat shellfish again,” for example, the speaker might place emphatic stress on (never) to suggest specially bad reaction in an indirect way that eating shellfish is not good. In the same way, speaker (B) places emphatic stress on the word (really) to signal a strong degree of enjoyment.

A: How did you like that new computer you bought?

B: I am REALly enjoying it!

In addition to emphatic stress, contrastive stress is another circumstance that governs the placement of prominence. In this case two parallel can receive prominence. For example, “Is this a LOW or a HIGH impact aerobics class?” here the speaker places prominence on both words low and high to show this important contrast in a sentence. Meanwhile, sentence stress can be used for giving more emphasis as in (I want a RED pen, not a BLACK one.)

Ladefoged, (2010) claims that “it could be usually found where the stress occurs on a word by trying to tap by your finger in time with each syllable. It is much easier to tap on the stressed syllable. Try to say *abominable* and tapping first on the first syllable, then on the second, then on the third, and so on. If you say the word in your normal way, you will find it easier to tap on the second syllable.

Radford et al (2009:41) reaffirms that “compare the words transport (n) in means of transport and to transport (v) goods, we can hear an important difference in pronunciation. In means of transport the first syllable, “tran-,” gets greater emphasis than the second, - “sport,” while in to transport goods it is the second syllable which gets the greater emphasis. This emphasis is called stress,

and we say that in means of TRANsport the first syllable bears stress, while in to transport the second syllable is stressed.”

So how EFL learners can produce and place word and sentence stress clearly and accurately. To do so Dickerson (1987b, 1989a) provides some useful rules which ease and facilitate placement of word stress. i.g. polysyllabic words which have weak endings include some suffixes that affect placement of word stress– al – an – ance – ancy – ant – en (noun)- ence – ency – ent – ide – is – ite – oid – on – um – and us. Example can be seen from below tables.

A table (2.1) The Effect of lax and tense vowels on placement of word stress

CVC (Lax Vowel)	CVC+ weak endings (Tense Vowel)	
Sin	Sin + us	
Pot	Pot + ent	
Cub	Cub + oid	
Leg	Leg + al	
Fat	Fat + al	
V Key syllable	VC Key syllable	VC Key syllable with "u" in left syllable
GRADual	• NAL- ys is	NUM- er- ous
STREN- u- ous	MED- ic- al	• LUM- in um
Con- tin- u- um	MIL – it – ant	PUN- it- ive

Lexical stress: Stress distinguishes parts of speech such as a noun, a verb or an adjective. For example if we compare the word transport in “means of



transport”, which is noun and “to transport goods” which is verb; here different pronunciation can be heard. The phonetic spelling of the word transport, which is noun according to IPA, is [ TRANSport] while the phonetic spelling of the word transport which is a verb is [ tranSPORT ] . To sum up, placement of stress may change the parts of speech.

Field, (2005) claims that when teaching vocabulary; stress pattern of each word should be clarified obviously and the oral practice of new word should include word stress practice. EFL learners may rely more heavily on word by word learning of stress patterns particularly if they are from syllable timed languages such as Arabic. This word by word learning may occurs when learning new vocabulary. It is important to be reminded that word stress learning cannot be taught in isolation. It is clearly linked to other aspect of pronunciation vocabulary learning and grammar.

Baptista, (1989) states that although English word stress has been demonstrated to have certain regularity it is still more complex than in other syllable timed languages because of unpredictability of word and sentence stress in English, a fact that discourages many teachers from teaching stress prediction techniques. It is unfortunate that pronunciation textbooks give very limited guidance on word stress patterns.

Murcia, (1987) states that teaching word stress in its communicative way is more difficult than teaching phonetic aspect of pronunciation. However, she suggests method of teaching word stress to students through listening discrimination activities followed by guided practice and then communicative practice using games. In a natural pronunciation each separate word receives amount of emphasis, in other words a separate word gets stressed on a syllable

that is louder, longer and higher in pitch. But, take an example,” Jane plays tennis.” Here, a speaker can give more emphasis to a certain word in the sentence. JANE plays tennis. This can be a natural answer of a question “who plays tennis?” Moreover, if a speaker gives more emphasis to the word play in the sentence” Jane PLAYS tennis.” this is should be the natural answer of the question “what does Jane do?” finally if emphasis is given to the word tennis in the sentence “Jane plays TENNIS” This a reply of the question what does Jane do?

On the other, hand, stressed syllable is produced by pushing more air out of lungs compared to unstressed syllables. It has more respiratory energy than neighbouring unstressed syllables.

Gussehoven and Jacobs (2011:214) state that “The question of how stress is realized depends on how the question a language chooses to use the structural position represented by the foot. English is a language that makes very clear distinction between stressed and unstressed syllables.” Stress has various functions in English. It is used in a sentence to give emphasis to certain words in a sentence. That is what is called sentence stress because here a speaker gives emphasis to specific words. Another main function of stress is syntactic or grammatical category of words; here stress differentiates whether a word is noun, verb or adjective, take this pair of words as an example which emphasize how placement of stress can distinguish syntactic category of words “an insult “ and “to insult” /INsult (n)/ /inSULT (v)

#### **2.1.4 Suffixes that Influence Word Stress.**

EFL learners may know the word stress patterns of certain words such as “humanity” and apply its word stress structure to a new vocabulary item such

as “absurdity”. It is particularly of note that EFL learners rely most on the stress patterns of phonologically- similar known words. There some suffixes in English that can alter a stress pattern. Examples are shown in below tables.

Table (2.2) Suffixes that attract the stress to the penultimate syllable.

Suffix	Ia	Ial	Ible	Ic(s)	Ian	
examples	Media Victoria Criteria Dementia Bacteria Militia Nostalgia pneumonia	Social Material Special Official Potential Influential Residential Essential Differential	Possible Terrible Visible Sensible Flexible Horrible Accessible Invisible Eligible	Statistics Critics Graphics Physics Republic Topic	Politician Musician Physician Technician Electrician Magician Clinician Statistician	
exception s			eligible incorrigible intelligible	Politic Arabic Catholic Lunatic rhetoric		
Suffix	Ient	Ious	Ish	Osis	Sion	
Examples	Patient Sufficient Efficient	Various serious Previous	English Establish Distinguish	Diagnosis Fibrosis Tuberculos	Decision Commissio n	

	Ancient	Obvious	h	is	Provision
	Ingredient	Religious	Rubbish	Prognosis	Division
	Recipient	Curious	Diminish	Hypnosis	television
	Nutrient	Anxious	Vanish	Osmosis	Discussion
		Furious	Flourish		Version
			Accomplis		Occasion
			h furnish		Conclusion
			Reddish		Session

Table (2.3) Suffixes that Attract the Stress to the Third Syllable.

Suffix	Ate	Cy	Eous	ical	Ify
Example	Estimate Candidate Associate Investigate Generate Illustrate Appreciate	Policy agency Emergency Currency Frequency Pregnancy Accuracy Conspiracy	Spontaneous Gorgeous Courageous Hideous Righteous Courteous	Political Physical Practical Classica l musical Typical Critical	Identify Justify Qualify Verify Clarify Signify Notify Modify Signify
Excetion s		PREsidency			
Suffix	Itive	Ity	Ogy	Phy	Ize
Examples	Positive Sensitive	Community Authority	Technology Strategy	Geography Biography	Realize Recognize

	Primitive	University	Ideology	Topography	Organize
	Infinitive	Quality	Biology	Typography	Emphasize
	Cognitive	Activity	Sociology	Autobiography	Criticize
	Infinitive	Security	Geology	Photography	Summarize
	Additive	Majority	Analogy	Bibliography	Minimize
	Fugitive	Ability	Geology	Ethnography	Apologize
		Reality	Apology	Philosophy	Authorize
		Capacity			Modernize

From the above tables, it is noticed that how lexical suffixes affect on placement of word stress. For EFL and ESL learners who learn English as second (l2) or foreign language placing and producing accurate stress isn't easy because interference of (l1) is considered problematic. But, placement and production of word and sentence stress isn't difficult for native speakers whose English is their mother tongue; because they naturally producing it regardless looking for some rules.

Culter, in his paper which was published in (1984), states that word stress patterns are an integral part of the phonological representation of word in mental lexicon. They are not generated by rules. This is why native speakers generate and produce stress naturally. But, nonnative speakers have to follow certain rules of stress placement and then listen to native speakers who produce stress naturally so as to produce stress accurately and precisely.

### **2.1.5 Strong and Weak Syllables**

It is of great importance for EFL learners to know how to place word stress precisely. But, to absorb or comprehend this procedure and process of placing

word stress; they have to differentiate between strong syllables and weak ones. It is worth mentioning, to shed some light on importance of word and sentence stress because mistakes on word stress make it very difficult for hearers to get a message. In addition to this, stressing wrong syllable in a word can make the word very difficult to be heard and understood; simply because there is misunderstanding.

On the other hand, stressing a word incorrectly can change the meaning or even type of a word. Having a look to the word desert (n) / Desert/ which is noun and the word desert (v) which is verb / deSERT / and then see the grammatical differences. It is worth mentioning that, stressing words incorrectly which means pronouncing them wrongly can make listeners feel irritated and get nothing and then communication between speaker and listener has been cut. When a speaker stresses words they should use five characteristics of stressed syllables which are longer, louder, changing pitch from other unstressed syllables, it is said more clearly and it uses bigger facial movement. This procedure can be applied when you look in a mirror and see facial movement mainly your jaw and lips. It is also important for learners to recognize unstressed syllables and their characteristics which contradict stressed syllables. Thus, here the important question which should be raised is that what are characteristics of both weak and strong syllables? So that EFL learners can follow in order to distinguish strong syllables to weak ones. Strong syllables have long vowels (i:, u:, ɜ:) but weak syllable have short vowels.

### **2.1.6 Some Rules of Word Stress**

There are some patterns that EFL learners can follow dealing with placement of word stress in English language; although there are some exceptions because

it is not possible to say there are fixed and clear cut rules for placement of word stress.

Table (2.4) General Tendencies for Placement of Word Stress in English

Word	Type of word	Tendency	Exceptions
Apple Table Happy	Two syllable nouns and adjectives	Stress on the first syllable Apple	Hotel Lagoon
Suspect Import Export Insult Desert	Words which can be used as nouns and verbs	The noun has stress on the first syllable.” You are the suspect”  The verb has stress on the second syllable.  “ I suspect you”	Respect Witness
Football Doorstep	Compound nouns	Stress on the first part	

Roach (1995) states that strong syllables have tense vowels such as long vowels (a:, u:, 3:) or diphthong such as (ei, ) but weak syllables should have lax vowels such as schwa and short vowels. From the above quotation, EFL learners should know that tense and lax vowels which play an important role on placement of word stress. Therefore, it is very important to know them well and to differentiate between them well. As it is said prominence is achieved through quality which affects mainly the vowel. As an example phoneme / PHOneme/ phonology / phoNOLOgy / phonological / phonoliGICAL

Even though these words are derived from the same stem but they bear different placement of stress. The stress is placed on different syllable. For the word PHONEME the stress is placed on the first syllable which is /        / and the second word PHONOLOGY which is /        /. The stress is placed on the second syllable and the third word PHONOLOGICAL the stress placed on the third syllable which is /        /. It is worth mentioning that stress is linked to vocalic quality which is related to vowels. If pairs of words are spelled the same but pronounced differently due to placement of stress, this may show that how placement of stress affects the quality nucleus of syllable. Take the following pair of words.

Conduct - (n) / conDUCTt/        (v) / CONduct        /

Present - (n/adj)/ PREsent        /        (v) / preSENT

Desert - (n) / DEsert        /        (v) / deSERT

Linguists no longer use the term long and short vowels, instead they use the terms tense and lax respectively to describe vowels (Roach, 1983). So, EFL learners have to absorb and comprehend lax and tense vowels precisely and accurately because unless they distinguish between lax and tense vowels it will not be easy for them to mark stressed syllable. Not only marking stressed syllable but also they have to produce stressed syllables. Here, EFL learners should listen to record speech by native speakers who produce stressed syllables naturally because it is their mother tongue and they do not need to follow certain rules to mark and produce stress. Some phoneticians define word stress, which is marked on strong syllables, a syllable which involves loudness, prominence and pitch to convey meaning.



What is worth mentioning here is that why is word stress so important? The answer of this question is, simply, because mistakes in word stress result in misunderstanding in English mainly in communication. And it is irremediable if EFL learners make mistake in word stress placement. So, to mark stress EFL learners have to follow different ways such as big circle and small circle. It is useful method because it is clear enough and very easy to be seen by learners. In addition to that, it has beneficial advantage of identifying the number of syllables in a word, as well as the stressed syllable. For example \Caribbean \ o o O o \ .

Murcia et al (2005) emphasized that “there are many ways of presenting notation for marking stress in a written word that can help make the concept visual. CAPital, boldface, bubbles, accents and underline.” The useful way of solving the problem of producing word stress correctly is to place the stress on different syllables. For example using bigger and smaller circles, computer \o o O\ , computer \O o o\ computer \o O o \. The big circles imply stressed syllables while small circles imply unstressed syllables. By hearing the word stressed incorrectly. There are several ways of how to mark word stress such as capitals, boldface, bubbles, accents and underlining. Each way has its advantages and disadvantages. If capitals are taken as a method it is clear enough for EFL learners because capital letters stand well in printing but only two stresses are marked which are primary and secondary stress. Taking another type of stress notation, which, is bold type that to some extent opens up possibilities for indicating additional stress levels. Bubbles work well if circles written in hand so as to differentiate between stressed and unstressed syllables. Accents are often used in monolingual dictionaries guides with a vertical accent mark before stressed syllable: onion \                      \. For polysyllabic words, words

with more than one syllable, which have three levels of stress a subscript accent is added to show light stress as in telecommunication / telecommuniCAtions and desertification / desertifiCAtion /.

Wong (1987 a: 15- 20) discusses the following techniques to improve students confidence level while promoting fluency. It is worth mentioning that EFL learners have to bear in mind if all individual sounds are correctly pronounced, incorrect placement of stress can result in misunderstanding. Thus, to solve the problem of misplacement of stress, learners should know how native speakers highlight a stressed syllable; how they produce unstressed syllable often with vowel reduction and how they introduce three levels of stress. While there are significant studies confirming the importance of word stress accuracy, further research is required. Miscommunication due to word stress errors has mostly been investigated using native English speakers listening to non-native speakers. Further studies are required to investigate whether misplacement of word stress is as damaging to intelligibility in non- native speaker interactions where English is used. The results of some researches may have a significant impact on classroom teaching. Knowing the importance of word stress in non-native to native interactions, a teacher of migrants may choose to focus on word stress. On the other hand, a teacher of students who require English to speak to other non-natives may place less importance on word stress if it is shown that word stress is not detrimental to non-native to non-native intelligibility. There is limited comparison within the literature of methods used to teach word stress. (Fischler, 2005)

Although there is some comparison of which word stress rule is better to learn, there have been insufficient studies comparing techniques.

One further direction may be to investigate whether CALL can replace traditional classroom methods for teaching word stress. Pickering (2006) suggests that with the shift of focus onto intelligibility and communicative practice, any future research comparing techniques should include outcome measures of intelligibility, perceived comprehensibility and reports of communication in real life situations given that some of the techniques of teaching word stress in the reviewed literature, it would be advantageous for researchers to survey.

### **2.1.7 Sentence Stress in English**

As a stressed- timed language, English has syllable structure combining a primarily stressed syllable (with longer duration) and unstressed syllables (with shorter duration) at both word and sentence stress. Examining of English sentence stress have been conducted by Gee (1994) who reports that the most reliable acoustic features underlying sentence stress are the increase of fundamental frequency duration and intensity, relative to unstressed words. This can interpreted that when a word is stressed in a sentence, it will be pronounced louder, longer and with higher fundamental frequency.

Celce- Murcia et al (2005) stated that the bridge between word and sentence stress can be illustrated by comparing the stress pattern of some example words with utterances containing equal numbers of syllables and similar stress patterns:

Multisyllabic word	Utterance
Overlook	Tell the clock!
Guarantee	can't you see?

Electrification

we took a vacation.

Identification

we went to the station.

For many EFL learners, especially those from syllable- timed language backgrounds such as Arabic, simply hearing which elements in a sentence receive stress may be difficult initially. It is recommended providing EFL learners with the metrical pattern of limerick (a humorous short poem that has five lines that rhyme.)

#### Examples of limericks

MARY, MARY

Mary, Mary

Quite contrary

How does your garden grow?

With silver bells,

And cockle shells,

And pretty maids all in a row.

LITTLE JACK HORNER

Little Jack Horner

Sat in a corner

Eating his Christmas pie

He stuck in his thumb.

And pulled out a plum,  
And said “What a good boy am I “

### MARCHING CHANT

Left, left, left- right- left  
I left my wife and twenty- one kids  
Alone in the kitchen  
In starving condition  
Without any gingerbread  
[Repeat line one and continue]

### CINDERELLA

Cinderella dressed in yellow  
Went uptown to meet a fellow  
She walked so slow,  
She met her beau  
He took her to the picture show  
How many kisses did he give her?  
One, two, three, four (etc)

Sentence stress gives spoken language natural tune because speakers can speak naturally without negative effect of their mother tongue. Like word

stress, sentence stress helps EFL learners understand spoken English. It gives English its rhythm and beat.

Celce- et al (2005) emphasized that the term sentence stress is used to illustrate various stressed words in a sentence. The following examples clarify how sentence stress and word stress are similar in stress pattern in both multisyllabic words and simple sentence.

Attend / aTTEND / you did. / you DID /

Mother / MOther / pay them. / PAY them /

Education / eduCAtion / JOHN is a LAWYER.

From the above examples what is sum up is that the function of word and sentence stress is to create the rhythm of an English utterance. The rhythmic structure which is similar to musical phrase classifies and categorizes English language as stress- timed language. This means that the length of an utterance depends on the number of stresses rather than the number of syllables. Going back to word stress, it is stated that word stress is accent on one syllable within a word. Here pedagogically dealing with primary stress. But in sentence stress, which to some extent different from word stress, sentence stress is accent on certain word within a sentence. It is known that sentences have two types of words Content words and Structure words. Content words are keys words of a sentence. They are important words that carry meaning and sense.

Unlike content words, structure words are to some extent not as important as content words. They simply make a sentence grammatically correct. They give the sentence its correct form or structure. If structure words are removed from a sentence the meaning is still clear. But if content words are removed from a sentence the meaning is not easy to be absorbed or understood. So, the sentence

has no sense. Look at this sentence in which structure words have been removed but the meaning is still clear. “iron, shirt, trousers, want go party.” This sentence grammatically is not correct but it gives a sense. The structure words which are removed are (can you because my and I to) the sentence becomes (can you iron my shirt and trousers because I want to go to party?). The addition of structure words to a sentence does not add any more information but makes it grammatically correct. There are many possible additions of structure words. In above sentence the five key words which are content words are accentuated or stressed. Why is this important for pronunciation? Because it adds music and gives English language its natural tune. In addition, it is the rhythm of the English language.

### **2.1.8 Rules for Sentence Stress in English.**

The following tables are useful for EFL learners so as to differentiate between content and structure words. To do so Dickerson (1989) provides some useful rules which ease and facilitate placement of sentence stress.

Table (2.5) Content words are stressed

Main verbs	play	enjoy	eat	encourage
Nouns	the moon	nation	shirt	book
Adjectives	boring	interesting	beautiful	
Adverbs	unfortunately	usually	always	
Negative auxiliaries	isn't	didn't	doesn't	aren't

Table number (2.6) which shows Structure Words are Unstressed

Pronouns	you	they	he	him	them	it
Prepositions	on	in	at	off	into	of
Articles	a	an			the	
Conjunctions	and		but			because
Positive auxiliaries	are	is	be	do	did	has
	were	was	have			

In English sometimes structure words are accentuated or stressed what is said here there are exceptions for rules. The following example shows how some structure words are stressed

1- “They have been to the USA. Have not they?”

“No, THEY haven’t, but WE have.”

2- “You made everyone believe Angela stole your money!”

“I never said SHE stole my money.”

Table number (2.7) which shows Content Words versus Function Words

Content information words (often stressed)	Function words (usually unstressed unless in final position or when used emphatically)
Nouns	Articles
Main verbs	Auxiliary verbs
Adjectives	Personal pronouns
Possessive pronouns	Possessive adjectives



Demonstrative pronouns	Demonstrative adjectives
Interrogatives	Prepositions
Not/ negative contractions	Conjunctions
Adverbs	
Adverbial particles	

English language which is, different from other languages, described as stressed- timed language this means that the length of an utterance depends on the number of stresses rather than the number of syllables. As a result of this difference, EFL learners whose mother tongue is a syllable- timed language tend to stress syllables equally without decreasing unstressed syllables.

Therefore, to solve the above problem EFL learners should listen carefully to native speakers who speak English naturally so as to know well how native speakers reduce unstressed syllables when dealing with word stress and accentuate content words that carry information in a sentence. When words are said in connected speech, it is differently pronounced from saying them in isolation. Speakers may want to give more emphasis to a certain word in a sentence. While, word stress is decided by language rule and can be thought of pronunciation as fact but there are some exceptions, sentence stress is decided by speaker choices. The speaker usually but not always chooses content words which carry more information than function or structure words such as auxiliaries, pronouns, prepositions and determiners. But, have a look to the following sentences which show even function or structure words can be stressed because the speaker give them more emphasis than content words.

(A) You made everyone believe Angela stole your money.

(B) I never said she stole my money.

(A) Don't lie. You sometimes said she stole your money.

(B) I NEVER said she stole my money.

(A) You have been thinking she stole your money.

(B) I never SAID she stole my money.

(A) You keep complaining that someone stole your money.

(B) I never said SHE stole my money.

(A) She only BORROWED your money.

(B) I never said she STOLE my money.

(A) You tell people that she likes to steal money.

(B) I never said she stole MY money.

(A) AND you tell people she steals from you.

(B) I never said she stole my MONEY.

From the above dialogue, words in capital letters are stressed even though some of them are not content words such as I, and, she and never.

So, Stress and rhythm is the spine of English pronunciation. The role of stress, however, goes far beyond the segmental and supra segmental levels. English stress has a bearing on syllable structure, morphology grammar and meaning.

### 2.1.9 Segmental Effects of Stress.

The phonetic realization of segments largely depends on their position with respect to stress. The clearest case is the relationship between stress and vowel quality. Stressed vowels have their full vowel quality, while the same vowels in unstressed position will be reduced to [ə] or the reduced vowels [ɪ, ʊ], e.g. present (n) ['prezənt] vs *pre'sent* (v) [pri'zent]. Stress affects not only vowels but whole syllable.

Consequently, consonants in unstressed syllables will undergo important reduction processes. Next, some regular phonological processes are illustrated. The voiceless stops /p, t, k/ are aspirated in the words apart, take and come. But they are not aspirated in the words polite, tonight and quite. The realization of /p, t, k/ in the two sets of words differs because of stress, /p, t, k/ are aspirated if they occur as the initial element in stressed syllable and they are not aspirated in an unstressed syllable.

Thus, the determining factor for aspiration vs lack of aspiration is stress. However, the [t] and [d] in *atomic*, *attract* and *endeavour* can never be waved. This is due to the effect of stress; [t] and [d] can be flapped (i) between a stressed vowel and an unstressed vowel, e.g. *'atom* [p], and (ii) between vowels that have the same degree of stress, both unstressed as in *di'vinity* [c], or both stressed as in *'not 'all* [f]. *A/* and *lál* cannot be flapped, however, if the preceding vowel is more weakly stressed than the following vowels, e.g. *a'tomic*, *a'ttract*. The fricatives [v, f] in the words *divine*, *fine* have more friction noise than in the words *ivy* or *dolphin*, because in the first set of words they occur in a stressed syllable. The fricatives [v, f] can lose their friction completely, and even disappear altogether in unstressed syllables of very frequent sequences, e.g. cup of tea [kʌpati:]. “*What’s the matter*”

[wotsamaeta]. The prosodic device of introducing a glottal stop before a word initial vowel for emphatic reasons, as in *that's 'awful*, is only possible if vowel is stressed.

Similarly emphatic utterance “that's amazing” can never show a reinforcing glottal stop before the unstressed initial vowel. Since number of allophonic realizations depend on stress, it is essential to learn the stress pattern of a word pronounce segment clearly.

## 2.2 Phonological Variation due to Stress

Hence, word stress might determine the occurrence of different phonemes. Thus, the pronunciation of the letter *x* as [ks] or [gz] in words such as *exit* and *exist* [ig'zist], *exhibit* [ig'zibit] is determined solely by the position of the stress. And if the stress is on the preceding syllable the cluster will be voiceless. But, if the stress is on the following syllable the cluster will be voiced.

### 2.2.1 Syllable Structure and Stress.

English syllable structure is a controversial issue; however, most current theories recognize the role played by stress in determining syllable structure and syllable boundaries. Stressed vowels attract adjacent consonants to their syllable. Thus, English consonants tend to be syllabified with the stronger stressed syllable:

*attic* ['at-ik] *attain* [atein].

*sister* [sist] *astound* [a-'staund]

Observe how the stress shift involves a change in syllable boundary and syllable affiliation of /t/ and /d/ in the following words:

*atom* ['atam ] *atomic* [a-'tom-ik].

*adaptation* [.ad-ap-'tei -n] *adapt* [3'-dapt].

In the words in the first column /t, d/ syllabify with the stressed syllable and consequently they occur in syllable final position. The test for syllable final position is:

(i) that they can be flapped to [r] in some dialects (e.g. American English): [ˈatəm], A, Al cannot be flapped or pre glottal in *a'tomic* or *a'dapt*.

The words the atomic and adapt, syllabify with the following stressed syllable, and they are initial elements in the syllable. It is shown to be syllable initial since syllable initial is aspirated, [a'thomik] .

While, there is no heavy aspiration in *atom*. Thus, stress can be said to determine the grouping of sounds into syllables in English.

### **2.2.2 Stress and Rhythm in English**

Morphological, Syntactical and Lexical Variation are due to Stress. There are a number of morphological alternations that affect stress and consequently, the pronunciation of the whole word. Morphological derivation might involve a change in stress since many of the suffixes which are added to derived words have an effect on stress. The words: 'politics po'litical poli'tician jIlústrate how the adjectival suffix *-al* moves the stress to the second syllable, and the nominal suffix *-ian* shifts the stress to the syllable preceding it. There are also suffixes also suffixes that attract the stress of the word *-on to themselves, such as aire in 'questio'nnaire, or -ette, in 'usher, 'ushe'rette*. The effect of suffixes on stress can be predicted by a finite set of rules.

It is worth mentioning here there is another function of stress is to indicate the syntactic function of the word. The stress and subsequent phonetic changes are the only indicator of the syntactic category of words such as *a 'present, to pre'sent; a 'frequent (word), to fre'quent; a record (n), to record (v)*. The noun

or adjective always has the stress on the first syllable, and the verb on the second syllable. There are also a small number of words where stress indicates a lexical contrast that does not correlate with the syntactic function of the word: *'billow* vs *be'low*, *'reefer* vs *refer*. Stress also differentiates between phrasal verbs, which function together as a unit and have the main stress on the particle (e.g. *the 'driver pulled 'up [stopped]*. *The car went 'by [passed]*) and prepositional verbs which have the stress on the verb and the preposition is unstressed: *he 'pulled his 'trousers up*, *he 'went by the 'highway*. Stress also plays a role in differentiating between nouns derived from phrasal verbs and verbs.

But, in the nouns and adjectives the first element only is stressed: *a 'handout*, *a 'runaway and a dropout*. In the corresponding verbs the particle has more prominence than the verb: *to hand 'out*, *to run a'way*, *to drop 'out*. The difference between compounds, such as *a 'loud, speaker* (sound amplifier), and noun phrases, *a, loud 'speaker* (a person who talks loud), is also indicated by stress alone. Noun phrases have the main stress on the most important element, the noun. Compounds have the main stress on the first element; in fact, stress welds together the two elements in the compound into a single lexical category with a special meaning and function. In fact, the degree of compounding of a frequently used phrase is indicated by the stress pattern. Stress is also an indicator of the psychological reality of the morphemes that make up compound words. If the word is a morphemically transparent word, i.e. speakers recognize the two morphemes or words in the compound; both elements retain or keep a certain degree of stress, e.g. *'mouth'ful [ful]*. If nonnative speakers do not recognize the morphemic made-up of the word, but they interpret it as one single morpheme, the word retains a single stress (on the first element of the compound) with the subsequent phonetic reductions. Thus, *'England [land]*

(historically /Angle/+/land/) and 'awful [fl] (historically / awe/ +/ ful/) are not interpreted as composed of two morphemes anymore, but as a single morpheme.

However, cases such as the ones presented show that stress might correlate with psychologically real morphemes, and that each recognized morpheme bears a stress. Still another aspect of a slightly different nature is that concerning the grammatical difference between the strong and weak forms of some words. In this case it is the presence or absence of stress which indicates the syntactic function of the word. For example, *that* as a demonstrative always has the full form, e.g. / I want that book, whereas the relative *that* or the conjunction *that* always have the weak form (if not followed by a pause), e.g. 'this is the 'one that [óat] / 'want (relative); / 'think that [oat] he's right (conjunction). The effects of stress at the segmental and lexical level show the importance of stress not only for what it contributes to the correct pronunciation of English at the segmental and supra segmental level, but for its effects on intelligibility due to its lexical and syntactic function. It follows from this that practicing English pronunciation in terms of stressing and unstressed should be rewarding task.

### **2.2.3 Stressed and Unstressed Syllables.**

Fry, (1955) claims that the physical correlates of stress are *pitch*, *duration* and *loudness* Experimental evidence (Fry «Duration and Intensity» «Experiments, »

Lieberman, (1977) shows the interrelation of these three parameters in the production and perception of stress. The pitch of stressed vowels is usually higher than that of unstressed vowels.

Nevertheless, a syllable with a lower pitch than the rest is likely to be heard as stressed. Thus, the primary cue for stress perception seems to be that the

stressed syllable stands out in pitch from the rest. Stressed vowels also tend to have a longer duration and to be louder than unstressed vowels. In English there is an extra cue for stress which is vowel quality, in particular the reduced quality ([ə, i, u and schwa]) of unstressed syllables. Thus, stress is a relational feature. A syllable is identified as stressed because it is relatively more prominent than the rest. So, stress is cued not only by how we use the features of pitch, duration, loudness and vowel quality in the stressed syllables, but also by how these features are used, in a reduced manner, in background or unstressed syllables.

#### **2.2.4 Word and Sentence Stress**

Stress is present at the word level and at the sentence level. Every word said in isolation has a stress. Word stress has a fixed distribution; it is a lexical feature of the word and consequently word stress is related to the lexicon. English language stress is a distinctive feature in a word. If stress changes, meaning might change, e.g. a 'present (n), stress and rhythm in English to present (v), here stress has function effect on words category.

Kreidler, (1989) claims that recent work in generative phonology has stated rules for predicting stress assignment in words based on (1) the simple or complex (derivatives and compounds) morphological nature of the word, (2) the syntactic category of the word (noun, verb, adjective, etc.), (3) the number of syllables in a word and (4) the phonological structure of the syllable. The rules, however, are complex and have exceptions, so it seems more adequate for the foreign learner to learn the stress pattern of the word when the word is learned (i.e. as a lexical feature of the word). As the learner advances in his mastering of English he will be able to abstract the general rules of stress assignment and correctly stress most new words he might come across. It seems that one of the



ways in which we store words in our mental lexicon is according to its stress pattern. It is difficult to interpret a word pronounced with the wrong stress pattern; in processing this word we begin to look up possible words under this wrong stress pattern which will fit the context, and we might arrive at the wrong interpretation or we might not find an appropriate word and we may start wondering about the stress pattern. However, the first choice for interpreting the word is the stress pattern produced.

Other types of evidence for the storage of words under stress pattern comes from experimental research done on 'tip of the tongue' phenomena and 'slips of the tongue'. Tip of the tongue phenomena, that is, not being able to remember a given word but having it 'on the tip of your tongue,' show that in some cases speakers might not be able to retrieve a word or bring it back but they can tell the stress pattern of the word. This suggests that in looking for the words they are activating that part of the vocabulary that has this stress pattern, and that consequently words are stored according to that pattern.

SO, every word said in isolation has a stress; however when words are put together in a sentence only some words is stressed. Sentence stress emphasizes the portion or part of the utterance that is more important for the speaker or that the speaker wants the listener to concentrate on. Stress in a sentence has no fixed distribution.

It is related to semantic, the words which are likely to be more prominent and to carry a stress in connected speech are those which are important for meaning, *i.e. content* words or *lexical* words, such as nouns, adjectives, verbs and adverbs. Grammatical or function words, such as articles, pronouns, prepositions, auxiliaries and conjunctions, tend to be unstressed. Thus, in the sentence: *'Mary would have 'liked to a'ttend the 'meeting the content words*

*Mary liked, attend, meeting* are likely to be stressed and the function words unstressed. Thus, the function of stress in sentences is to highlight the information bearing words in the utterance. It is noticed that this general rule—content words are stressed, grammatical words unstressed—applies to default stress. It does not apply when contrastive or emphatic meaning is intended. In fact, any word or syllable might be stressed (in fact, bear the into national nucleus). When used contrastively (but she was here [she hadn't left]; / said that word was 'unstressed [not stressed]) or emphatically (She's very nice). There is no one right way of stressing an English sentence. The choice to stress some words rather than others depends on the context of the message and on the particular meaning the speaker wants to convey. Consider, for example, (a) I 'don't think I can 'do it (you'd better ask another person (b) I 'don't 'think I can 'do it (you'd better ask another person). The stressing in these alternatives is equally acceptable. The choice of one or the other pattern depends on the attitude of the speaker towards some aspects of the message; for example, in (b) the speaker sounds less assertive or behave in a confident way than in (a). *By stressing think* rather than *don't* alone he softens the negative, suggesting that it is his momentary, subjective impression that he can't do it, and he seems to leave the possibility to be convinced a bit more open than in (a).

Since stress has the function of signaling to the native speaker the most important words in the utterance, it is very difficult to understand speech in which every single word is stressed or made equally prominent, just because nothing is made prominent. That is why in English it is very important for intelligibility what you do to the unstressed syllables to make the stressed syllables—those of meaningful words stand out.

### 2.2.5. Stressing and Speaking Rate

Another factor that might affect sentence stress is speaking rate, which is related to speaking style. The more careful the style, the slower the tempo or speed of speech and the more stresses. The more informal the style the faster the speaking rate and the fewer stresses. Consider the sentence:

a) I 'would have 'liked to a'ttend the 'meeting.

b) I would have 'liked to attend the 'meeting.

(a) involves a very slow and *delib rate* speaking rate whereas (b) demands a very fast speaking rate which accounts for the missing stress.

In fact, the more stresses you have in an utterance, the more weight you are assigning to each part of the utterance.

Compare the angry and weighty tone conveyed by stressing every single word in the utterance:

*'you 'will 'do 'as 'I 'say.*

Since informal fast speech has fewer stresses and consequently more unstressed syllables, it is most probably the most difficult style to master for the EFL learners. In their attempt to sound clear, the EFL learners tend to overstress words in sequence. It is consequently very important to practice unstressed syllables if foreign speech is to sound not only intelligible but also adequate or sufficient to the situation. Speech, as with all bodily movements such as breathing, walking, heart-beat, etc., is highly rhythmical; it tends to have a regular beat. But what mark the beat differs is various languages. Two kinds of rhythm in languages are distinguished by two characteristics:

(i) syllable-timed rhythm, where syllables tend to occur at regular interval of time and consequently all syllables tend to have the same length.

(ii) stressed-timed rhythm, where stressed syllables tend to occur at regular

intervals. That means that the syllables might vary in length since there might be a varying number of syllables between stresses. English is a stress-timed language. In the equivalent English sentence, syllables vary in length but stressed syllables occur regularly: e.g. I 'want you to 'come with me to the 'doctor's to'morrow.

Abercrombie,(1964) states that in English rhythm is organized into feet. The foot begins with the stressed syllable and includes all the unstressed syllables up to the next stress where a new foot begins. The above English sentence has four stresses and consequently four feet. Using slashes to indicate /indicate/ foot boundary we could represent feet as follows: J / 'want you to / 'come with me to the / 'doctors to /morrow. The beat at the beginning of the foot might be silent, we mark this silent beat with double comas (,,). Rhythm is also tempo dependent. The faster the speech, the more stressed- timed the rhythm (Celce et al). English is stressed- timed language because of the following features:

1. weak vowel reduction 1. Strong vowel reduction.
2. Simple syllable structure 2. Complex syllable structure.
3. Proportional effect of tempo 3. Non-proportional effect of tempo.
4. Absence of secondary stress 4. Presence of secondary stress.
5. Metrical system of a syllabic type 6. Metrical system of an accentual type.

In English unstressed syllables have little time to be produced in order to keep the rhythmic beat on the stressed syllables. Thus, there is a strong reduction in vowel quality due to the undershoot phenomenon as follow:

1. In the short time given for the pronunciation of unstressed vowels the articulators do not achieve the vowel target, resulting in the centralized vowels [a, i, u and schwa].
2. The reduction and subsequent elision of unstressed vowels have

resulted in a large amount of consonant clusters and a complex syllable structure in English.

3. In English, speaking rate (fast vs slow speech) does not affect the duration of stressed and unstressed syllables proportionally.

4. Stress-timed languages tend to have secondary stress in words (or to introduce rhythmical stresses in longer sequences) to avoid long sequences of unstressed syllables and to keep the rhythmic beat. In

English no stressed syllable in a word can be preceded by more than two unstressed syllables in succession, a secondary stress is introduced.

(e.g.,clarifi'cación,reconsider, radon). After the stressed syllable there may be up to three unstressed syllables, but only in some words with certain suffixes such as following words (e.g. ad'ministrative, 'candidacy).

5. In syllable-timed languages the syllable occurs at roughly regular intervals of time and the syllable is the rhythmical unit in verse.

Thus, in English, stresses occur at roughly regular intervals of time, and. Therefore all feet tend to be of equal *synchronous* or duration. Since feet take roughly the same amount of time to be produced and the number of syllables in a foot might vary, it follows that the length of syllables must also vary. If a foot with four syllables takes the same amount of time to be pronounced as a foot with one syllable, then each one of the four syllables must be shorter than the one. Thus, if there are no intervening syllables between two stresses (e.g. below), the syllable which stands alone in a foot will tend to be stretched in time. If there are a number of intervening unstressed syllables (e.g.2 below), the stressed syllable will be made shorter, and the unstressed syllables will be squeezed together between stresses and they will undergo important phonetic reductions such as vowel weakening, elisión, assimilation, haplology, etc.

The time adjustments in syllable length due to stress can be graphically

represented as follows:

(1) / 'P a t / 'g o e s /

(2) / 'Pat should have / 'g o n e /

All feet in (1) and (2) will tend to have the same duration independent of the number of syllables. In order for that to be the case *Pat* in (1), which stands alone in its foot, will be longer than *Pat* in (2), which will be pronounced with a shorter vowel to allow more time for the unstressed syllables in the foot.

Notice also the phonetic reductions of the unstressed syllables in (2), [Pat av], to keep the beat on the following stress. Even though the regular occurrence of stresses, might not be perfect, there is evidence that English speakers unconsciously aim at synchronicity in the production of speech since they make adjustments in the length of sounds, as has been demonstrated. The more organize speech, the more harmonic it will be. Thus, verse, nursery and rhymes are more organized than prose. And prose read aloud or formal speech is more rhythmical than conversational speech, which may be full of pauses, «uhms and errs», false starts and other interferences due to memory failure, lack of planning, etc.

Another consequence of the stress-timed and synchronous nature of English rhythm is the existence of weak forms. Since content words are usually given prominence in the utterance, grammatical words will tend to be unstressed. Thus, grammatical words are squeezed in order to fit into the constant time interval between two stresses. This is so common in English many grammatical words are said to have a full form used when the word is stressed for rhythmical, emphatic or contrastive reasons, and a weak form used when the word is unstressed and must be matched between stresses.

Consider the following grammatical words in stressed and unstressed position:

### *Stressed*

'Yes, we 'are [a:]

h/e's the 'person [hi:]

'Yes, you 'have [hav]

### *unstressed*

'what are you 'doing? [a]

I 'don't 'know who *he* 'is [i]

I 'must *have* 'missed him [3v]

## **2.2.6 Rhythmic Alternation**

English rhythm, apart from being conditioned by the principles of stress-timing, is characterized by the principle of rhythmic alternation; that is, in English weak and strong syllables alternate with one another. However, it is that regular alternation of stress and unstressed syllables results, if speakers do not choose their words according to their lexical stress pattern, but to they want to express meaning and the form in which they want to couch or to be expressed in a particular way of this meaning. It seems that once the lexicons of an utterance have been selected, a set of rules (syntactical, morphological, phonetic and rhythmic) are applied to the utterance to determine its phonetic realization.

Thus, a structure which does not observe the stress alternation principle because too many stresses appear next to each other, or there are long sequences of unstressed syllables will be modified by the rhythm rules to conform more closely the ideal rhythmic alteration.

1. If a series of content words appear next to each other, some stresses are dropped.

There is a stress on each of the following content words: 'John's I 'friend l'wants l'get/ home/ before/ midnight/but; some of these stresses, usually stresses on alternative words, are dropped when these words occur in a sentence such as: 'John's friend 'wants to get home before midnight. Tap with

your finger at each stressed syllable while saying this sentence and you will find it quite natural to tap all the syllables marked as stressed.

Similarly, if an utterance contains a succession of three stresses, as in *she's 'big /'blue/'eyes* the intermediate stress tends to be dropped in order to achieve a more regular alternation.

2. If an utterance consists of a succession of unstressed function words, e.g. *he should have been here 'earlier*, stresses are added to produce a more regular rhythm: *'he should have 'been here 'earlier*. Similarly, the rhythmical stressing as in initial position when followed by unstressed syllables, as in:

*'If you are 'right, we should be 'getting there 'soon.*

*'As a 'child he 'studied 'English. But not in medial position when next to another stress: 'We should be 'getting there 'soon if you are 'right.*

*He 'studied 'English as a 'child.*

The sentence shows the tendency to distribute stresses rhythmically. Note that *it is not* not likely to be stressed when immediately followed by a stressed syllable as in the following sentences: *'Head of De'partment,* "I 'can't a'llow you to be dropped in order to achieve goal If 'worse comes to 'worse, we'll 'just 'drop it.

There are constraints on stress addition and deletion. Stresses cannot be deleted just anywhere. Thus, in the above utterance *John's friend wants to get home before midnight*, the stresses on *John/home /midnight* cannot be deleted though others can.

Similarly, stresses cannot be added just anywhere. If an extra stress is to be added in *'leave it in the 'car*, due to a very deliberate and slow speaking rate, it cannot be added on the determiner, but must be added on the preposition: *'leave it 'in the 'car.*



Based on evidence of this kind (Giegerich, 1998) suggests a hierarchy of stressed words.

3. If two stresses are next to each other in a phrase, e.g. *a ,Japa'nese 'student. ,after'noon 'tea*, the first stress is *moved* to the preceding strong syllable: *Japanese 'student, 'afternoon 'tea*, to space out the stresses.

The alternation of rhythmical stresses in English is best described by rhythmic hierarchies and metrical grids.

In the following grid all syllables at the lowest rhythmic level (1) are marked with (vertical line'), all strong syllables at level (2) with another (vertical line), and the lexical stress in each word by another (vertical line') at level (3).

Phrasal stress is marked by another (vertical line) at level (4). The stresses in this utterance are represented as follows:

If two stressed syllables are immediately next to each other on an upper level, with no intervening beats at the level below, there is what is called a «stress clash» and stress shifts towards a leftmost strong syllable (at least at level 2).

Thus, “Japanese student” becomes *'Japanese 'students*, but *be'tween 'cars* does not become *'between 'cars*, because the first syllable in *between* is not a strong syllable.

To sum up, the factors that contribute to maintain a regular rhythm in English are of two kinds. (1) There are those which affect the distribution of stresses to ensure rhythmic alternation:

- a. dropping of some stresses to prevent too many stresses coming together, e.g. *Nice 'old 'book — 'nice oíd 'book*;
- b. stress addition to avoid a long succession of unstressed syllables, e.g. *he should have 'done it him 'self — \* 'he should have 'done it him 'self*,

c. stress movement to a preceding strong syllable if two stresses are next to each other: Heath'row 'airport — \* 'Heathrow 'airport.

(2) There are those which affect adjustments in the length of sounds to keep a constant time interval between stresses.

a. Durational variations in the stressed syllable depending on the number of unstressed syllables in the foot. For example, reduction in vowel length when unstressed syllables follow. Compare the decreasing duration of the stressed vowel in '*lead*,' *leader* and '*leadership*.

b. Reduction processes that affect unstressed syllables: vowel reduction, consonant weakening, elisión, assimilation, haplology. For example, *probably* ['probabli].

['pra:bli], solicitor [sa'lisita] - ['slista].

c. Weak forms.

#### 4. Practising Stress and Rhythm

Materials for practicing stress and rhythm will necessarily involve longer stretches of speech. It is convenient that the words and phrases used for practice should be well within the capacity of the learner and communicatively meaningful.

Although it is the case that various degrees of stress can be distinguished, for the practice of rhythm it is only necessary to consider two types of stressed and unstressed syllables. The use of standard materials for the practice of stress and rhythm (rhythm counting games, limericks, etc.) will be considered here since they are good for pronunciation. Some basic classroom interventions which encourage the adequate pronunciation of stressed and unstressed syllables are consequently considered such as games, chants and limericks.

To deal with sentence stress EFLs should practice polysyllabic word stress such as ('yesterday) which is more adequate than in sequences of words ('yes,

he said). This is because words have one main stress.

In contrast, every single word a content or a function word has a word stress in connected speech, and this tends to influence English pronunciation. To avoid assigning stress to each word, EFLs practice phrases with the same stress pattern as single words till both are uttered exactly with the same rhythm.

4. Practicing unstressed in function words. Read the following strings of content words with an even rhythm. Then supply function words to turn them into full sentences and read them again with the same rhythm. Be sure to use weak forms where appropriate for your added function words.
5. English rhythm is not perfectly synchronous.

However there are different factors that tend to make it nearly synchronous. To practice synchronicity, EFLs can first snap their fingers or tap their feet at a regular rhythm. Then try to make the stressed syllables in the following sentences coincide with the beats as you read the sentences (leave two beats between sentences):

1. 'Rhythm is a 'crucial 'feature of 'English.
2. I 'don't 'think he 'wants to 'come .
3. 'How are you 'doing?
4. I'm 'doing O'K, 'thank you
5. 'When we 'left, it was 'raining.
6. 'He should have 'gone himself, but he 'couldn't 'make it.
7. Ill 'have 'bread and 'eggs, 'please .
8. 'What a 'mess you've 'made.
9. 'Will you 'please 'stop that?
10. 'These are 'nice 'shoes you are 'wearing .

6. Stress - timing. Each of the following sentences has two stresses, even though the number of unstressed syllables varies. As EFLLs say each sentence tap a table twice on the stressed syllable, keeping the strokes or movement of your hands at a regular beat.

The 'cat is 'big.

The 'tiger is 'big.

The 'elephant is 'big.

The 'cat is 'big.

The 'cat is 'happy.

The 'cat is 'happier.

The 'cat is 'big.

The 'tiger is 'happy.

The 'elephant is 'happier.

'Peter 'talks.

'Peter would 'talk.

'Peter would have 'talked.

'Peter would have liked to 'talk.

'Mary 'studies.

'Mary is 'studying.

'Mary will be 'studying.

'Mary should have been 'studying.

7. Assigning sentence stress, (a) Place the stresses on the following dialogue,

(b) Read the dialogue tapping your finger on each stress to keep the rhythm.

Brian: Hello Mary. It's nice of you to come.

Mary: Oh, it's no trouble. I wanted to find out how yóu were feeling.

B: I'm feeling fine, but I think it will take me a while to be recovered, I

mean completely recovered.

M: Tell me about the accident. What happened exactly?

B: I was riding my motorbike and this old man stepped out in front of me so I had to brake suddenly.

M: He stepped out in front of you? But then it was his fault!

B: Yes, it was, but it doesn't change things. I fell off my bike, broke two ribs and he continued crossing the road as if nothing had happened. I think he didn't even realize he had caused an accident.

M. Oh, that's awful!

B: Yes, it is. Well, tell me about yourself. How are you getting on?

M: OK. I'm preparing my course and I'm very worried about getting a good grade. Otherwise, I won't be able to get into Law School.

B: Oh, you will get a good grade, don't worry. Look at me! I won't even be able to take my course this term.

Here, in above conversation importance of stress and rhythm in determining the realization of segments have been shown which indicating the morphemic and syntactic function of elements, and structuring information in the sentence. It follows from this that stress and rhythm are basic for intelligibility, adequacy and fluency in speech and that they should be consistently practiced by foreign learners if possible in the early stages. Here, the production side of English stress and rhythmical meter have been concentrated on, which will contribute to more intelligible speech. There is another aspect which should be considered, which is how the practice of stress and rhythm helps to understand running speech. Since stress highlights the most important words in the message, a rhythmical approach to English pronunciation will help the foreign listener to concentrate on the meaningful words in the message and to strengthen the links

between pronunciation on the one hand and grammatical structure and meaning on the other. This approach encourages the understanding of language as communication rather than a set of isolated segments.

### **2.3 Previous Studies.**

Studies which have been conducted on pronunciation are meager because many researchers focus much on syntax, semantics, or discourse analysis rather than pronunciation problems. They ignore studies on pronunciation. Thus, the researcher found very few studies conducted on pronunciation.

Abkar, (2016) The title of the study was “Investigating Pronunciation Problems among Sudanese University Students A case study of three Sudanese Universities in Khartoum state”. The study aimed at investigating pronunciation problems among Sudanese University students. Three universities in Khartoum state were taken as sampling. Descriptive method was used to analyze data. The results of the study were: (a) University curricula did not have enough exercises on pronunciation. (b) University students encounter pronunciation problems. (c) Pronunciation was problematic for university students: a. there was negative interference of L1 to pronounce vowel sounds correctly. b. Differences, regarding vowel sounds in English, between L1 and L2 are problematic.

EzzeelDin , (2013). His study entitled “Pronunciation Problems: Acoustic Analysis of English Vowels Produced by Sudanese Learners of English.” The study aimed at investigating errors made by Sudanese learners on pronunciation vowel sounds. Experimental method was used to analyze data. Some results of his study were:

- a. There was negative interference of L1 to pronounce vowel sounds correctly.
- b. Differences, regarding vowel sounds in English, between L1 and L2 are problematic.

Ali, (2010) the title of his study was “Pronunciation Problems for EFL learners in Sudanese Curriculum.” The study aimed at investigating some problems which were encountered by EFL learners on pronouncing words correctly. Experimental method was used to analyze data. Results of the study are: (a) there was a lack of pronunciation exercise text books. (b) Pronunciation of English words was problematic for EFL learners. (c) EFL learners got confused when pronouncing affricate and fricative consonant sounds such as /v / and /f / , /b/and /p /, / θ / and / s / , / ð / and / z / , / g / and / dʒ / .

Hassan, (2007). The title of the study was “Pronunciation Problems of Sudanese Learners of English”. The study aims to investigate problems which are encountered by encounter Sudanese learners of English on producing consonant sounds. Descriptive statistical method was used to analyze data. Results of the study are there are some English consonants which are problematic to Sudanese learners such as / p/ and /b/, / / and / s/, / θ/ and / z/ , ð / f/ and / v/ / g/ and dʒ/.

Altmann,( 2006) the tile of his dissertation was the “Perception and production of second language Stress: a cross- Linguistic Experimental Study.” The study investigated the effect of native language (L1) stress properties on the second language (L2) acquisition of primary word stress in light of two typological hierarchical model of stress: the Stress Deafness Model (SDM) and Stress Typology Model (STM). The subjects were from different languages

backgrounds that represented L1 groups (Arabic, Chinese, French, Japanese, Korean, Spanish and Turkish) as well as native English speakers participated in perception and production experiments. The results indicate that, on one hand, learners with predictable stress in their L1 (i.e. Arabic, Turkish and French) had problems perceiving location of stress but they performed most like the English native speakers in production, who applied a frequency- based common strategy. On the other hand, learners without word -level stress in their L1 (i.e. Chinese, Korean, Japanese) or with unpredictable L1 stress (Spanish) showed almost perfect perception scores however, their productions were quite different control groups. Thus, it was found that good perception did not necessarily underlie good production and vice versa.

Fischler, (2005), the title of his study was “Rap on Stress: Instruction of word and Sentence Stress through Rap Music”. The study was conducted to examine effect of rehearsing English words and sentences using rap music, in order to determine whether there was perceived improvement on elicited primary word and sentence stress. The subjects were students from different languages backgrounds such as French, Farsi, and Africans. The result of the study is that, according to the responses gathered from evaluators, there was general perceived improvement in the performance of the most students. Perhaps the most valuable result is that the students in this sample gained a sense of autonomy or being free to make a decision through learning Meta cognitive skills regarding word and sentence stress production. In addition to that the results obtained show the potential of this rap music method.

Komondan, 2004. The title of his study was “The Interference of mother tongue in learning English sounds for Sudanese Arabic Learners. A case study “1<sup>st</sup> year students” at Faculty of Arts Omdurman Islamic University.” The study



aimed to introduce the effect of interference of L1 in learning English sounds for Sudanese Arabic speakers studying English. It aimed at investigating the way L1 interferes in learning English. Subjects were interviewed then data is analyzed using analytic method to analyze errors which were made by the subjects. Result of the study was that sounds were strongly influenced by L1 learners.

In a study designed to investigate L2 stress perception, Altmann and Vogel (2002) examined the ability of L2 learners of English from different L1s to locate primary word stress in English words. In this study, 320 items were tested, consisting of words between two and four syllables length with systematically varied syllables. The syllables were not only classified as light or heavy, but were also distinguished with regard to the kind of vowel (schwa, lax, tense or diphthong). It was found that speakers of L1 without stress did as well as English native speakers. Learners whose L1 had phonologically predictable word stress performed badly.

Youssef and Mazurkewich (1998) investigated the ability of Egyptian Arabic learners of English to perceive L2 stress in real words in addition to their ability to produce stress. The subjects were required to mark stress a pre-printed list of English words that were presented auditory. The stimuli consisted of words with four different stress patterns: a) stress on super heavy final syllable (CVVC or CVCC) (e.g. comprehend) b) stress on antepenult syllable (e.g. recognize) c) stress on a heavy penult syllable (e.g. agenda) or d) exceptional stress on the antepenult syllable (e.g. calendar) The L2 learners' perception scores were well below the control group of native speakers', except for the one word type with stressed super heavy final syllable.

Similar challenges can be raised in relation to Pater (1997) study. Examination of his stimuli revealed that some of the words might have allowed for close analogy to existing words or possibly to interpretations containing derivational morphemes. In the latter case speakers, may not have considered final stress to be an option if they assume the presence of an unstressed suffix at the end. Furthermore, some syllables that were classified as light because of containing only a consonant and a lax vowel may actually have contained a multi syllabic coda consonant in actual production and thus would not exactly have been light syllables.

Robinson (1977) conducted an experimental investigation of the importance of stress pattern of words recognition. Subjects heard lists of two- syllable nonsense sequences with either initial or final stress. In a false recognition test they were then presented with two- syllable items which were made up of the same syllables they had already heard although never in the same combinations which they had heard. Subjects tended to accept these items (erroneously) if the stress levels of the syllables were the same as they had been in the original presentation. Similarly, interference effects in free recall of both nonsense items and short phrases were found as a result of stress pattern similarity; in other words, stress pattern identity can precipitate false recognition, often in defiance of segment evidence. As one would suspect, it is not only the case that false stress information leads to difficulty of word recognition; prior knowledge of stress pattern can facilitate word recognition.

In addition, lowered expectations from the NS listener can negatively impact their perception of the NNS. Schumann (1975) found that the NNSs frequently demeaned, degrade or rejected by NSs of a target language. His study reveals that poor intelligibility negatively influences NSs estimations and judgments of

a NNS's credibility. NSs in this study noticed or perceived NNSs with poor pronunciation skills as less competent and intelligent. Schuman's study also found that feelings of rejection due to intelligibility could result in negative attitude which makes it very difficult for NNSs to acquire a foreign language or put obstacles in the way achieving or language acquisition in NNSs. The researcher provides an explanation and interpretation of the findings of the present study comparing and contrasting them with the results of the previous mentioned studies.

1- A study entitled "The Rap on Stress: Instruction of Word and Sentence Stress through Rap Music." The study was carried out by Fischler. It was designed to explore the effectiveness of teaching English word and sentence stress patterns through recitation of rap music. Six secondary English language learners from various primary language backgrounds voluntarily participated in a four- week intensive pronunciation course. Appropriate allocation of words and sentence stress was measured in speech samples obtained before and after completion of the course. The results of this study indicate improvement of placement of word and sentence stress by the end of the four weeks. Partly, there are noticeable similarities between the results of the Janelle' study and the present study.

2- Youssef and Mazurkewich (1998) investigated the ability of Egyptian Arabic learners of English to perceive L2 stress in real words in addition to their ability to produce stress. The subjects were required to mark stress a pre-printed list of English words that were presented auditory. The L2 learners' perception scores were well below the control group of native speakers', except for the one word type with stressed super heavy final syllable.

In a study designed to investigate L2 stress perception, Altmann and Vogel (2002) examined the ability of L2 learners of English from different L1s to locate primary word stress in English words. In this study, 320 items were tested, consisting of words between two and four syllables length with systematically varied syllables. The syllables were not only classified as light or heavy, but were also distinguished with regard to the kind of vowel (schwa, lax, tense or diphthong) and the absence or presence of a coda. It was found that speakers of an L1 without stress did as well as English native speakers. Learners whose L1 had phonologically predictable word stress performed badly. If it is compared to Youssef and Mazurkewich study it can be somehow noticed that there are some similarities among studies concerning ELLs' perception of placement of stress. If the findings of the three studies are compared, it may be noticed that there are some similarities. The three studies outlined and indicated improvement of placement, perception and production of word and sentence stress by the end of amount of time that was given to the subjects because of the positive impact of classroom interventions such as listening to rap music, listening to audio-materials by a native speaker and some handouts during a prescribed course attended by the subjects.

## **2.5 Summary of the Chapter**

The chapter reviewed literature which was related to the present study by citing and quoting from different writers' references that proved and supported the study. Then some previous studies which relevant to the word and sentence stress have been shown to shed some light to the area which was not covered by the researchers. Finally, explanations and interpretations of the findings of the present study were provided to compare and contrast them with the results of the previous mentioned studies.

# **CHAPTER THREE**

## **Research Methodology**

### **3.0 Introduction**

This chapter introduces population and sample size of the study, the methodology, tools of the study, procedure for carrying out the study validity and reliability of the tool of data collection.

### **3.1 Methodology of the study**

The present study adopts analytic and descriptive research methodology and it applies experimental design as the major method. Here, subjects are assigned to control and experimental groups based on random criteria. It has certain sample which is third year students who formally registered for the academic year 2019-2020 in the Faculty of Arts Department of English Language and Literature in Omdurman Islamic University.

### **3.2 The Population and Sample Size of the Study**

The population of the present study is students who have been recently registered in English language as a foreign language program in Department of English Language and Literature at the faculty of Arts in Omdurman Islamic University (O.I.U hereafter). The sample of the present study is the third level (3<sup>rd</sup> year students). They are one hundred and forty students; sixty- four are male students and seventy- six are female students. They constitute and form total population of the present study, and they register for the academic year 2019- 2020. They share the same qualities such as age and number of years of school where they have studied English as a foreign language. In addition, the

admission of these students in the university is according to certain marks that they got in secondary school certificate examinations.

In addition, (O.I.U) is not coed university therefore male and female students, who constitute the total population and sample of the present study, study at different and separate campus. The total sample of the study which is third year students are sixty-four male students and seventy six female students. The table (3.1) shows how male and female students are distributed in percentages. They have been distributed into experimental and control groups. Thirty two (32) male students are experimental group and thirty two (32) male students are control group which constitutes 50% each. Thirty eight female (38) are experimental group and thirty eight (38) female students are control group which constitutes 50% each.

Table (3.1) Distribution of the Subjects

Gender	Male students	Female students
Experimental group	32	38
Control group	32	38
Total	64	76
percentage of experimental group ( male and female)	50%	50%
percentage of control group (male and female)	50%	50%

### **3.3 Instruments of Data Collection**

Since this study adopts a quasi- experimental design, the major procedure of data collection is test- teach -test (T.T.T). It is a method of structuring lessons such as task- based learning. There are three stages for this methodology. First pre- test or Test (1), second Teach and post- test or final Test. Thus, pre- test and post test are constructed and given to the subjects, male and female students at the same time but in different campus because (O.I.U) isn't coed university.

#### **3.3.1 The tests (Written, listening and oral)**

Written and listening tests are designed to cover the placement of word and sentence stress. They have two parts: word stress (two-syllable words and polysyllabic words). Here the subjects are asked to highlight a syllable which is louder, longer and has pitch than unstressed ones. Part two is about sentence stress in which the subjects are asked to highlight word that is prominent in a sentence. Oral (pronunciation test) is constructed to cover the production of word and sentence stress. The tests have been checked by some professors in different Sudanese universities. The tests have two parts, part one is about word stress and it has two sub questions. In question one which is about two- syllable words, the subjects are asked to highlight a stressed syllable. Question two is about polysyllabic words and also the subjects are asked to highlight a stressed syllable. And part two is about sentence stressed, the subjects are given some sentences and then they are asked to circle words within a sentence which are stressed. The pre-test and post test have (28) and (25) items successively. (See appendix two)

### **3.4 Procedure of the Study**

Since this study adopts the experimental design as the main method, the major procedure of data collection is Test -Teach -Test (TTT) during the period of collecting data which is four weeks. It is a method of structuring lessons such as task- based learning. There are three stages which should be followed for this methodology. First pre- test is given to the subjects so as to collect data according to their information and knowledge backgrounds in word and sentence stress. And then the researcher teaches them how to place and produce word and sentence stress by giving them some handouts about two- syllable words , polysyllabic words and sentence stress in which the subjects are given some sentences and then they are asked to highlight words within a sentence that are stressed for four weeks as classroom interventions. There are more details about handouts and worksheets in below subtitle (see appendix one Handouts).

#### **3.4.1 Handouts (worksheets)**

Based on observations taken by the researcher, classroom interventions such as handout, worksheets and audio- materials were given to the subjects in order to teach and train them how to place stress mark for each individual word for four weeks. There was a hundred printed words on the handouts which represent content words: verbs, nouns adjectives and adverbs (see appendix one: Handouts). Then the words were roughly divided into two groups: two-syllable words and polysyllabic words. The researcher asked the subjects to give phonetic spelling for the words given. And remind them to the major rules of stress placement.

(1) One word has only one primary stress. If you hear two primary stresses, you are hearing two words.

(2) Only vowels are stressed, not consonants.



(3) Approximately 75% of two-syllable words receive stress on the first syllable (e.g. F**A**ther, W**I**Ndy, M**A**Nsion).

(4) Cardinal numbers (e.g. S**I**Xty versus six**T**EEN).

(5) Reflexive pronouns (e.g. him**S**ELF, them**S**ELVES).

(6) Compound words that function as nouns (e.g. DO**G**house, FI**R**Eman).

(7) Functional shift: words with identical spellings but different functions.

Generally verbs carry stress on the second syllable.

<u>NOUN</u>	<u>VERB</u>
INsult	inSULT
Record	reCORD
Rebel	reBEL

(8) Stress on penultimate syllables (e.g. cre**A**tion, i**R**ONic).

(9) Stress on antepenultimate syllables (geo**L**OGical, pho**T**Ography, a**B**ILity).

The researcher asked the subjects to give phonetic spelling for the words which were listed below. Then, they were directed to bear in mind that English language is stressed- timed language which means that not all syllables of a word are stressed. There are tense (strong) and lax (weak) syllables. Generally tense syllables are stressed but lax syllables are unstressed. So, the researcher demonstrated that there were five options which should be followed by the subjects in order to show stressed syllables for each individual words which are: using capital letters, underlining, highlight, circle or place stress mark (').

### **Word Stress Placement Exercise**

The researcher asked them to highlight, underline, or circle the syllable that receives the primary stress for words which are listed below?

1. accessible	26. competitive	51. historical
2. accomplish	27. conclusion	52. homogeneous
3. accuracy	28. courageous	53. horrible
4. activity	29. courteous	54. impression
5. actual	30. criticize	55. likely
6. actually	31. currency	56. likelihood
7. advantageous	32. democracy	57. majority
8. ambitious	33. discussion	58. material
9. analogy	34. efficiency	59. maximize
10. apologize	35. emergency	60. meaning
11. apology	36. emphasize	61. meaningless
12. authority	37. essential	62. methodology
13. authorize	38. event	63. militia
14. aware	39. eventually	64. minimize
15. awareness	40. expression	65. musical
16. bacteria	41. finance	66. nostalgia
17. bibliography	42. financial	67. occasion
18. biography	43. flexible	68. official
19. biology	44. frequency	69. opportunity
20. brother	45. furnish	70. organize
21. brotherhood	46. geography	71. person
22. characterize	47. happiness	72. personal
23. cigarette	48. happy	73. philosophy
24. classical	49. heterogeneous	74. photography
25. community	50. hideous	75. positive

Once the students' knowledge of word stress was clear enough, some general rules of sentence stress were introduced. First, students were made aware of utterance lengths being equivalent to multisyllabic word length.

The researcher taught the subjects that the bridge between word and sentence stress can be illustrated by comparing the stress pattern of some example of polysyllabic or multisyllabic words stress with utterances containing equal numbers of syllables and similar stress patterns:

<u>Multisyllabic words</u>	<u>Utterance</u>
Overlook	Tell the clock!
Guarantee	can't you see?
Electrification	we took a vacation.
Identification	we went to the station.

The subjects were taught by the researcher to emphasize accented syllables or words by stretching rubber bands, standing up and down, tapping on desks and clapping. Later in the teaching timing which is four weeks, content words, which are usually stressed in sentences, and function words, which are usually unstressed in sentences, were discussed and practiced. Again, the sequence of controlled, guided, and communicative practice was utilized. The subjects were also taught basic anatomy of the speech mechanism to increase their awareness of manner of articulation. The lesson plans consist of placement of word and sentence stress was given to the subjects (see Appendix one). The main focus of the teaching the subjects was word and sentence stress. The lessons moved from syllabification to word stress to phrase and sentence stress. A small amount of class time was dedicated to certain problematic segmental features, which were identified by the students during discussions in classroom interventions.

Concerning a sentence stress, the researcher directs the subjects to three circumstances that governing the placement of prominence. First sentence gives new information e.g.

A- I've lost an UMBRELLA.

B- A LADY's umbrella?

C- Yes, a lady's umbrella with STARS on it. GREEN stars.

In this example, *umbrella* functions as new information in A's, whereas *lady stars* and *green* are new information, thus receiving prominence. A second related circumstance governing the placement of prominence is emphatic stress when the speaker wishes to place special emphasis to a certain word in a sentence e.g.

A- How do you like that new computer you bought?

B- I'm REALLY enjoying it.

Here, speaker B places emphatic stress on *really* to indicate a strong degree of enjoyment. The third circumstance governing the placement of prominence is contrastive stress. In this case two elements can receive prominence within a given utterance. e.g.

A-Is this the low impact AEROBIC class?

B-No, it's the HIGH impact class.

In this example the contrast becomes obvious only with speaker B's contribution; thus low isn't stressed by speaker A.

### **3.4.2 Audio- materials**

The subjects were given listening scripts to train them in how to mark sentence stress (see appendix one).

Listen carefully and then underline words that are stressed

1-Cats chase mice.

2-The cats chase mice.

3-The cats have chased mice.

- 4-The cats have chased the mice.  
5-The cats have been chasing the mice.  
6-The cats might have been chasing the mice.

\*\*\*\*\*

Listen and mark the stressed words in the following dialogue:

Ben: Honey, I'm home!

Maria: Hi! How are you? How was your day at work?

Ben: It was great! I got a promotion! I'll have more responsibilities in the office, but the best news is that I'll have more money at the end of each month.

Maria: That's great! Congratulations! I'm really happy.

Ben: Unfortunately, I have to go to a conference this weekend so I won't be able to go to dinner with your parents this Friday. Sorry to let you down.

Maria: You're sorry? You're sorry?!?! I'm afraid "sorry" isn't good enough. I've already told them you're going, Ben!

Ben: I know, I know. And I am sorry about it. But as long as you have the chance to see them it's okay, right?

Maria: Fine. But we're going to dinner with them next Friday. No excuses.

Sentence Stress in English - Exercise 2

A. Where did you get these flowers from? The cemetery?

A. Here are the flowers Bob asked me to get.

The researcher directs the subjects' attention to rules of sentence stress. Generally, content words are given prominence in a sentence since they carry meaning. He asked them to predict words that are given more prominence in sentences before listening to audio- materials by native speaker.

Thus, the words *cats chase* and *mice* in question one are stressed because they are content words. But, may a speaker give prominence to function words e.g.

(A) You made everyone believe Angela stole your money.

(B) I never said she stole my money.

(A) Don't lie. You sometimes said she stole your money.

(B) I NEVER said she stole my money.

(A) You have been thinking she stole your money.

(B) I never SAID she stole my money.

(A) You keep complaining that someone stole your money.

(B) I never said SHE stole my money.

(A) She only BORROWED your money.

(B) I never said she STOLE my money.

(A) You tell people that she likes to steal money.

(B) I never said she stole MY money.

(A) AND you tell people she steals from you.

(B) I never said she stole my MONEY.

Capitalized words in the dialogue are stressed although they are not content words. The researcher let the subjects listen to the audio- materials and then follow along by tracking print with a finger or pencil.

### **3.5 Validity and Reliability of the instrument of the study**

Validity is one of criteria for a test quality. It is a term which refers to whether or not the test measures what it claims to be measured. On a test with

high validity, the items will be closely linked to the test's intended focus. The written test and oral test are closely linked to word and sentence stress. Reliability is one of the most important elements of test quality. It has to do with the consistency on the test.

Since the present study is quantitative and it applies the approach (T.T.T), it requires and needs certain sort of instruments which are pre- test and post test as the main tools of the study and then the classroom intervene which is considered as analytic data tool. Here, Cronbach's Alpha value is used to test and justify the reliability and validity of the tests. Then, to calculate the value of Cronbach's alpha the following formula is used.  $(n/(n-1)) * (\text{total variance} - \text{sum of each question}) / \text{total variance}$ .

N = number of test questions.

Then, to calculate the variance value, subtract mean from each number of question and then square the results to find squared differences. Then add those squared differences. To calculate mean, the following formula is used.

Mean = sum of tests items/ number of questions.

$$5+5+17/3= 9.$$

$$9- 5= 4 \text{ then square } 4= 16$$

$$9-4= 4 \text{ square } 4 \text{ equals } 16$$

$$9-17= 8 \text{ then square } = 64$$

The variance value is 96

The formula  $[n/(n-1) * (\text{total variance} - \text{sum of each } / \text{total variance} )]$  is used to calculate Cronbach's Alpha value for pre- test.

$$27/26*69/96= 0.746$$

To calculate Cronbach's alpha value for the listening test the above formula is used.

$$25/24*42/62= 0.705$$

To calculate Cronbach's alpha value for oral test the above formula is used.

$$25/24*42/62= 0.705$$

Theoretically, Cronbach's Alpha value should give a number from zero to one. The general rule of thumb is that a Cronbach's value of 0.70 and above is good, 0.80 and above is better and 0.90 and above is the best.

So, the alpha values for the three tests are 0.746, 0.705 and 0.705 successively which show that the reliability and validity of the three tests.

Table (3.2) which shows Cronbach's alpha values for the three tests

The two tests	Cronbach's alpha value
Written test	0.746
listening test	0.705
Oral test	0.705

### 3.6 Summary of the Chapter

The chapter introduced methodology of the present study, the population and sample size, instruments of the study which were written, listening and oral pronunciation tests, procedure of the study and validity and reliability of the tests.



# CHAPTER FOUR

## Data Analysis, Results and Discussion

### 4.0 Introduction

In this chapter the data of the study is going to be analyzed through computer program SPSS and then results are put in tables in terms of percentage, frequency, mean, and standard deviation and t-test values so as to be discussed.

### 4.1 The Tests Analysis (pre-/ post tests)

Written and listening tests were conducted to collect data of placement of word and sentence stress from the subjects. The data was analyzed using SPSS then the results were tabulated in tables and figures so as to be discussed.

#### Control group (male subjects)

Table (4.1) the frequency and percentage for question one underline the stressed syllable for the word ...*furnish* (v)

valid	Pre- test		Post- test	
	Frequency	percent	frequency	percent
Pass	10	31.30%	18	56.25%
Failure	22	68.70%	14	43.75%
Total	32	100%	32	100%

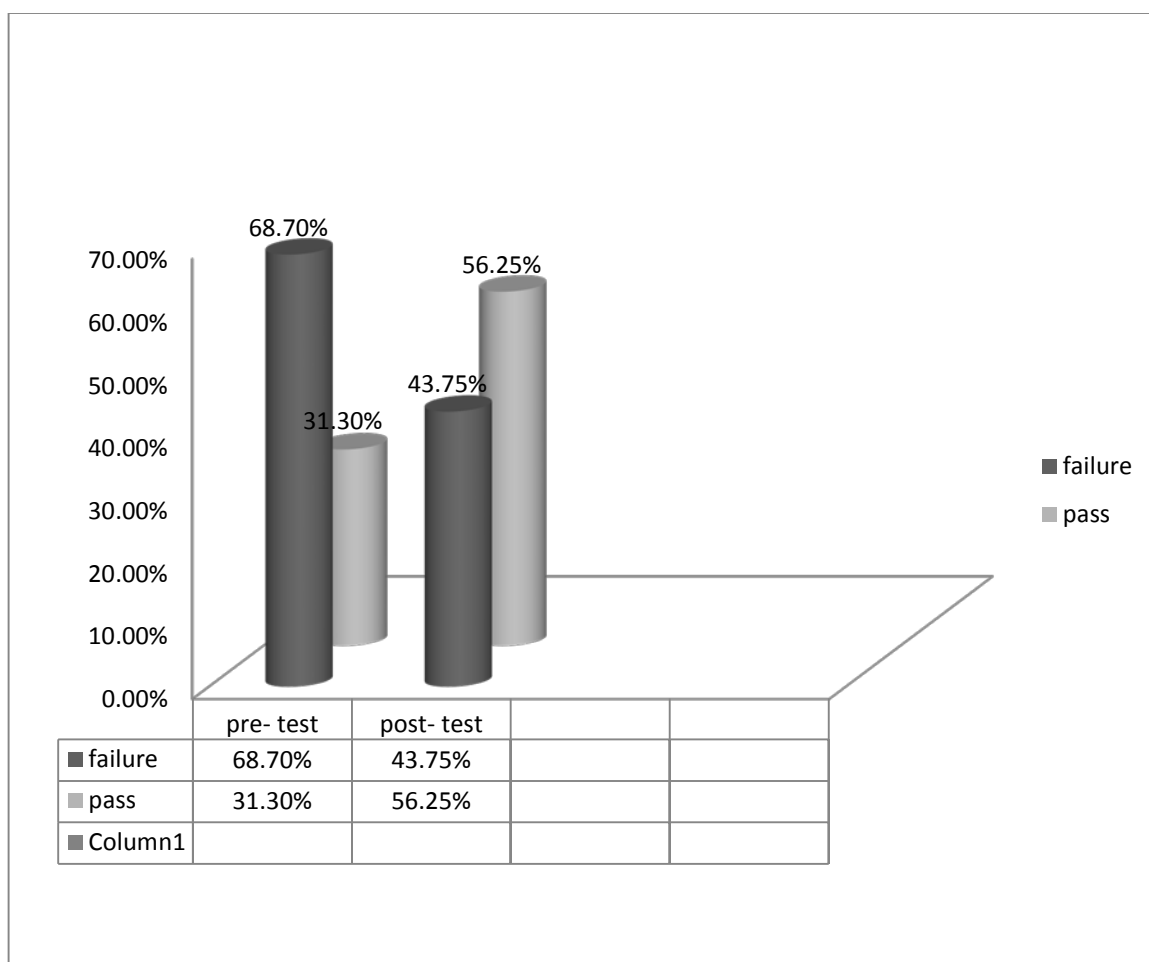


Figure (4.1) illustrates distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (31.30%) and failure by (68.70%) and post- test pass by (56.24%) and failure by (43.75%).

Table (4.2) the frequency and percentage for question two underline stressed syllable for the word ... *social* (*adj*)

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	08	25.00%	19	59.40%
failure	24	75.00%	13	40.60%
total	32	100%	32	100%

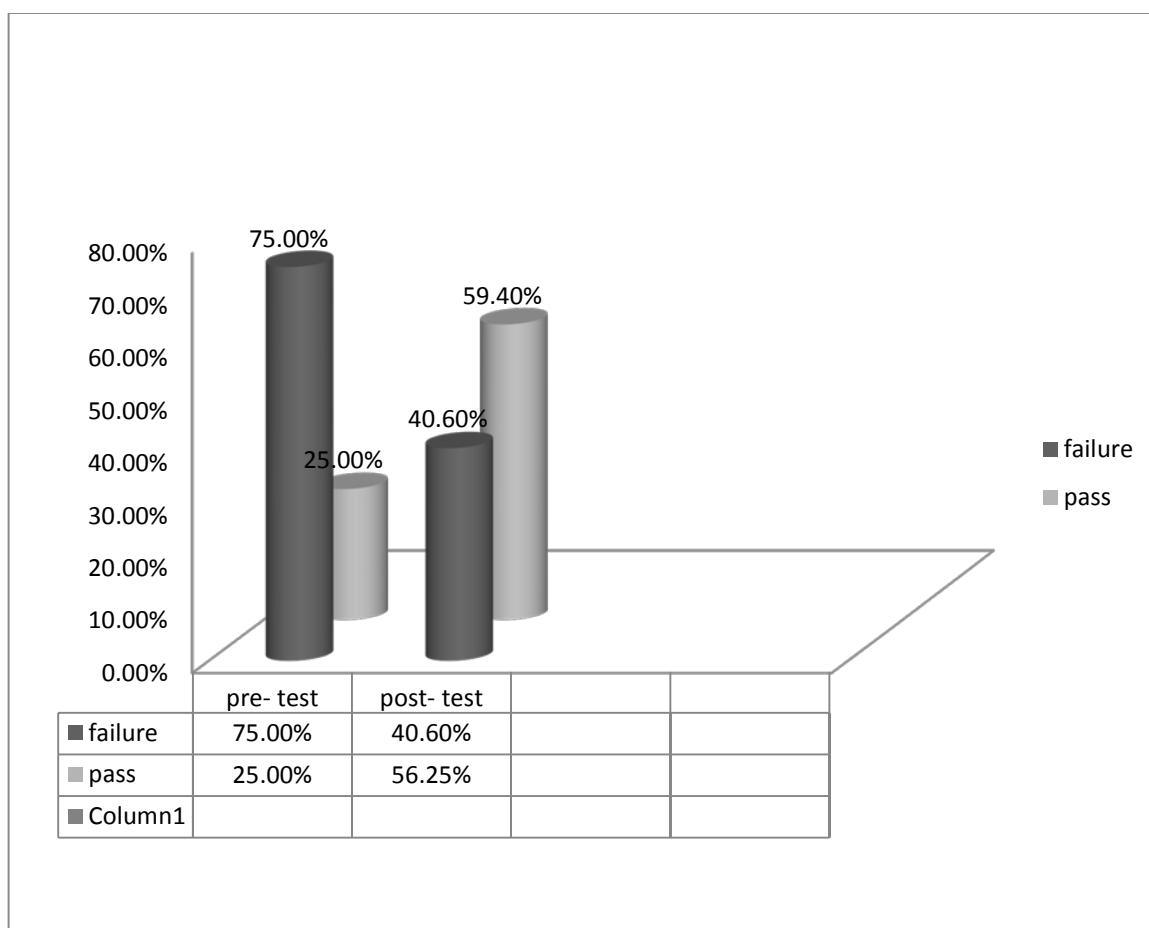


Figure (4.2) illustrates distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (25.00%) and failure by (75.00%) and post- test pass by (59.40%) and failure by (40.60%).

Table (4.3) the frequency and percentage for question three; underline stressed syllable for the word... the word... *often (adv)*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	09	28.00%	17	53.00%
failure	23	72.00%	15	27.00%
total	32	100%	32	100%

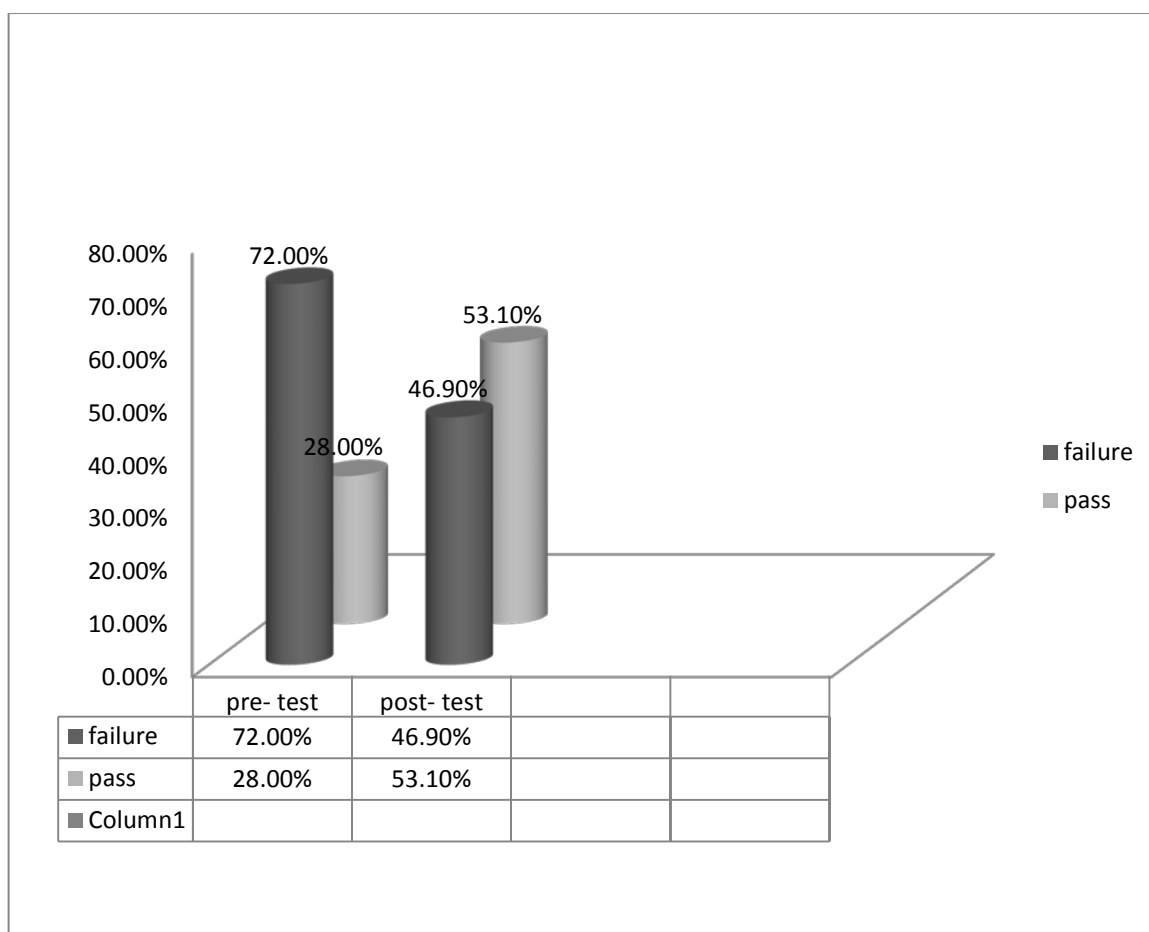


Figure (4.3) illustrates distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (28.00%) and failure by (72.00%) and post- test pass by (53.00%) and failure by (27.00%).

Table (4.4) the frequency and percentage of question four; underline stressed syllable for the word... *event*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	11	34.70%	20	62.50%
failure	21	65.30%	12	37.50%
total	32	100%	32	100%

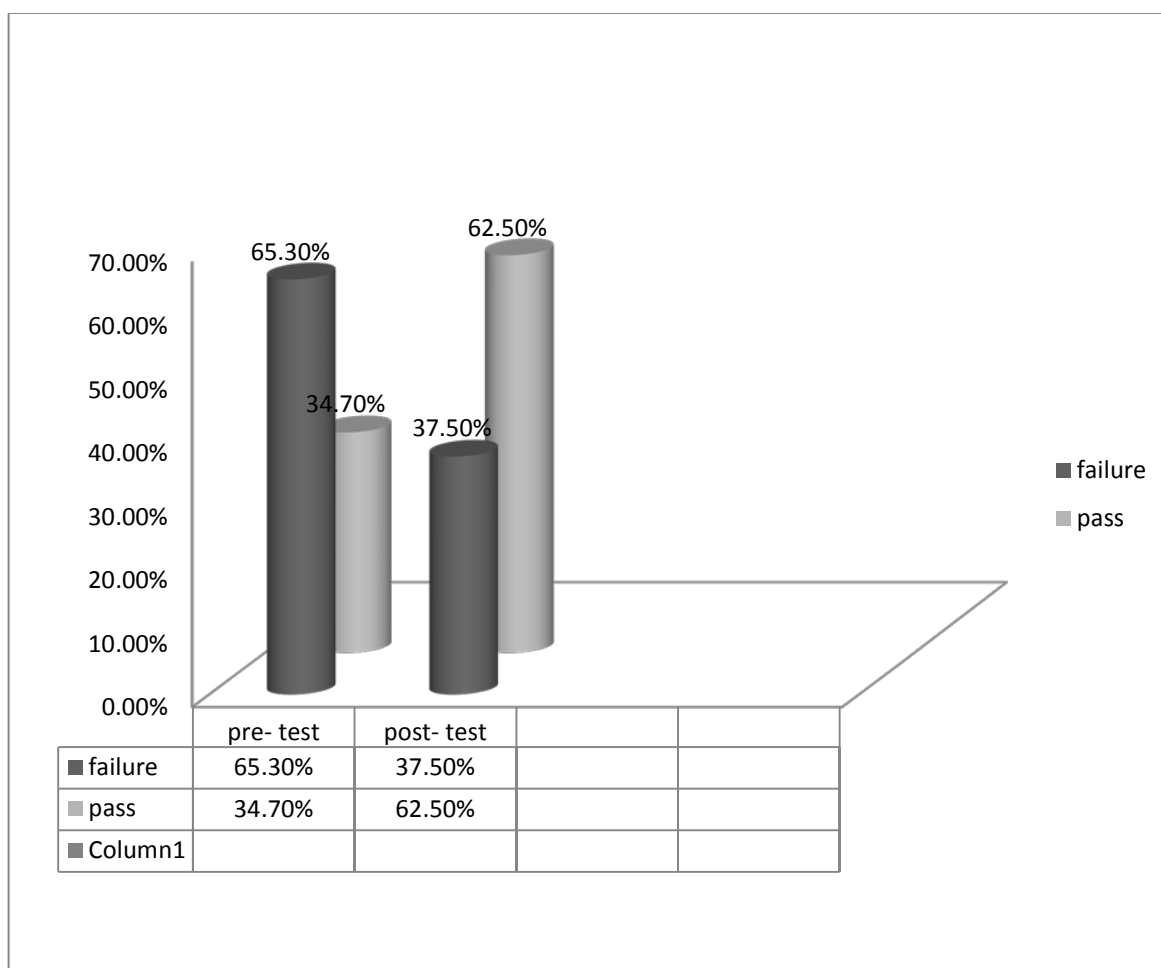


Figure (4.4) illustrates distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (34.70%) and failure by (65.30%) and post- test pass by (62.50%) and failure by (37.50%).

Table (4.5) the frequency and percentage for question five the word *desert* (v)

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	09	28.20%	18	56.25%
failure	23	71.80%	14	43.75%
total	32	100%	32	100%

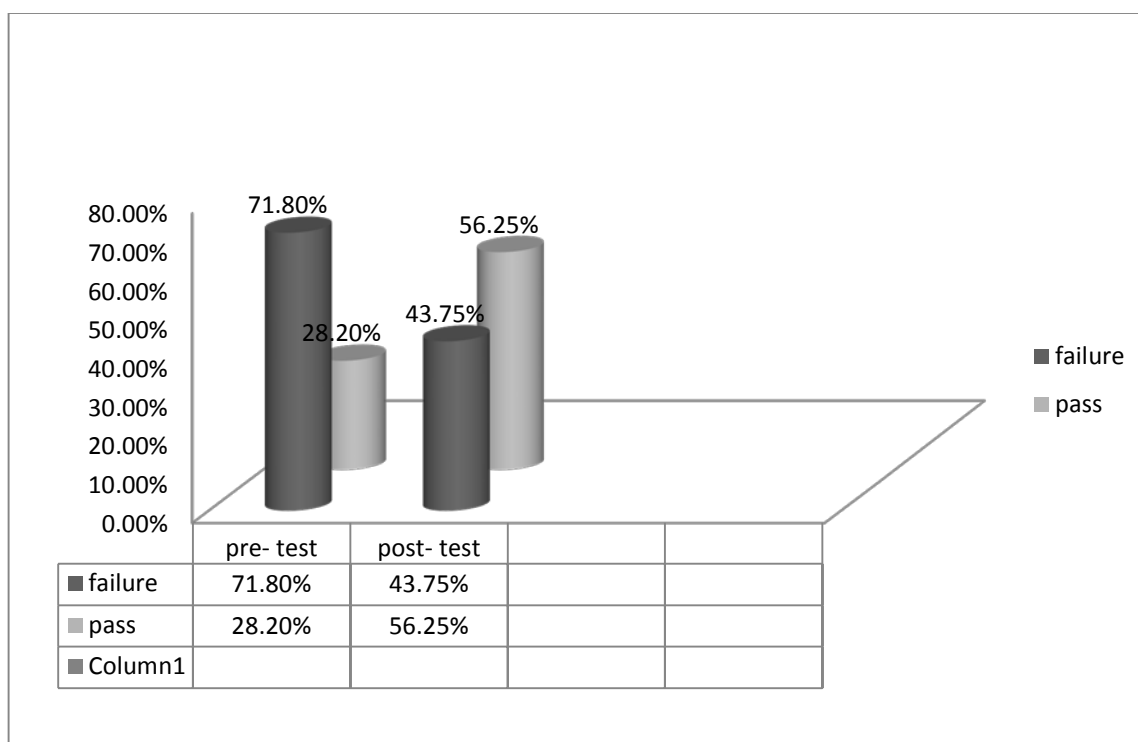


Figure (4.5) illustrates distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (28.20%) and failure by (71.80%) and post- test pass by (56.25%) and failure by (43.75%).

The improvement of placement of word stress in question one to five, which are about two- syllable words, has taken place in the post-test because the subjects have been taught some rules of placement of word stress by giving them handouts (see appendix one) by the researcher.

Table (4.6) the frequency and percentage for question six ....*television* (n)

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	06	18.75%	14	43.75%
failure	26	81.25%	18	56.25%
total	32	100%	32	100%

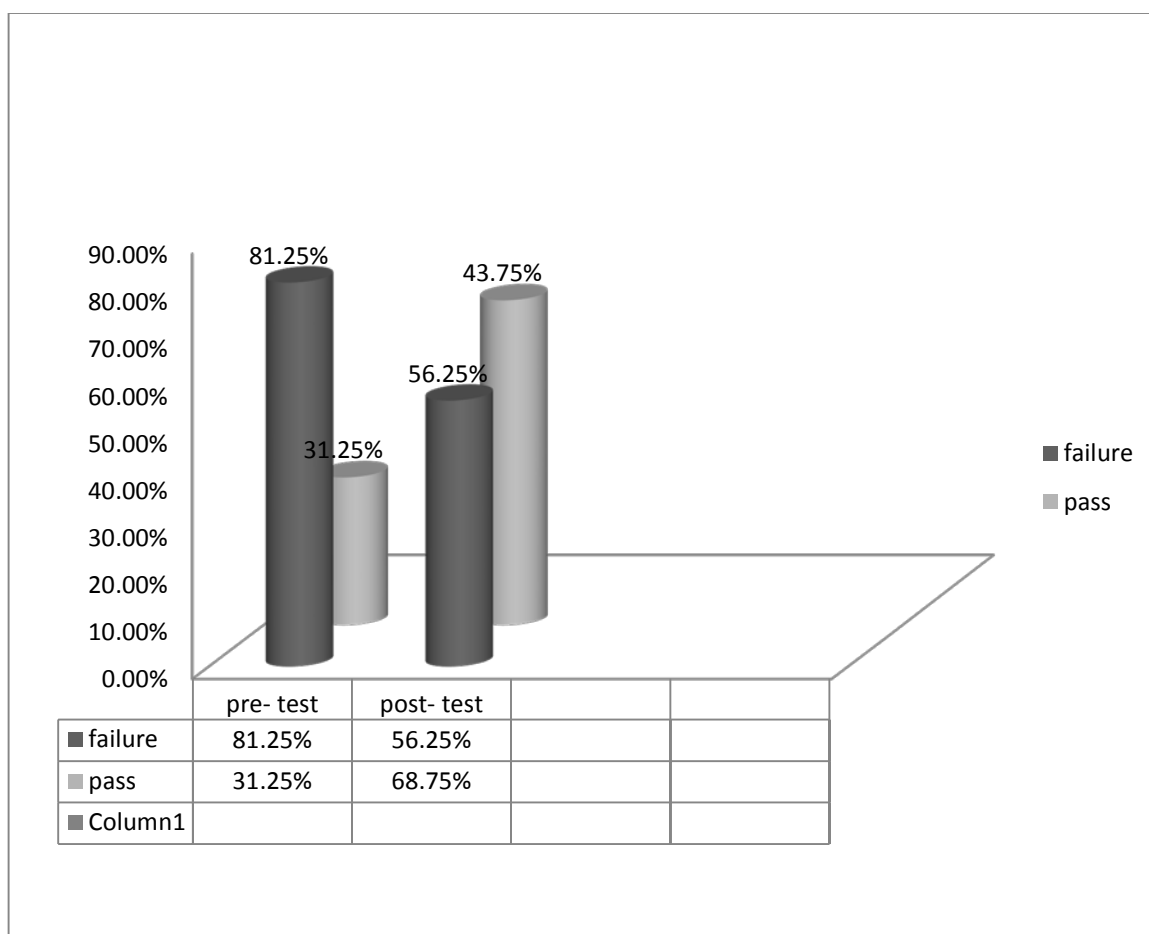


Figure (4.6) illustrates distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (18.75%) and failure by (81.25%) and post- test pass by (68.75%) and failure by (31.25%).

Table (4.7) the frequency and percentage for question seven the word...

*photography*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	05	15.40%	11	34.40%
failure	27	84.60%	21	65.60%
total	32	100%	32	100%

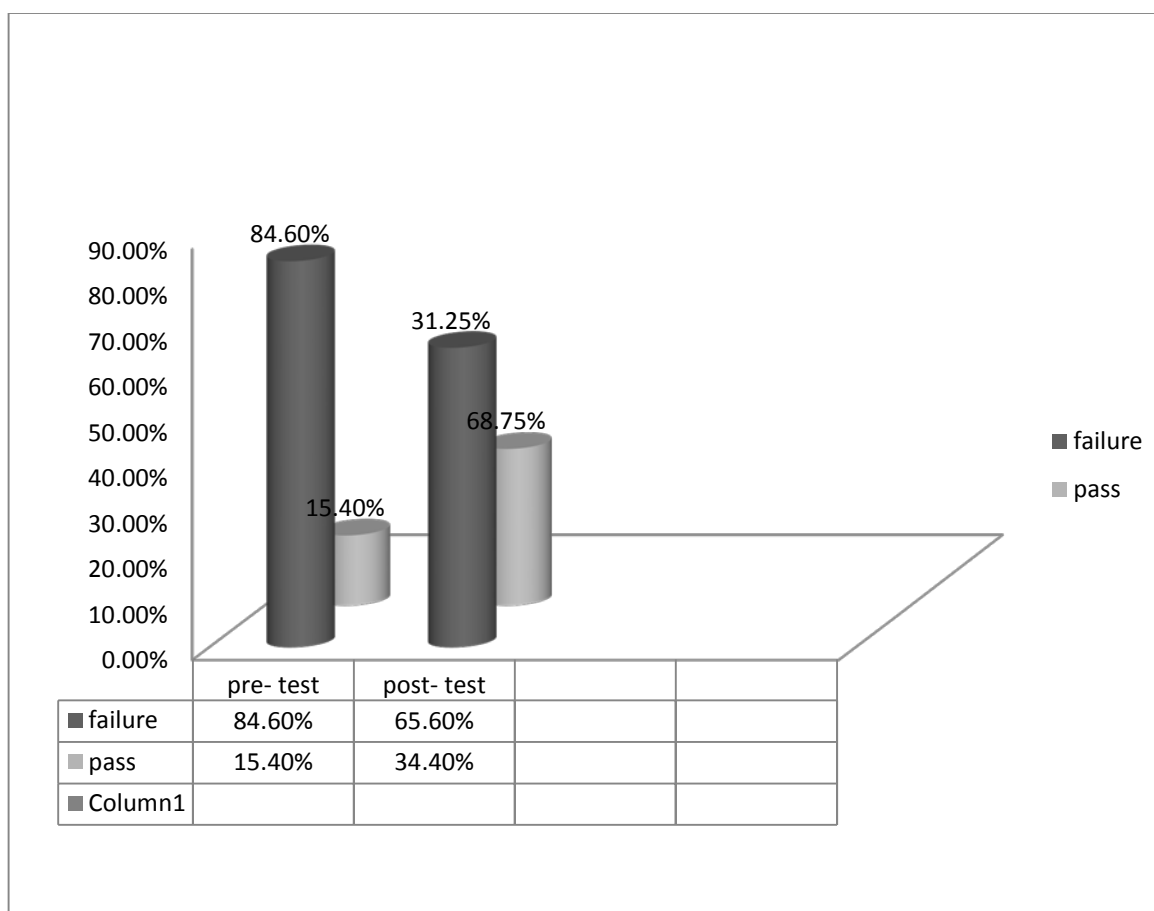


Figure (4.7) displays distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (15.40%) and failure by (84.60%) and post- test pass by (65.60%) and failure by (34.40%).

Table (4.8) the frequency and percentage of question eight the word...  
*opportunity (n)*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	07	22.00%	12	37.5%
failure	25	78.00%	20	62.5%
total	32	100%	32	100%



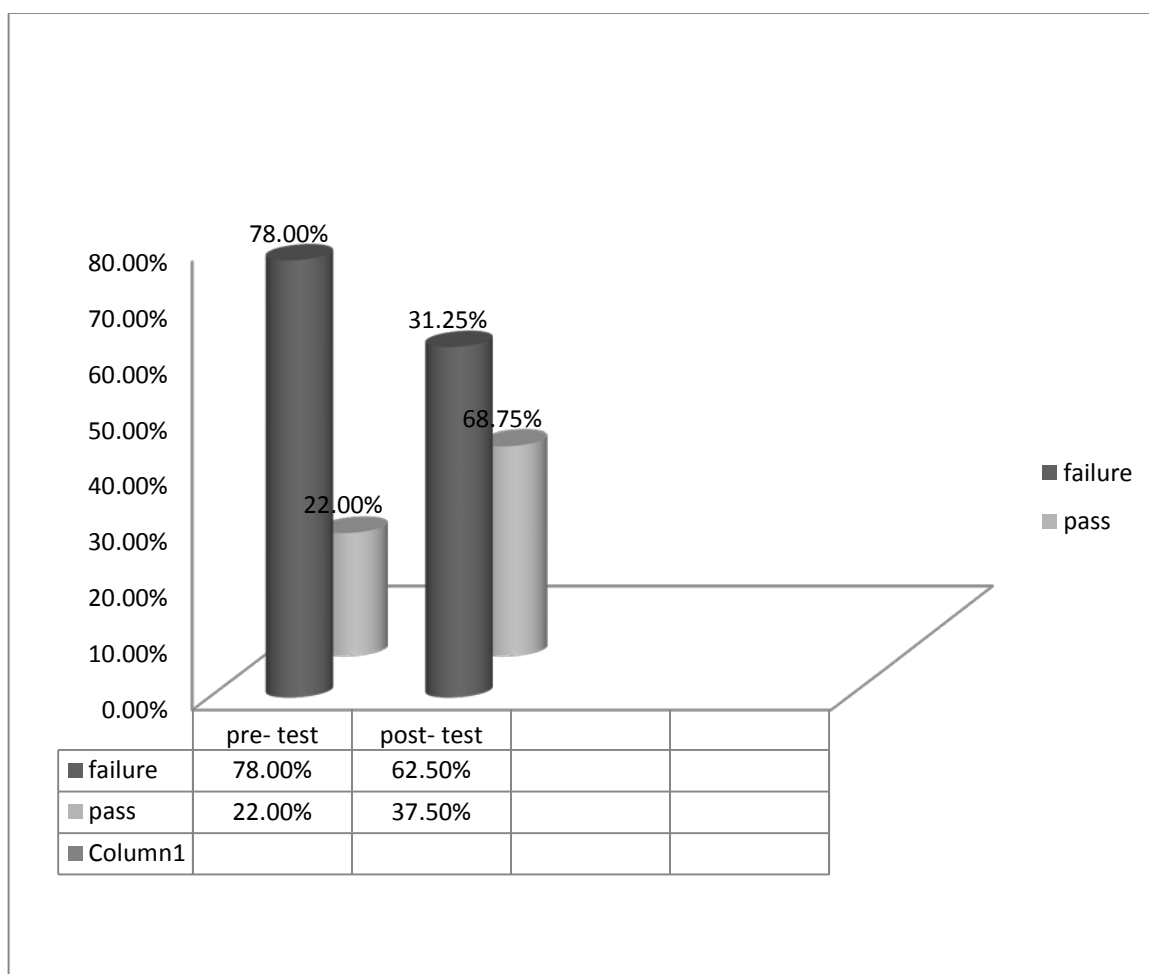


Figure (4.8) illustrates distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (22.00%) and failure by (78.00%) and post- test pass by (37.50%) and failure by (62.50%).

Table (4.9) the frequency and percentage of question nine the word...

*bibliography (n)*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	09	28,00%	10	31.25%
failure	23	72.00%	22	68.75%
total	32	100%	32	100%

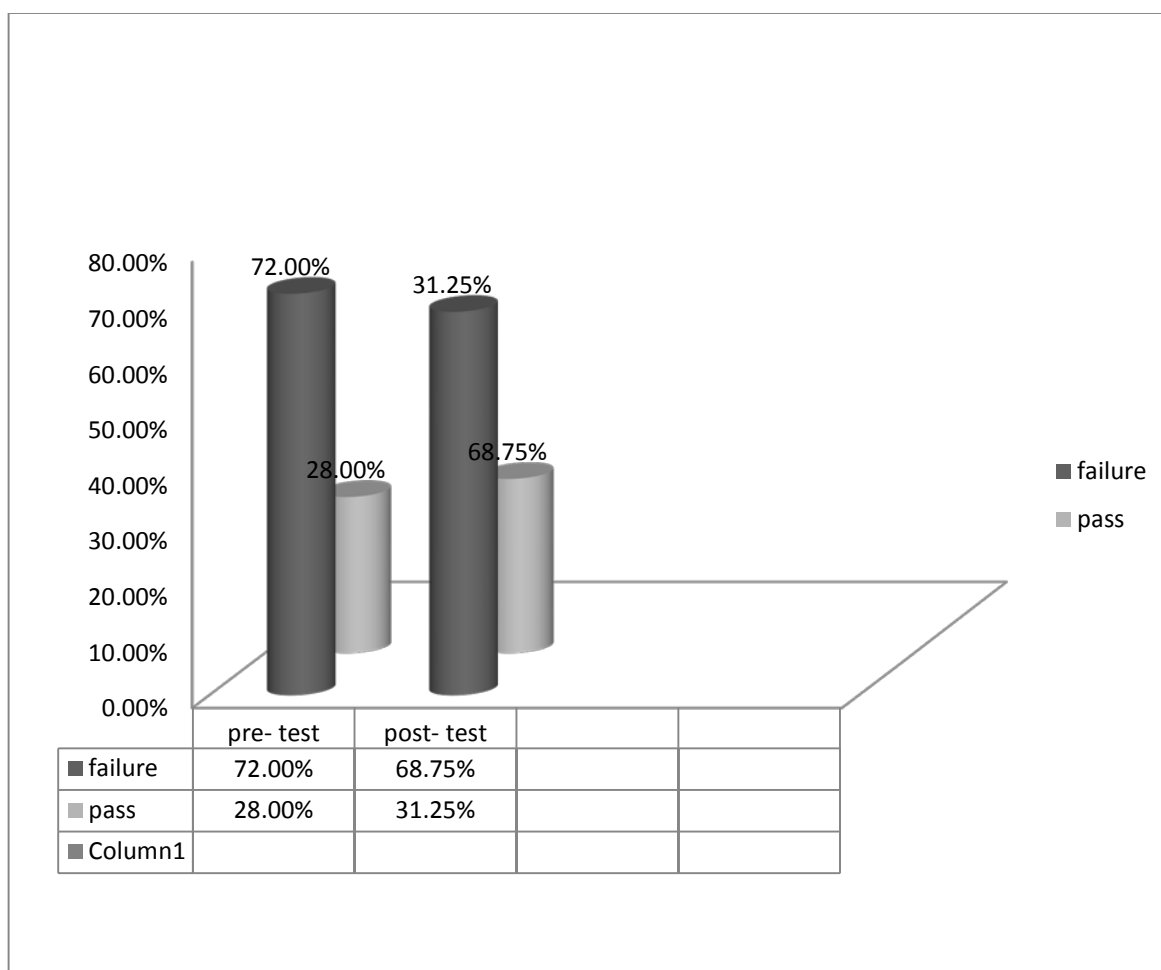


Figure (4.9) illustrates distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (28.00%) and failure by (72.00%) and post- test pass by (31.25%) and failure by (68.75%).

Table (4.10) the frequency and percentage of question ten underline stressed syllable for the word... *responsibility* (n)

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	08	25.00%	11	34.40%
failure	24	75.00%	21	65.60%
total	32	100%	32	100%

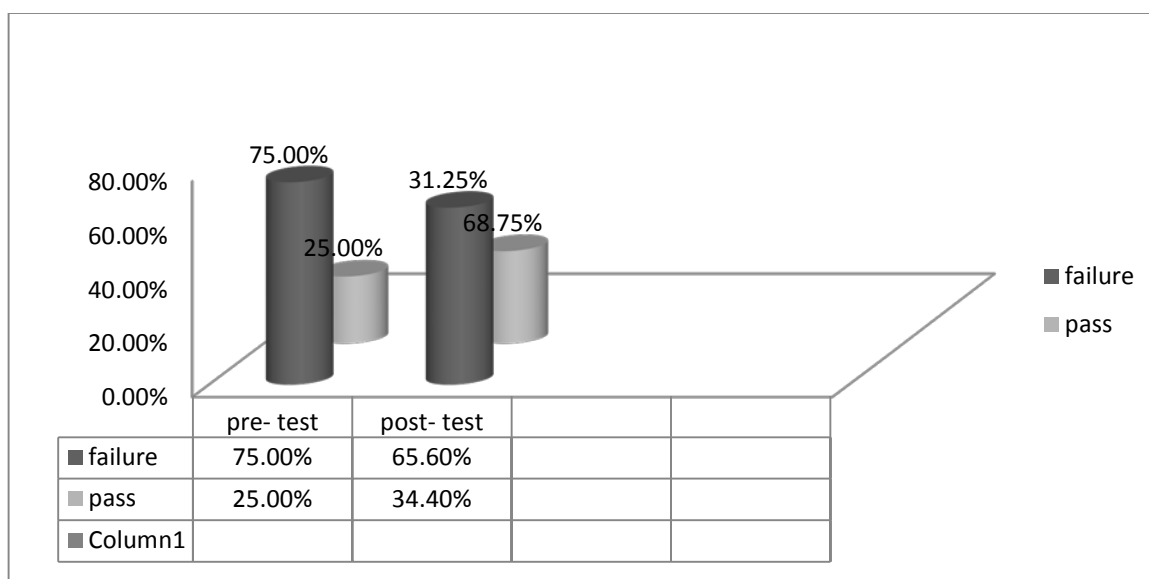


Figure (4.10) illustrates distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (25.00%) and failure by (75.00%) and post- test pass by (34.40%) and failure by (65.60%).

Based on statistical results, there was little progress concerning questions six to ten which were about placement of polysyllabic words stress comparing to questions one to five which were about two- syllable words stress. Although of classroom interventions, the results displayed that the subjects encountered difficulties in placement of polysyllabic word stress.

Table (4.11) the frequency and percentage of questions (11-13) stress words in a sentence ... *“the cat might have been eating the cheese.”*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	12	37.5%	18	56.25%
failure	20	62.5%	14	43.75%
total	32	100%	32	100%

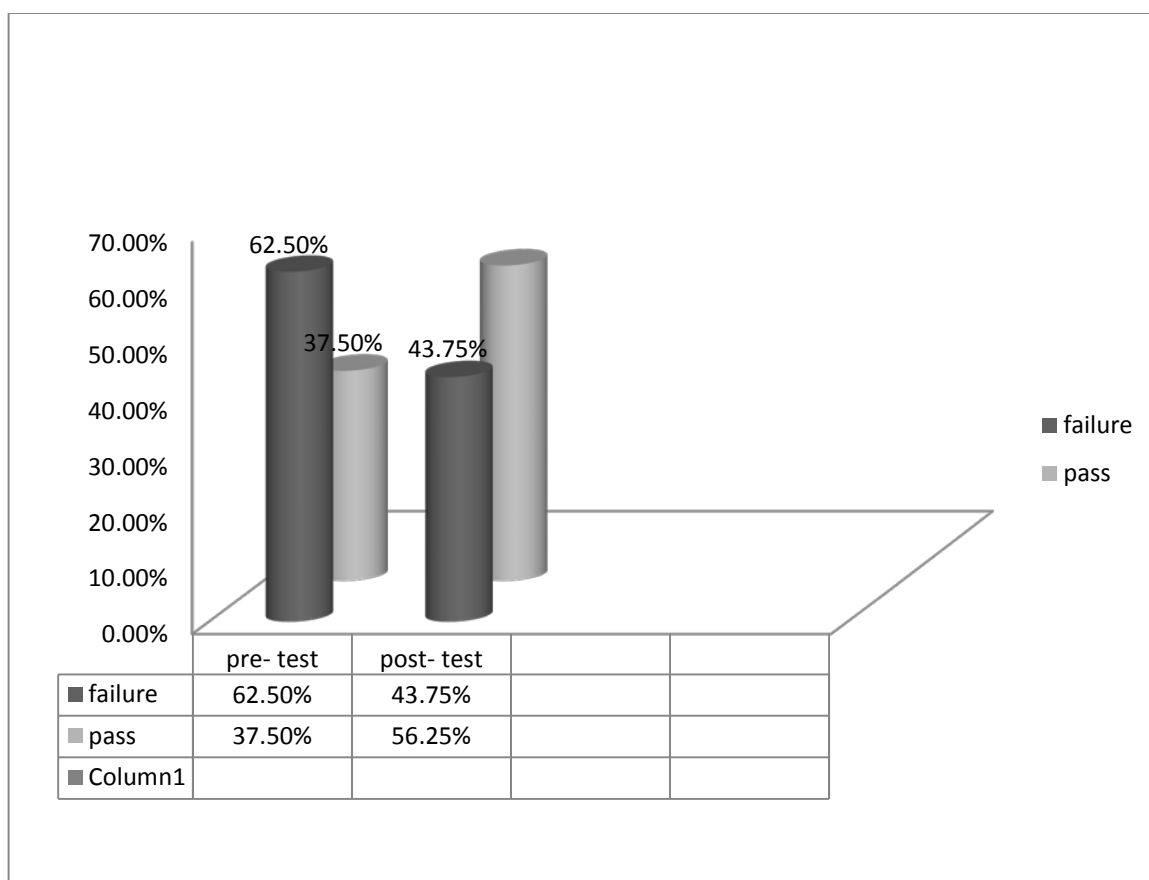


Figure (4.11) shows distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (37.50%) and failure by (62.50%) and post- test pass by (56.25%) and failure by (43.75%).

Table (4.12) The frequency and percentage of questions fourteen to sixteen underline words within a sentence which are stressed ... *yesterday I went to the dentist I had to have two teeth out.*

valid	Pre- test		Post- test	
	frequency	percent	frequency	Percent
pass	10	31.25%	17	53.00%
failure	22	68.75%	15	47.00%
total	32	100%	32	100%

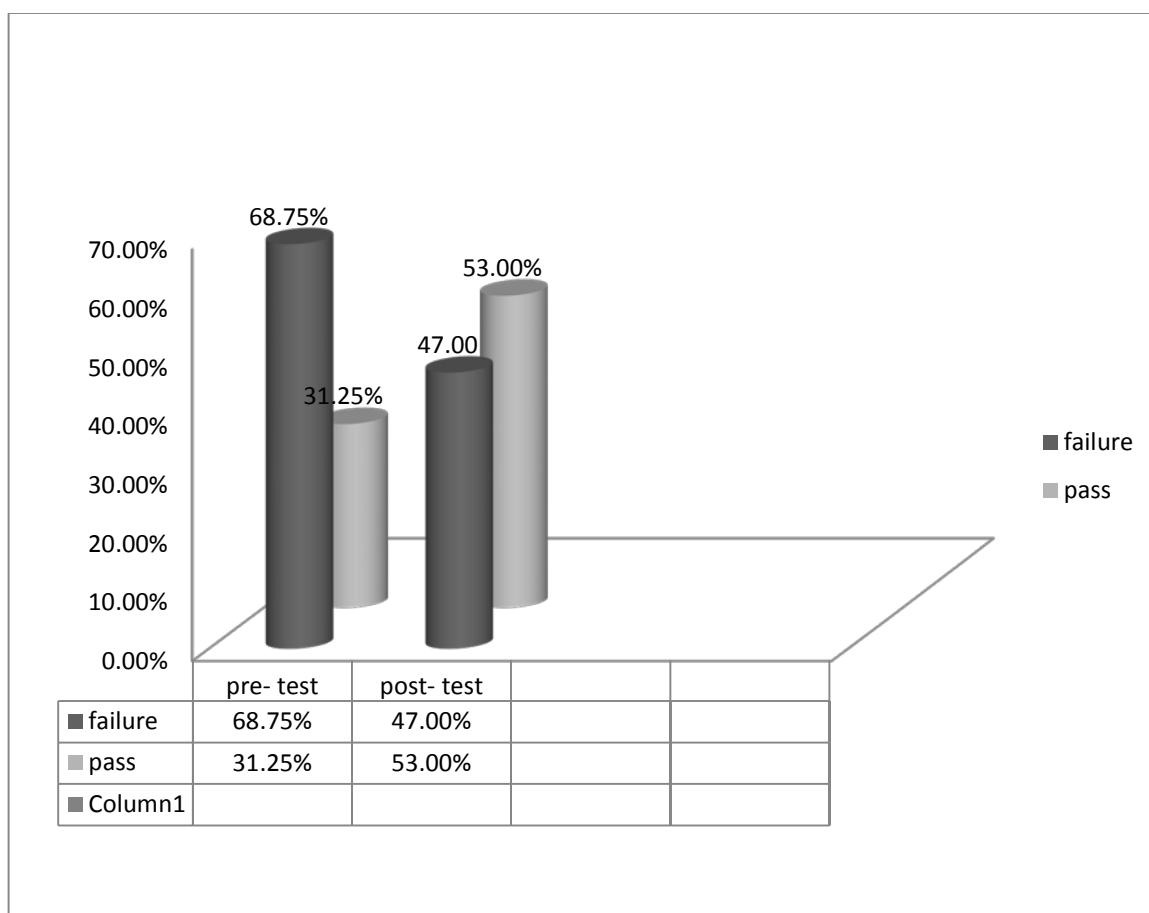


Figure (4.12) displays distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (31.25%) and failure by (68.75%) and post- test pass by (53.00%) and failure by (47.00%).

Table (4.13) The frequency and percentage of questions seventeen to twenty-one underline words within a sentence which are stressed *...when life knocks you down get up and turn down to the God.*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	11	34.40%	18	56.25%
failure	21	65.60%	14	43.75%
total	32	100%	32	100%

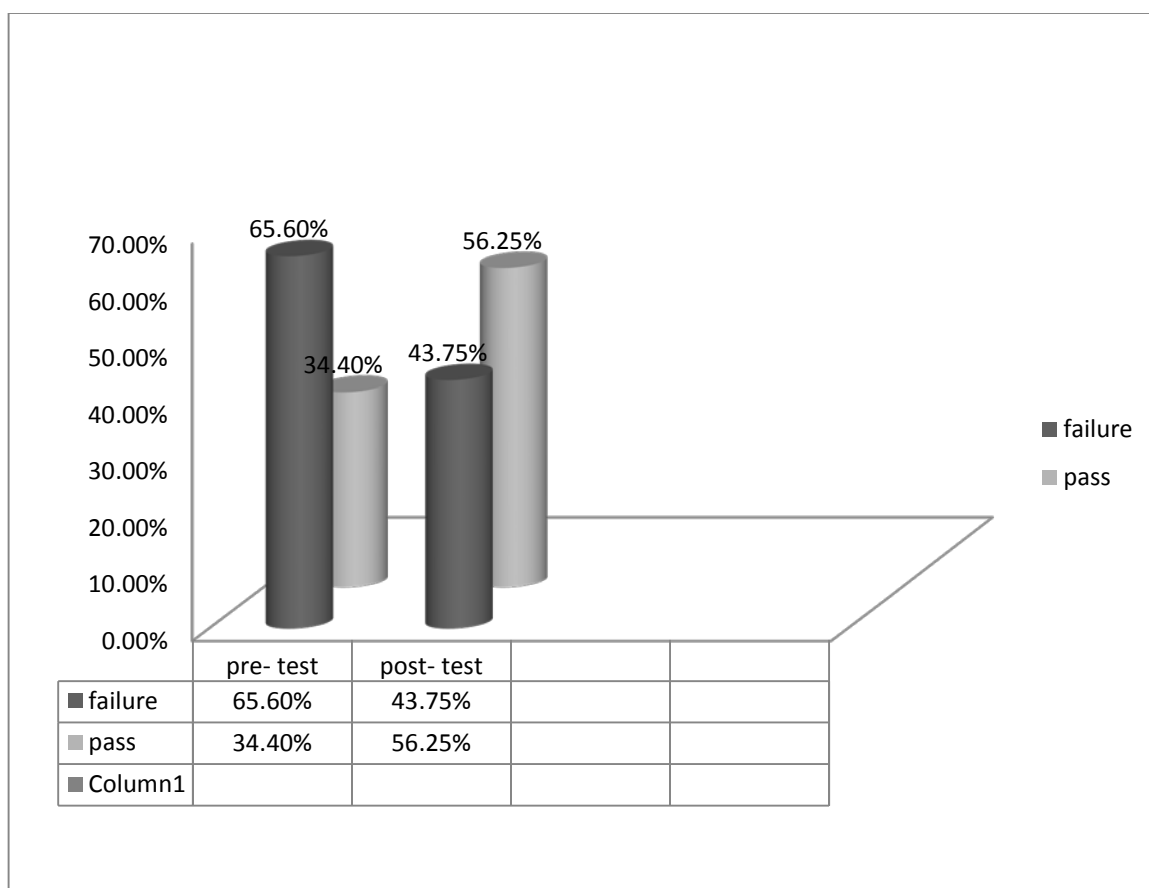


Figure (4.13) shows distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (34.40%) and failure by (65.60%) and post- test pass by (56.25%) and failure by (43.75%).

Table (4.14) The frequency and percentage of questions twenty- two to twenty- four underline words within a sentence which are stressed ...*the land has been farmed organically since 1995.*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	15	46.90%	19	59.40%
failure	17	53.10%	13	40.60%
total	32	100%	32	100%

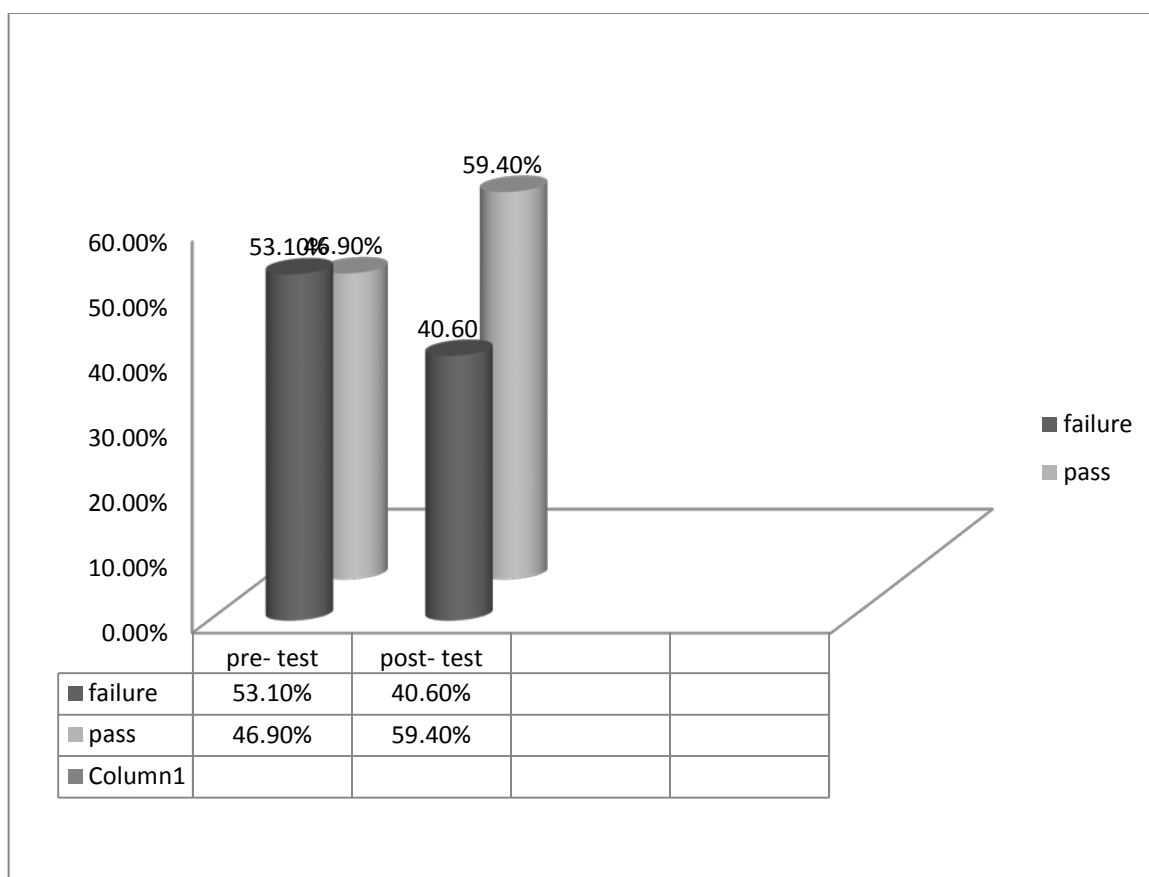


Figure (4.14) illustrates distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (46.90%) and failure by (53.10%) and post- test pass by (59.40%) and failure by (40.60%).

Table (4.15) the frequency and percentage of questions twenty- five to twenty- seven “underline words within a sentence which are stressed ...the *meal was absolutely delicious.*”

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	14	43.75%	20	62.50%
failure	18	56.25%	12	37.50%
total	32	100%	32	100%

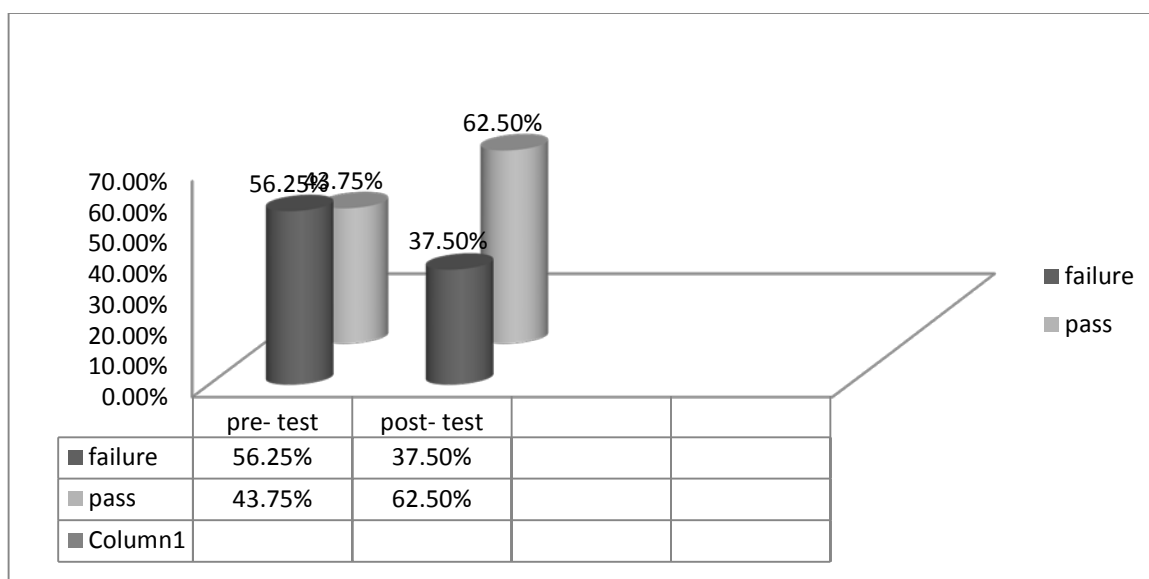


Figure (4.15) illustrates distribution views of control group (male subjects) sample by the statement as follow; pre- test pass by (43.75%) and failure by (56.25%) and post- test pass by (62.50%) and failure by (37.50%).

Based on statistical results, there was noticeable improvement of placement of sentence stress in post-test. This progress has taken place because of straightforward rules of sentence stress that were given to the subjects by the researcher in classroom interventions. (See appendix one: Handouts)

### Experimental group (male subjects)

Table (4.16) the frequency and percentage of question one; listen to audio-material to stress the word ...*record* (v).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	17	53.10%	25	78.10%
failure	15	46.90%	07	21.90%
total	32	100%	32	100%



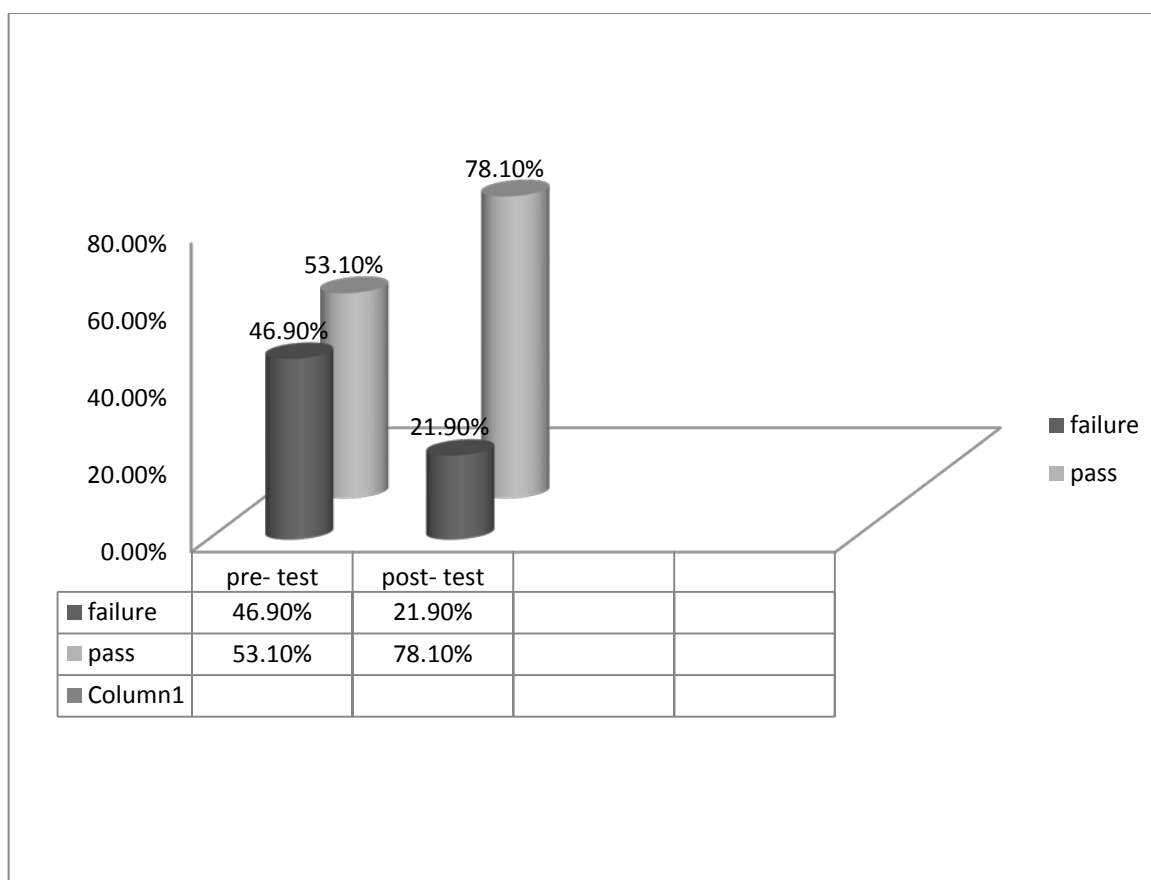


Figure (4.16) illustrates distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (53.10%) and failure by (46.90%) and post- test pass by (78.10%) and failure by (21.90%).

Table (4.17) the frequency and percentage of question two; listen to audio-material and then underline the stressed syllable for the word ...*critic* (*n*).

alid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	19	59.40%	28	87.50%
failure	13	40.60%	04	12.50%
total	32	100%	32	100%

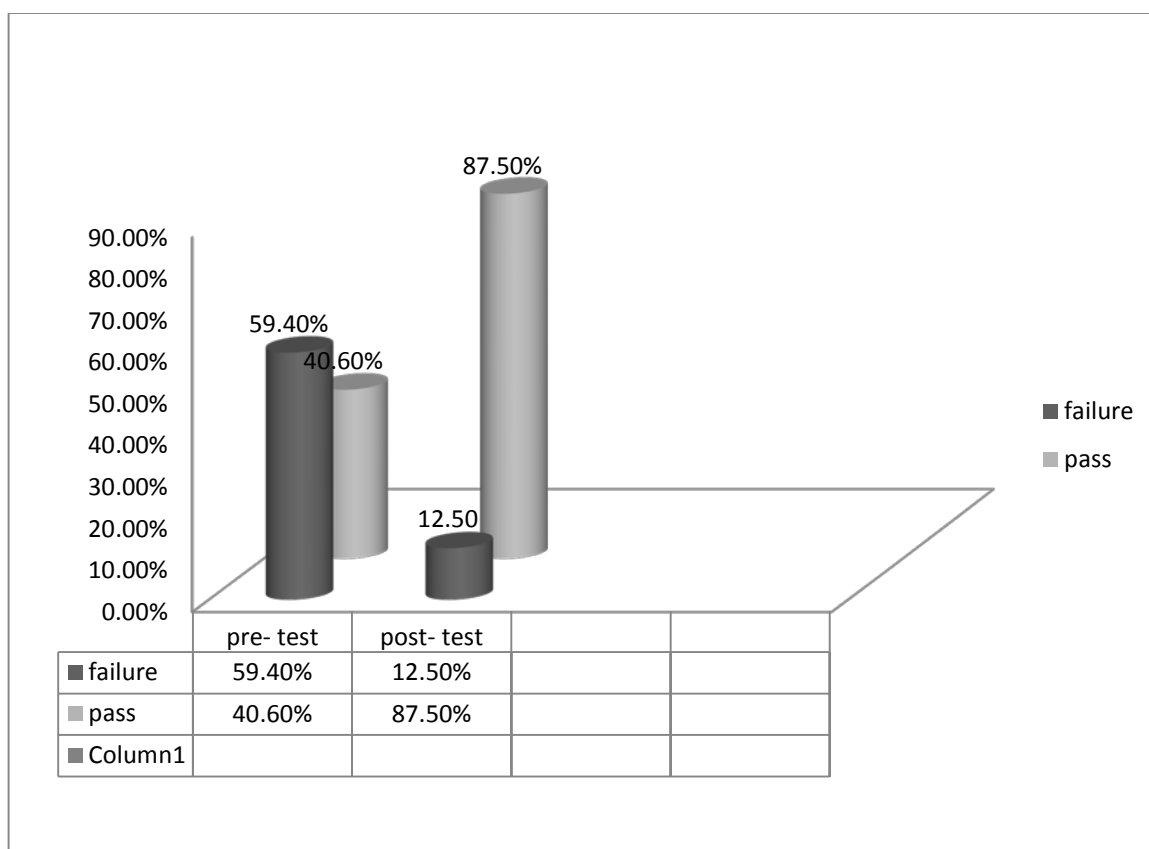


Figure (4.17) illustrates distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (40.60%) and failure by (59.40%) and post- test pass by (87.50%) and failure by (12.50%).

Table (4.18) the frequency and percentage of question three; listen to audio-material and then underline the stressed syllable for the word ...*precious*. (*adj*).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	20	62.50%	24	75.00%
failure	12	37.50%	08	25.00%
total	32	100%	32	100%

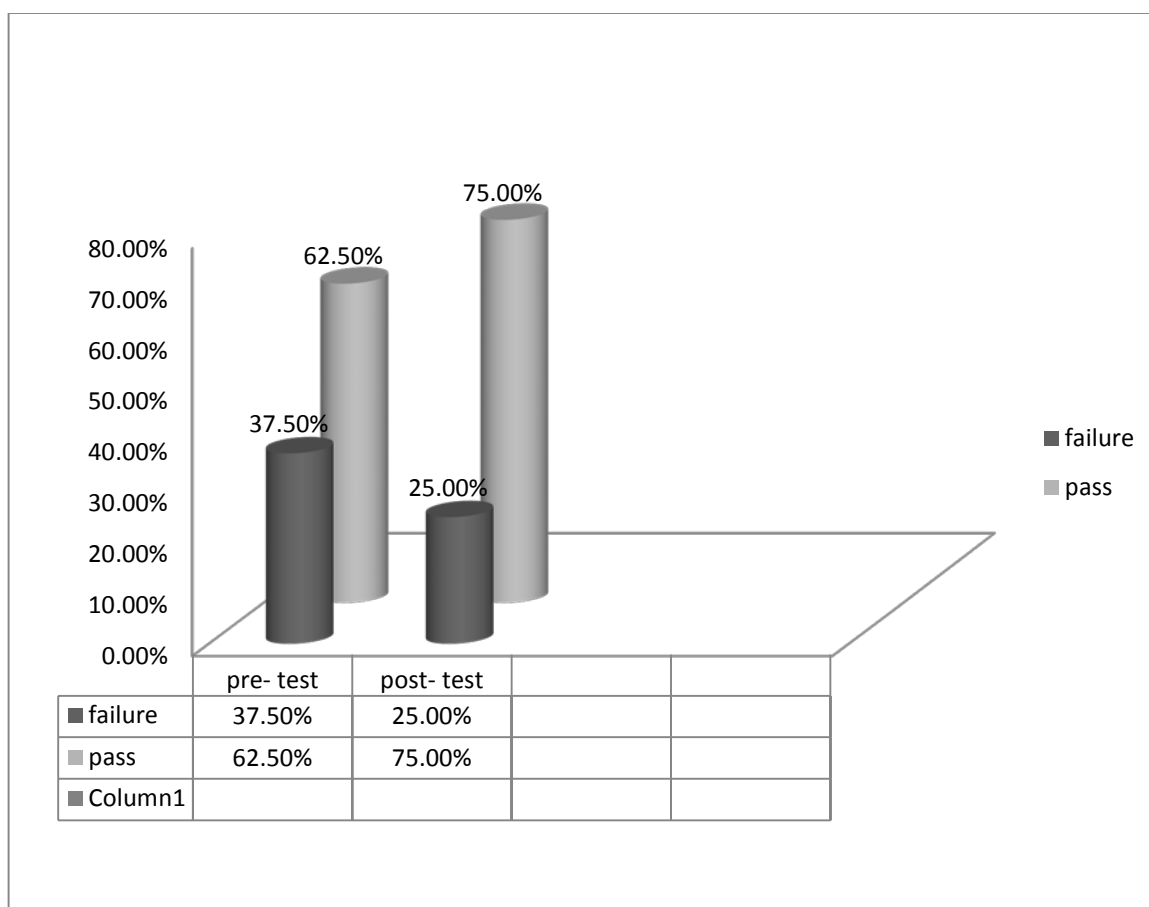


Figure (4.18) displays distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (62.50%) and failure by (37.50%) and post- test pass by (75.00%) and failure by (25.00%).

Table (4.19) the frequency and percentage of question four; listen to audio-material and then underline the stressed syllable for the word ...*seldom*. (*adj*).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	22	68.75%	26	81.25%
failure	10	31.25%	06	18.75%
total	32	100%	32	100%

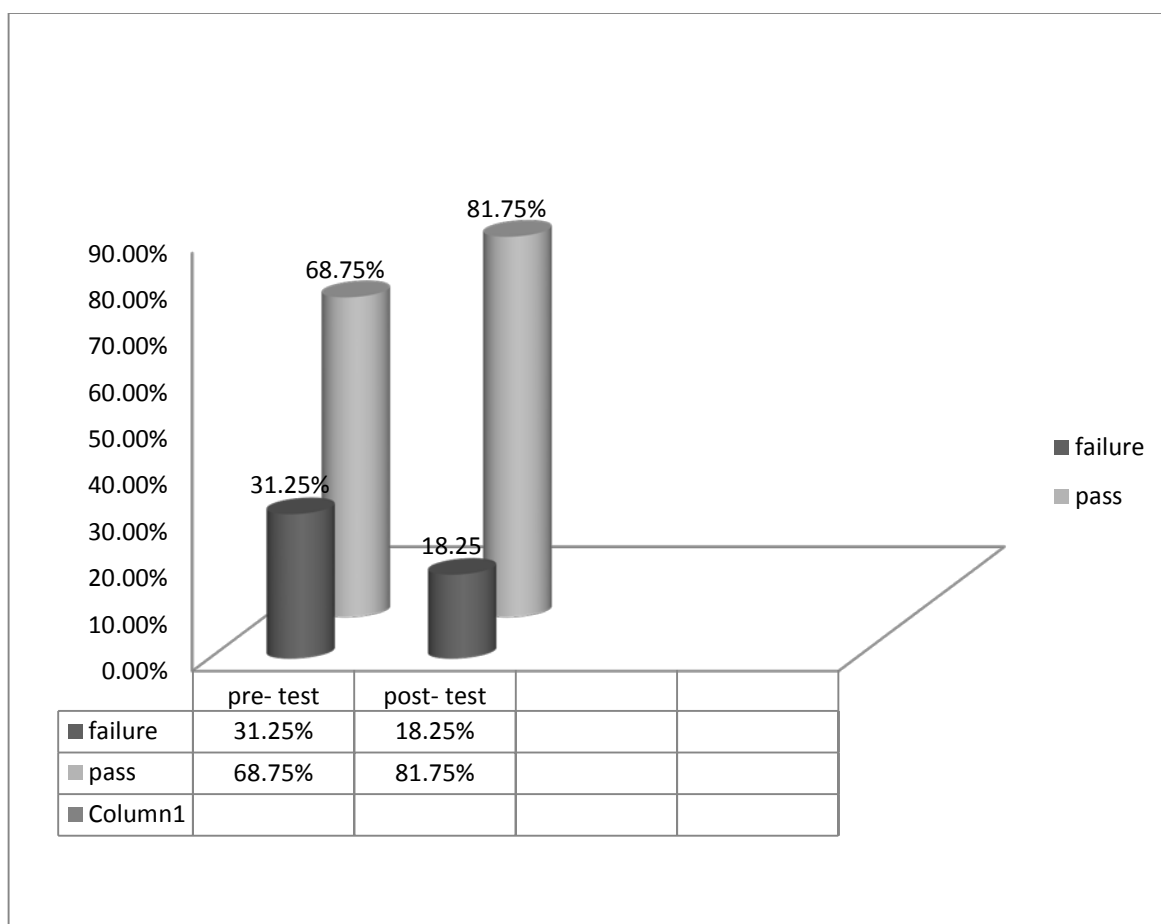


Figure (4.19) shows distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (68.75%) and failure by (31.25%) and post- test pass by (81.75%) and failure by (18.25%).

Table (4.20) the frequency and percentage of question five; listens to audio-material and then underline the stressed syllable for the word ...*realise*. (*adj*).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	21	65.60%	26	81.25%
failure	09	34.40%	06	18.75%
total	32	100%	32	100%

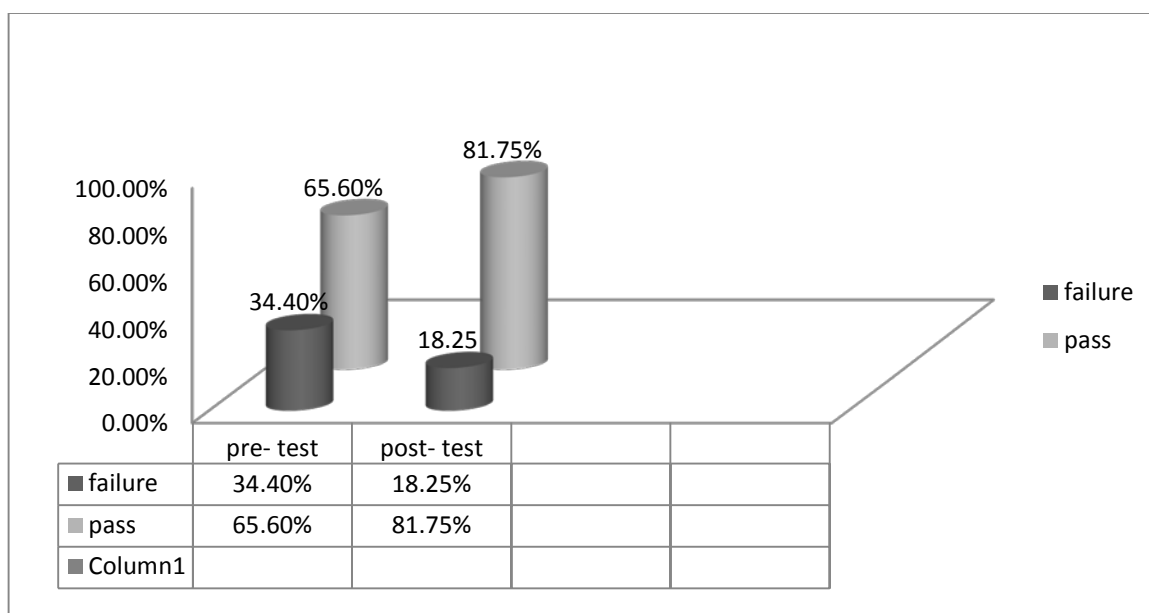


Figure (4.20) displays distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (65.60%) and failure by (34.40%) and post- test pass by (81.75%) and failure by (18.25%).

This remarkable and considerable enhancement of placement of two-syllable word stress in questions one to five was due to listening to audio- materials by native speakers which were given to the subjects during four weeks teaching by the researcher.

Table (4.21) points out the frequency and percentage of question six; listens to audio- material and then underline the stressed syllable for the polysyllabic word ...*realisation*. (n).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	18	56.25%	20	62.50%
failure	12	43.75%	12	37.50%
total	32	100%	32	100%

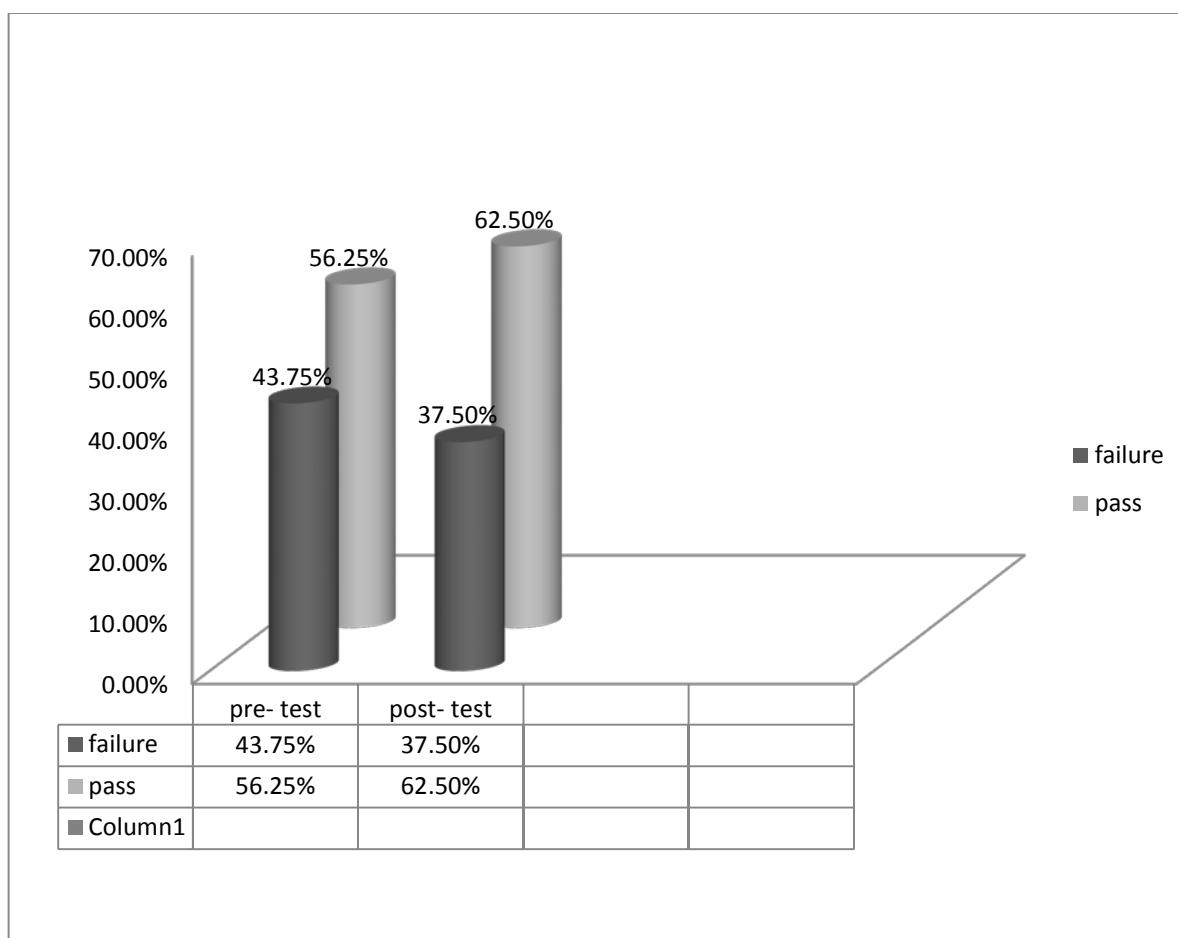


Figure (4.21) displays distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (56.25%) and failure by (43.75%) and post- test pass by (62.50%) and failure by (37.50%).

Table (4.22) the frequency and percentage of question seven; listens to audio-material and then underline the stressed syllable for the word ...*criticism*. (n).

valid	Pre- test		Post- test	
	frequency	percent	frequency	Percent
pass	17	53.10%	19	59.40%
failure	15	46.90%	13	40.60%
total	32	100%	32	100%

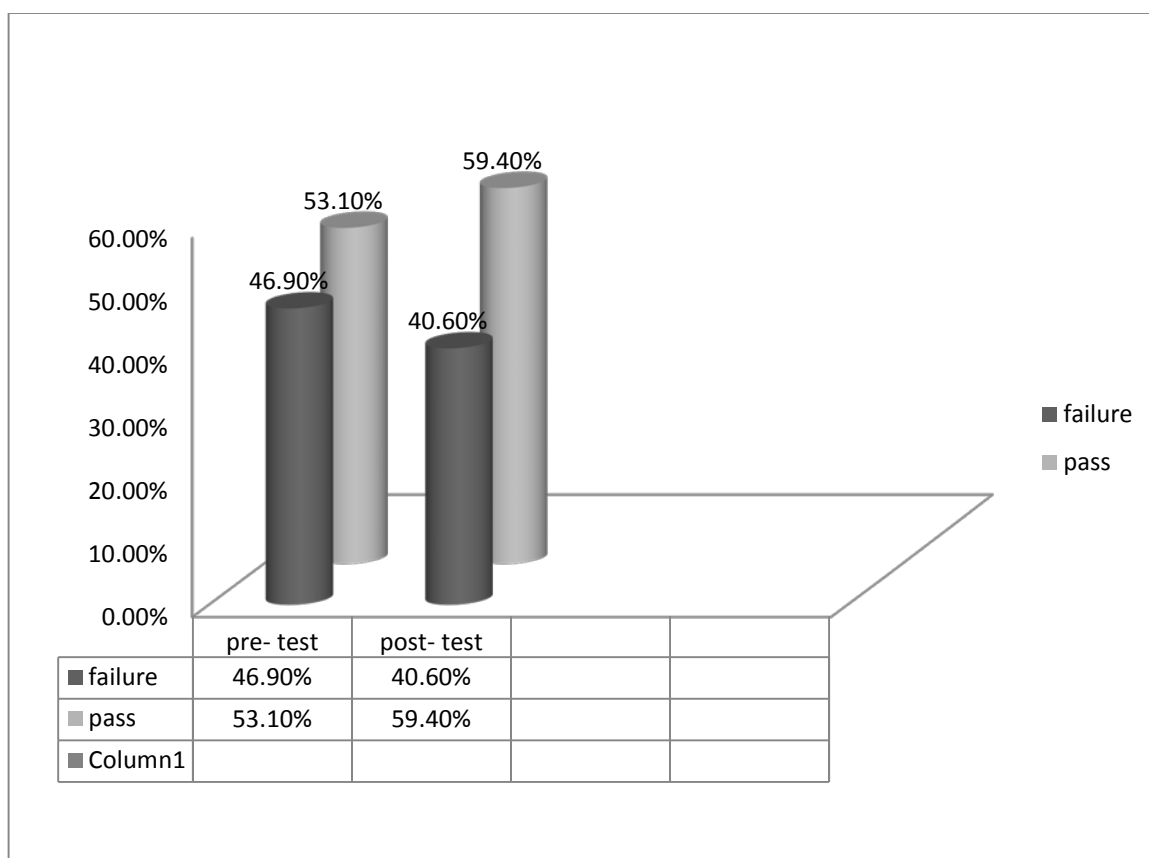


Figure (4.22) illustrates distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (53.10%) and failure by (46.90%) and post- test pass by (59.40%) and failure by (40.60%).

Table (4.23) the frequency and percentage of question eight; listens to audio-material and then underline the stressed syllable for the word ...*democracy*. (n).

valid	Pre- test		Post- test	
	frequency	percent	frequency	Percent
pass	15	46.90%	18	56.25%
failure	17	53.10%	14	43.75%
total	32	100%	32	100%

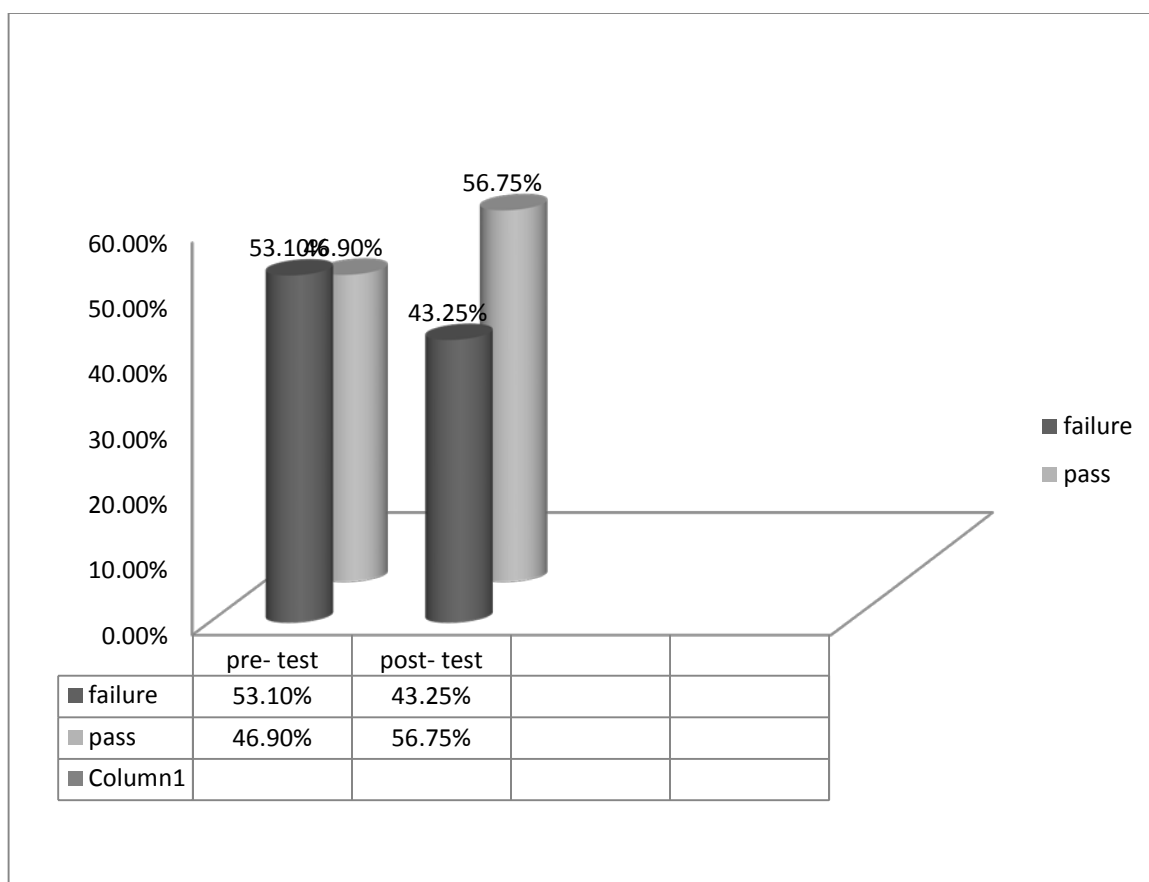


Figure (4.23) illustrates distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (46.90%) and failure by (53.10%) and post- test pass by (56.75%) and failure by (43.25%).

Table (4.24) the frequency and percentage of question nine; listens to audio-material and then underline the stressed syllable for the word ...*emergency*. (n).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	18	56.25%	23	71.88%
failure	14	43.75%	09	28.12%
total	32	100%	32	100%



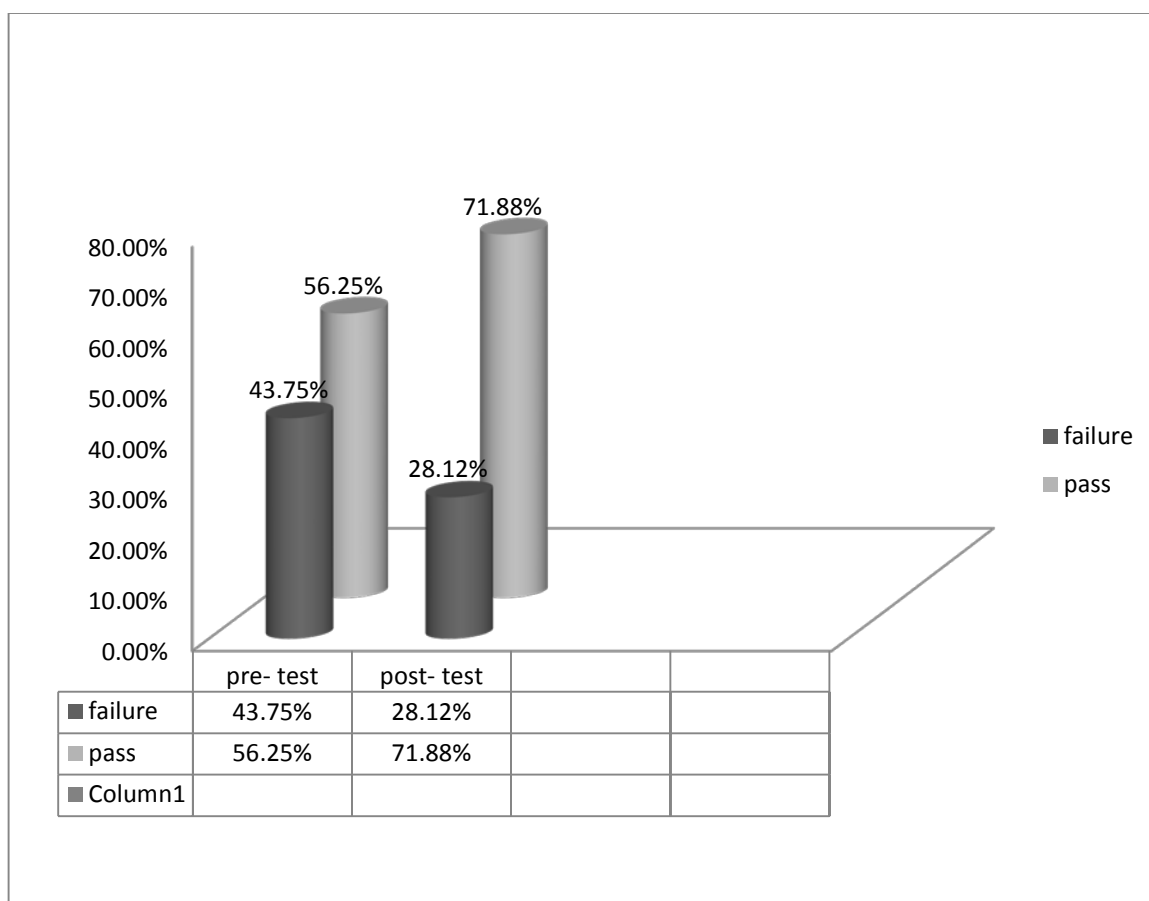


Figure (4.24) displays distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (56.25%) and failure by (43.75%) and post- test pass by (71.88%) and failure by (28.12%).

Table (4.25) the frequency and percentage of question ten; listens to audio-material and then underline the stressed syllable for the word ...*advantage*. (n).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	17	53.10%	24	75.00%
failure	15	46.90%	08	25.00%
total	32	100%	32	100%

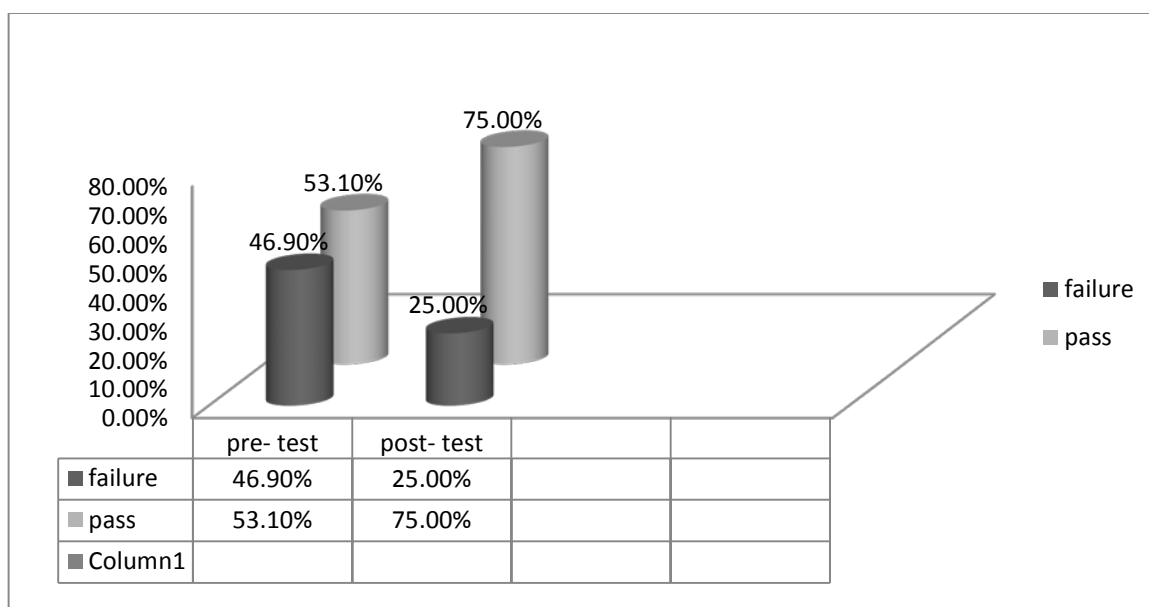


Figure (4.25) illustrates distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (53.10%) and failure by (46.90%) and post- test pass by (75.00%) and failure by (25.00%).

There was, to some extent, improvement of placement of polysyllabic words stress in post- test compared to control group. This enhancement in placement of polysyllabic words stress was due to listening to audio- materials by native speakers which was given by the researcher as classroom interventions during four weeks teaching.

Table (4.26) the frequency and percentage of questions(11-13) listens to audio- material to stress words in a sentence ... *do you have a pen, honey?*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	19	59.40%	28	87.50%
failure	13	40.60%	04	12.50%
total	32	100%	32	100%

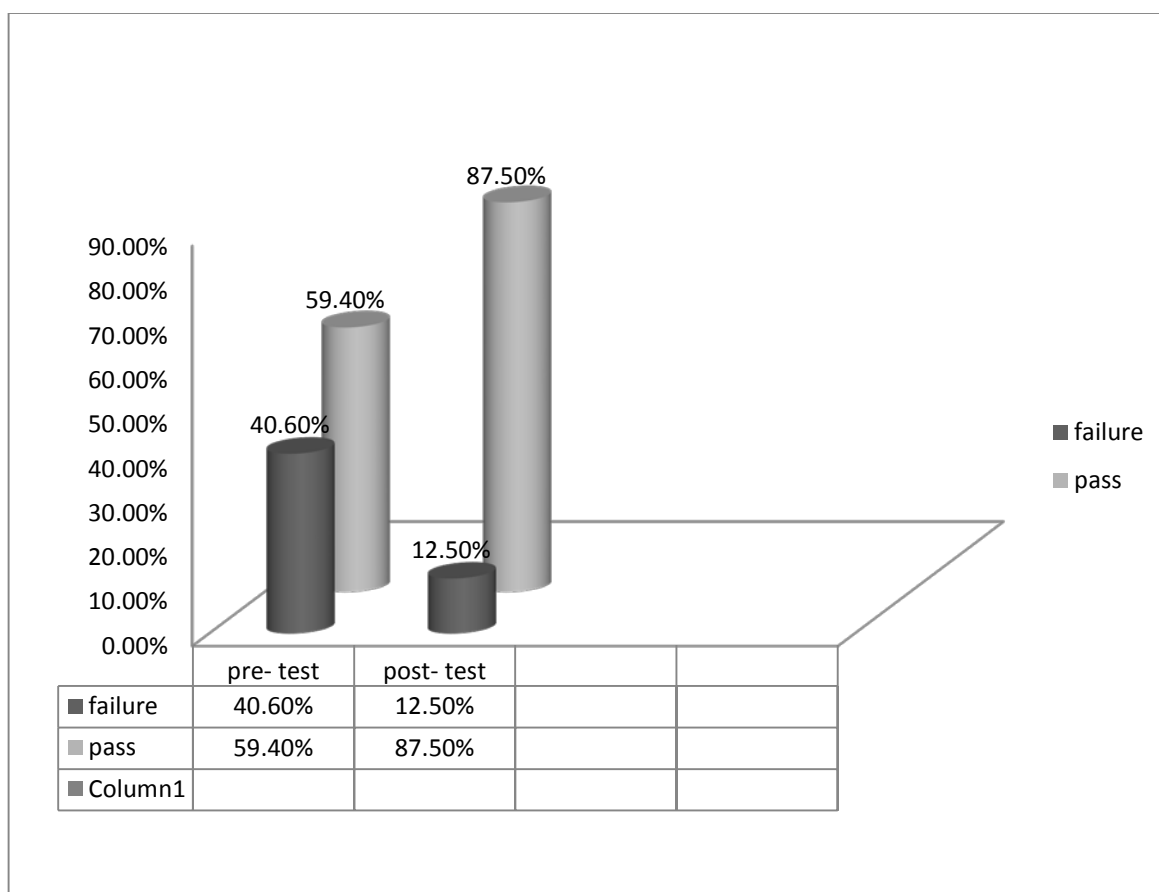


Figure (4.26) illustrates distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (59.40%) and failure by (40.60%) and post- test pass by (87.50%) and failure by (12.50%).

Table (4.27) the frequency and percentage of questions fourteen to sixteen; listens to audio- material and then underline certain words which are stressed in a sentence ... *a queue of people are waiting for a bus.*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	18	56.25%	27	84.40%
failure	14	43.75%	05	15.60%
total	32	100%	32	100%

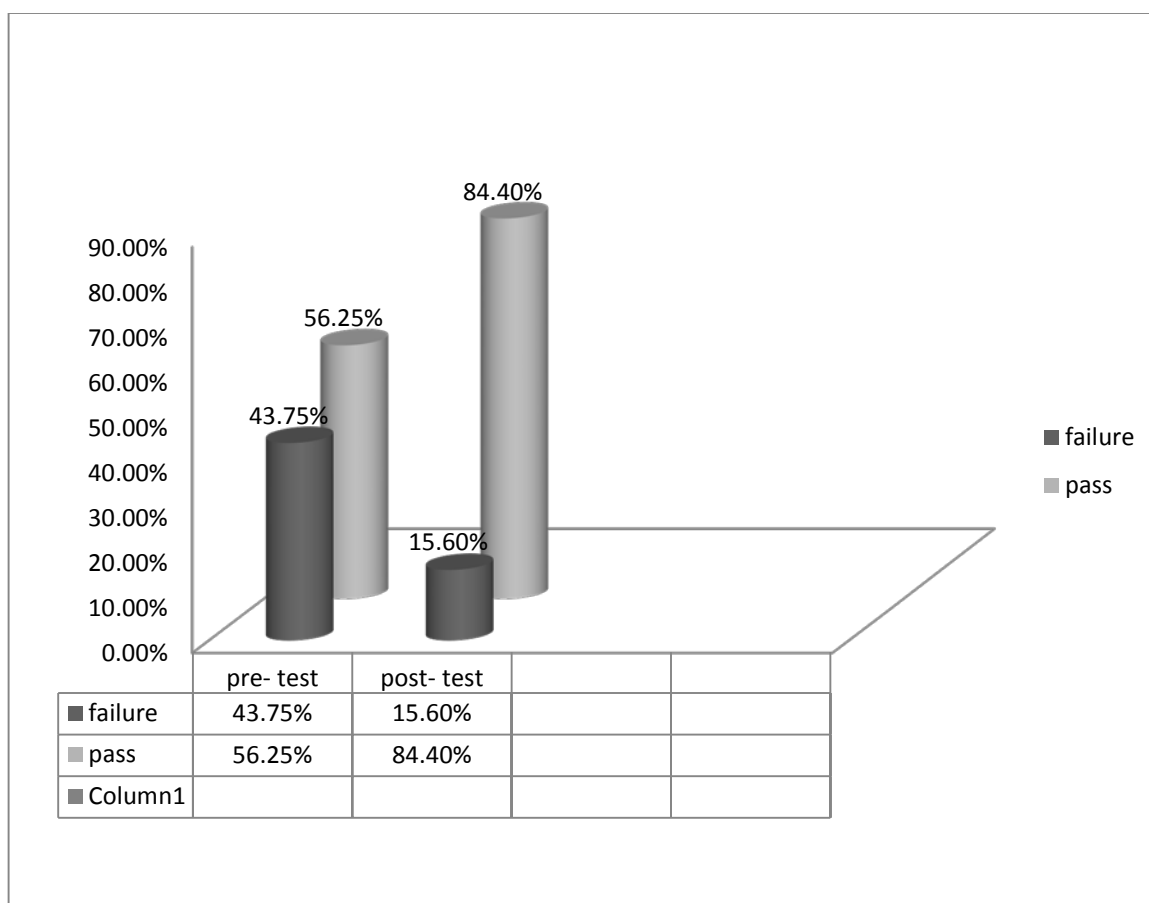


Figure (4.27) shows distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (56.25%) and failure by (43.75%) and post- test pass by (84.40%) and failure by (15.60%).

Table (4.28) the frequency and percentage of questions seventeen to twenty; listens to audio- material and then underline certain words which are stressed in a sentence ... *the waitress comes and we order a pizza.*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	19	40.60%	27	84.40%
failure	13	59.40%	05	15.60%
total	32	100%	32	100%

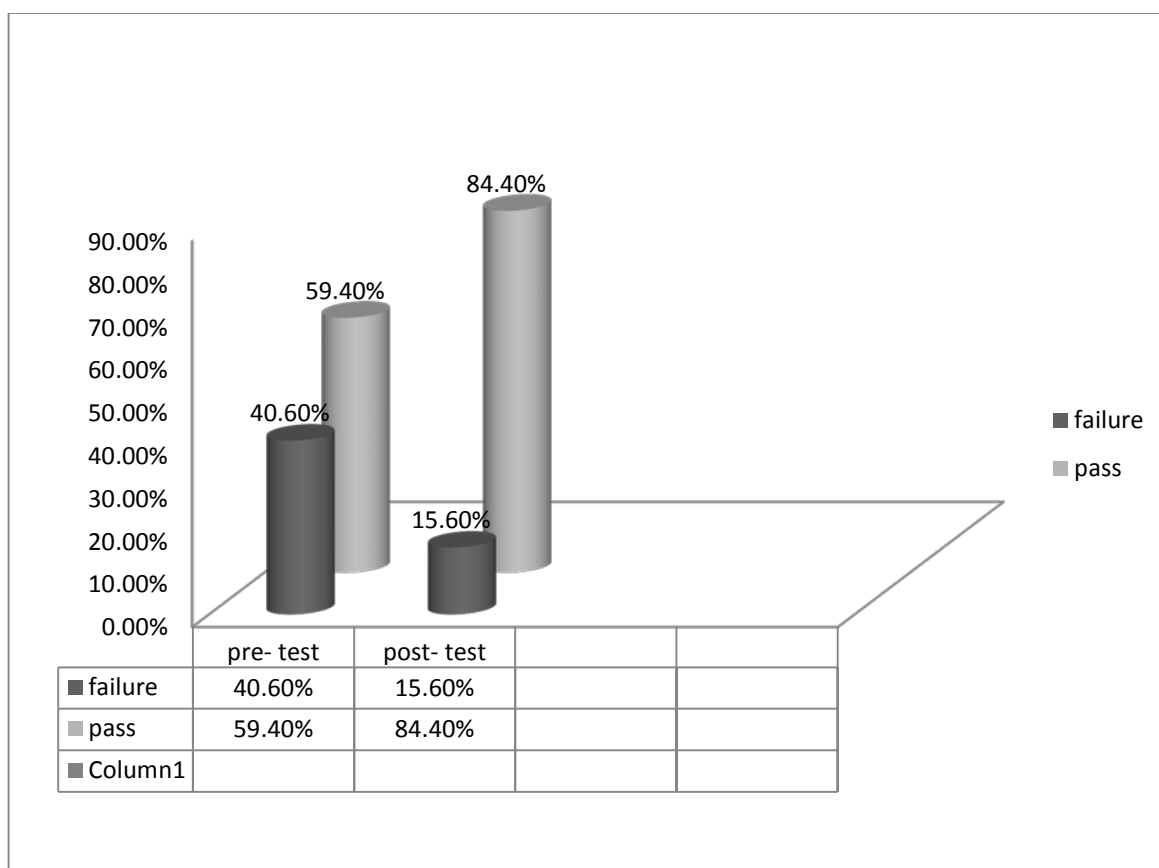


Figure (4.28) illustrates distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (59.40%) and failure by (40.60%) and post- test pass by (84.40%) and failure by (15.60%).

Table (4.29) the frequency and percentage of questions twenty one to twenty-three; listens to audio- material and then underline certain words which are stressed in a sentence ... *the dog has been barking at the strangers.*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	17	53.10%	25	78.10%
failure	15	46.90%	07	21.90%
total	32	100%	32	100%

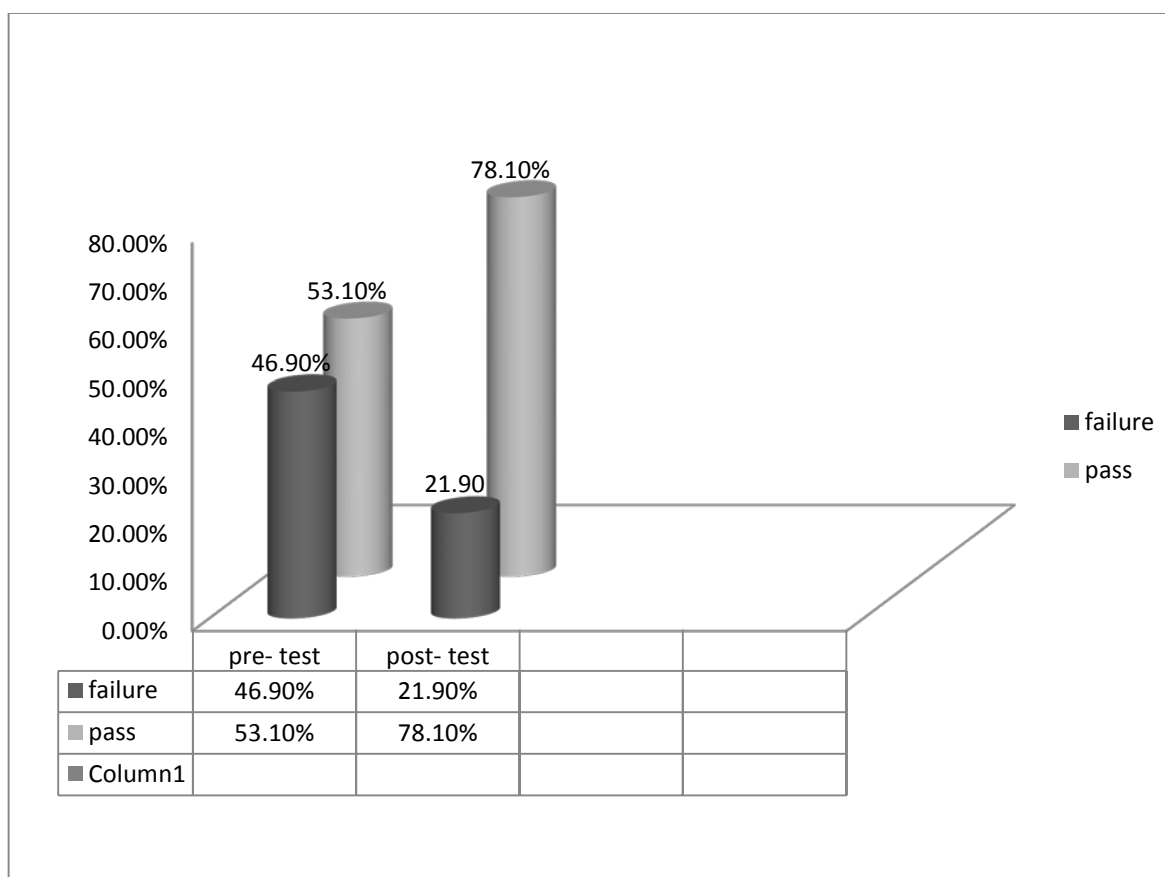


Figure (4.29) displays distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (53.10%) and failure by (46.90%) and post- test pass by (78.10%) and failure by (21.90%).

Table (4.30) the frequency and percentage of questions twenty- four to twenty- six; listens to audio- material to underline certain words which are stressed in a sentence ... *the cat has been chasing the mice.*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	19	59.40%	27	84.40%
failure	13	40.60%	05	15.60%
total	32	100%	32	100%

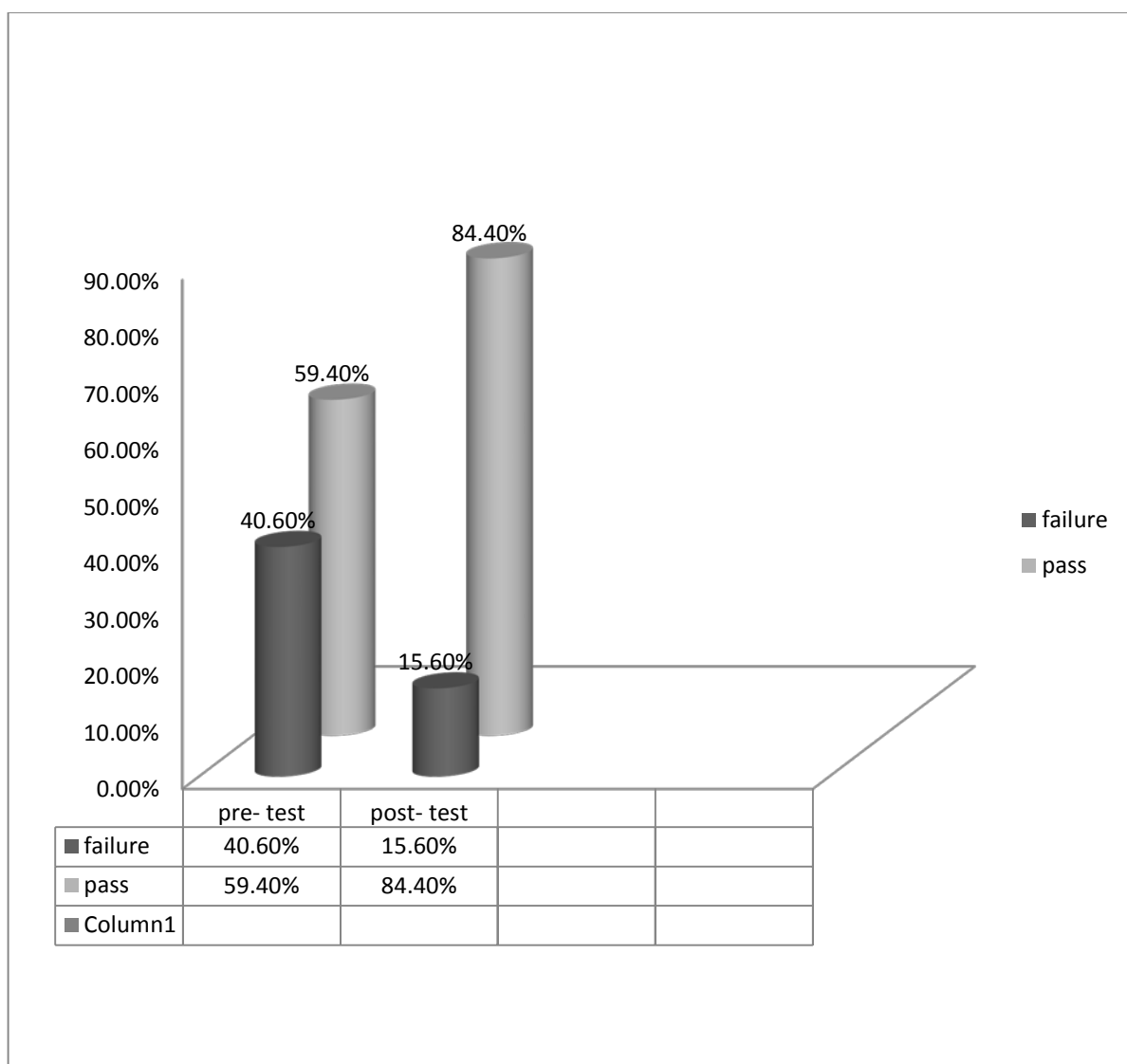


Figure (4.30) illustrates distribution views of experimental group (male subjects) sample by the statement as follow; pre- test pass by (59.40%) and failure by (40.60%) and post- test pass by (84.40%) and failure by (15.60%).

Based on statistical results, there was noticeable and remarkable improvement of placement of sentence stress in post-test compared to control group. This progress has taken place because of straightforward rules of sentence stress that were given to the subjects by the researcher in classroom interventions and they have been trained by the researcher in how to listen to native speakers to place

sentence stress correctly during four weeks teaching. (See appendix one: Handouts)

Table (4.31) shows t- test of control and experimental groups (male subjects)

Groups	N	Mean	Std. Deviation	df	t. test	Sig
Control	32	4.1928	0.94162	31	-2.5175	.000
Experimental	32	5.4139	1.12061			

Key: N: number of subjects, df degree of freedom (n-1) and sig: signified value

The value of t- test is calculated to signify differences between number of subjects of the study for the hypothesis as it is viewed in above table (-2.5175) with the signify value (00.0) which is less than significant value (0.05). This statistical result refers to the existence of statistical differences between experimental and control groups (male subjects).

### **Control group (female subjects)**

Table (4.32) the frequency and percentage for question one; underline stressed syllable for the word ...*furnish* (v)

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	16	42.10%	20	52.60%
failure	22	57.90%	18	47.40%
total	38	100%	38	100%



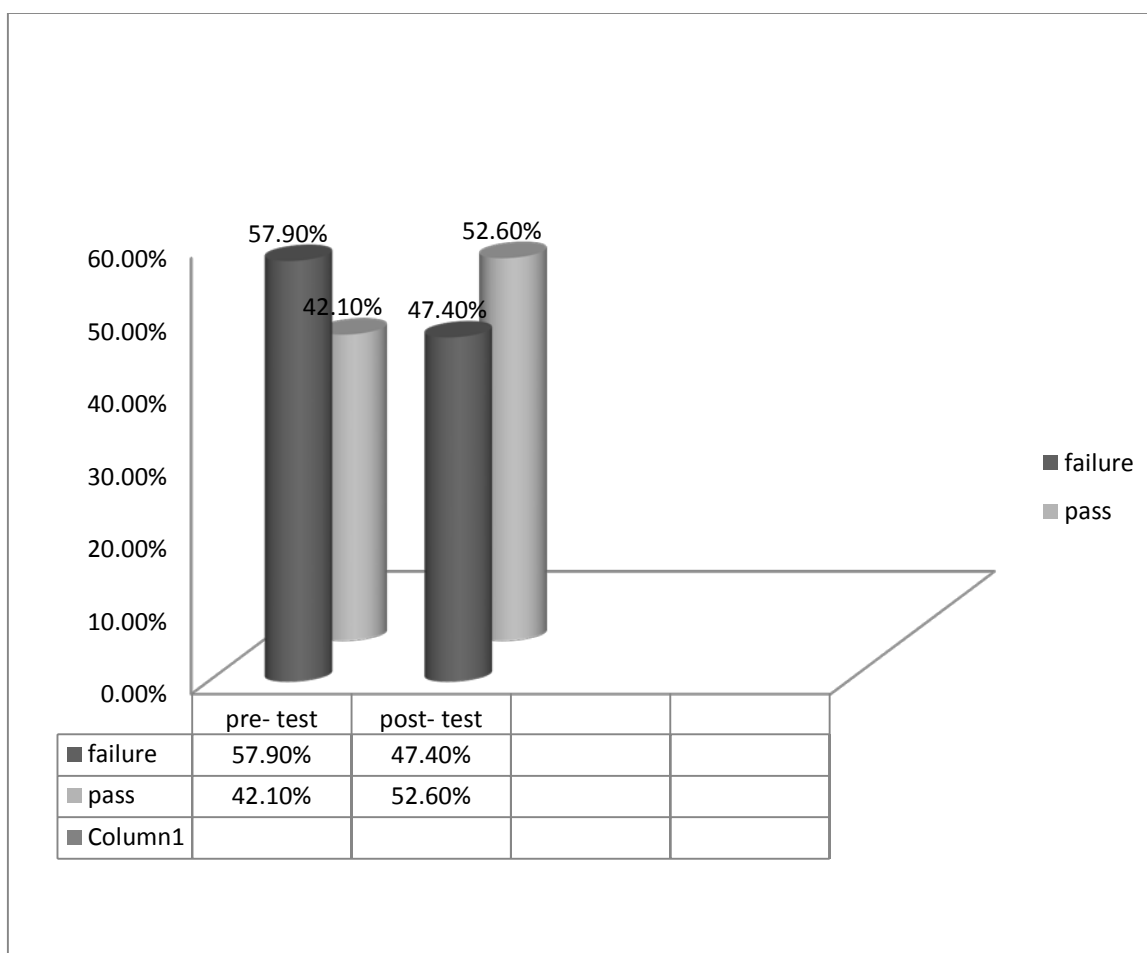


Figure (4.32) points out distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (42.10%) and failure by (57.90%) and post- test pass by (52.60%) and failure by (47.40%).

Table (4.33) the frequency and percentage for question two underline stressed syllable for the word... *social (adj)*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	14	36.80%	23	60.50%
failure	24	63.20%	15	39.50%
total	38	100%	38	100%

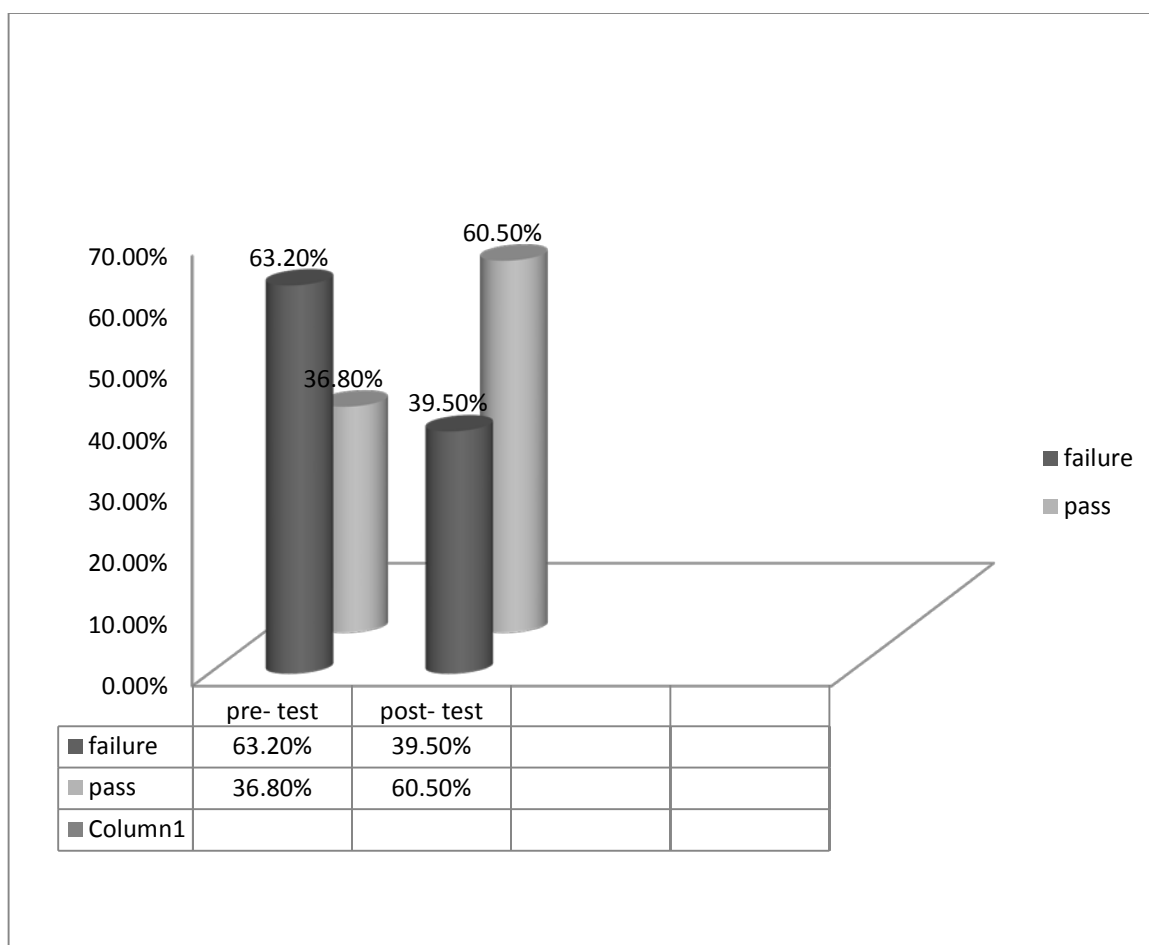


Figure (4.33) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (36.80%) and failure by (63.20%) and post- test pass by (60.50%) and failure by (39.50%).

Table (4.34) points out frequency and percentage for question three underline stressed syllable for the word... *often* (*adv*)

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	15	39.50%	26	68.40%
failure	23	60.50%	12	31.60%
total	38	100%	38	100%

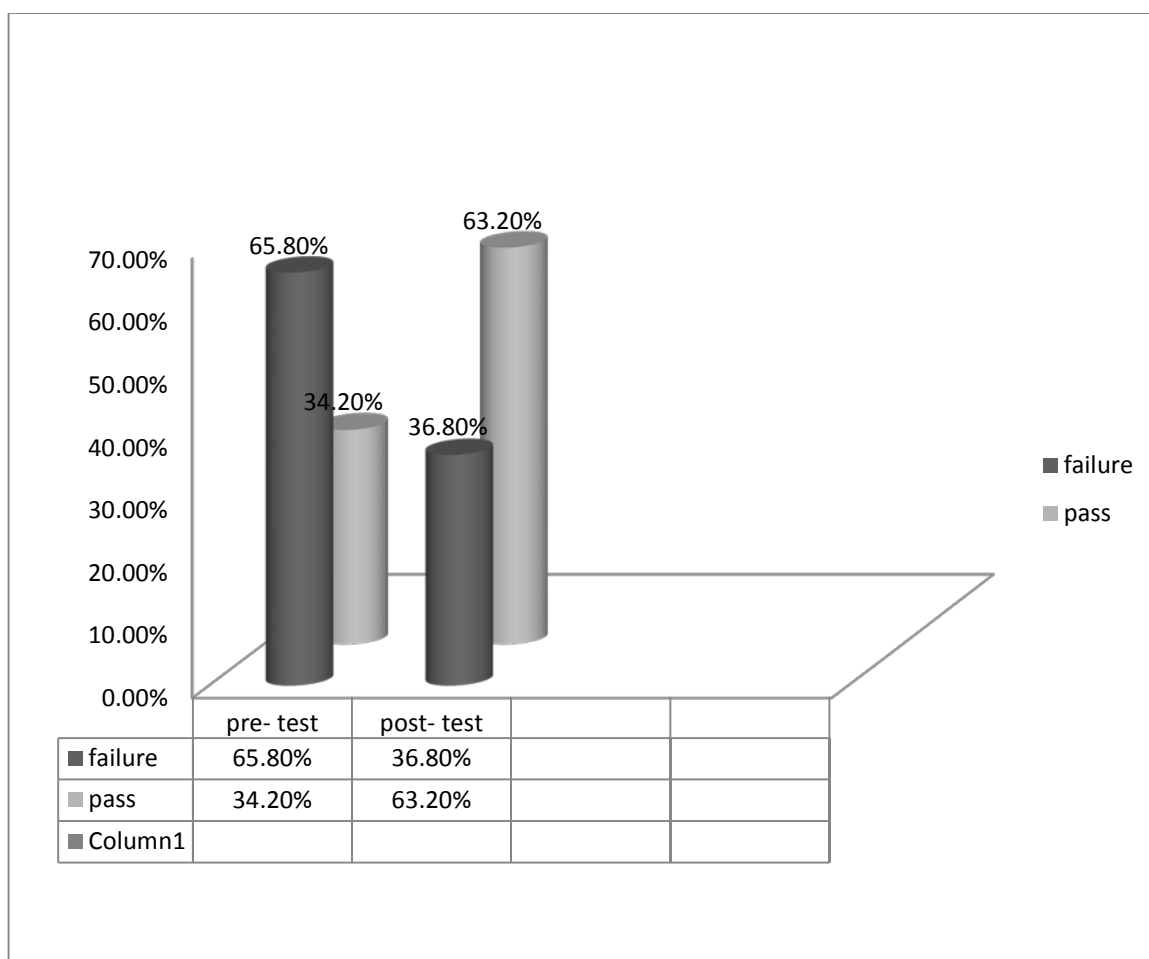


Figure (4.34) points out distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (34.20%) and failure by (65.80%) and post- test pass by (63.20%) and failure by (36.80%).

Table (4.35) the frequency and percentage for question four underline the stressed syllable for the word... *event* (*n*)

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	11	34.7%	20	62.5%
failure	21	65.3%	12	37.5%
total	32	100%	32	100%

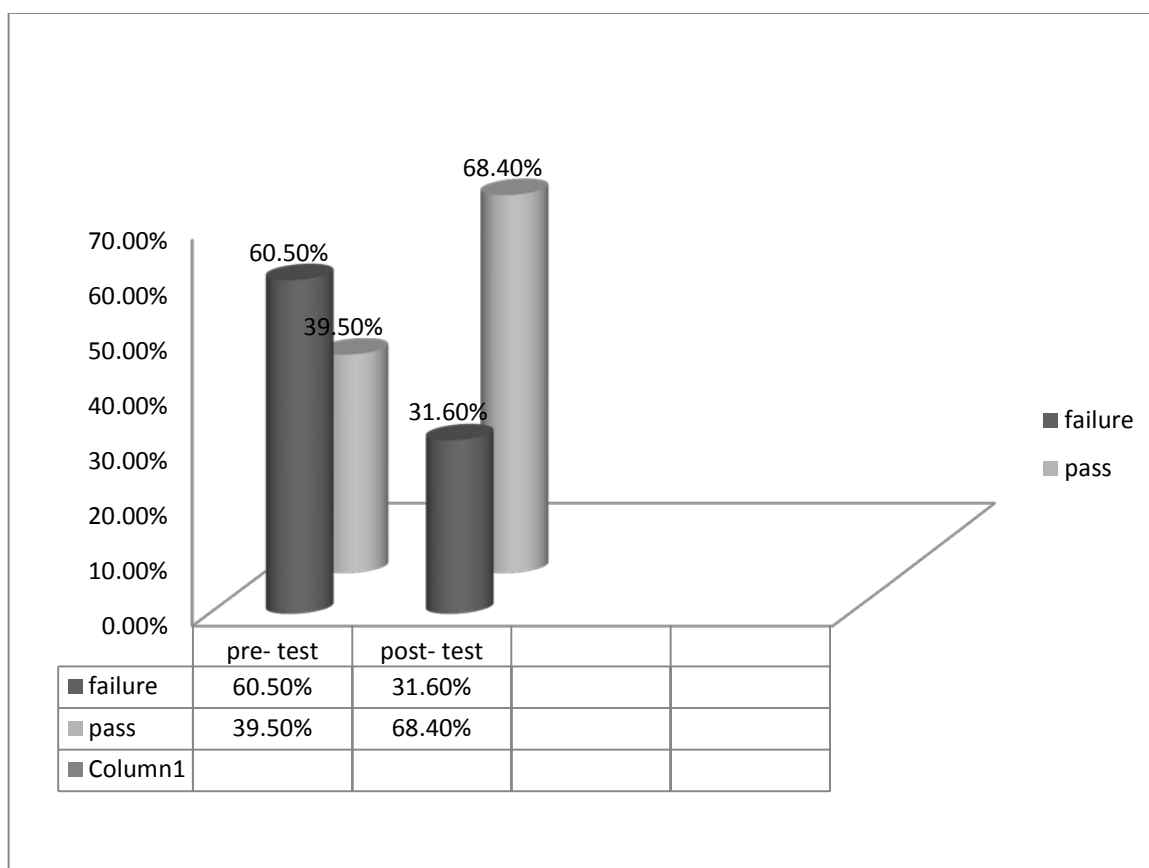


Figure (4.35) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (39.50%) and failure by (60.50%) and post- test pass by (68.40%) and failure by (31.60%).

Table (4.36) the frequency and percentage for question five underline the stressed syllable for the word... *desert* (v)

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	12	31.60%	20	52.60%
failure	26	68.40%	18	47.40%
total	38	100%	38	100%

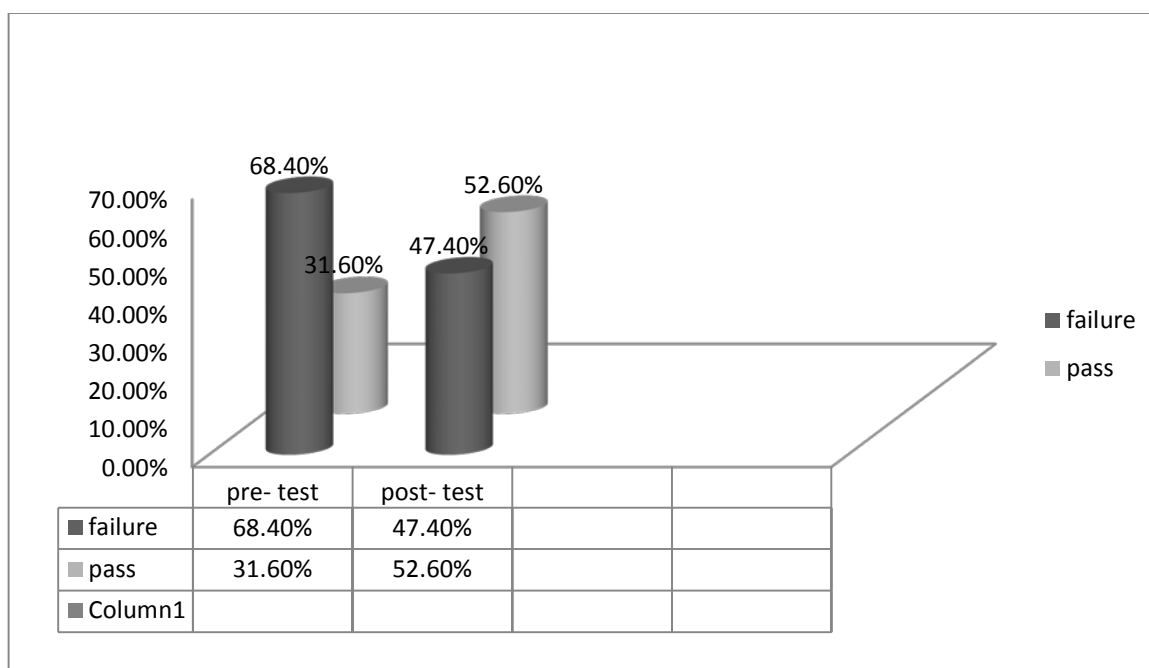


Figure (4.36) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (31.60%) and failure by (68.40%) and post- test pass by (52.60%) and failure by (47.40%).

The enhancement of placement of word stress in questions one to five, which were about two- syllable words, has taken place in the post-test because the subjects have been taught some rules of placement of word stress by giving handouts by the researcher. (See appendix one)

Table (4.37) the frequency and percentage for question six underline the stressed syllable for the polysyllabic word... *television* (n)

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	11	18.75%	20	43.75%
failure	27	81.25%	18	56.25%
total	38	100%	38	100%

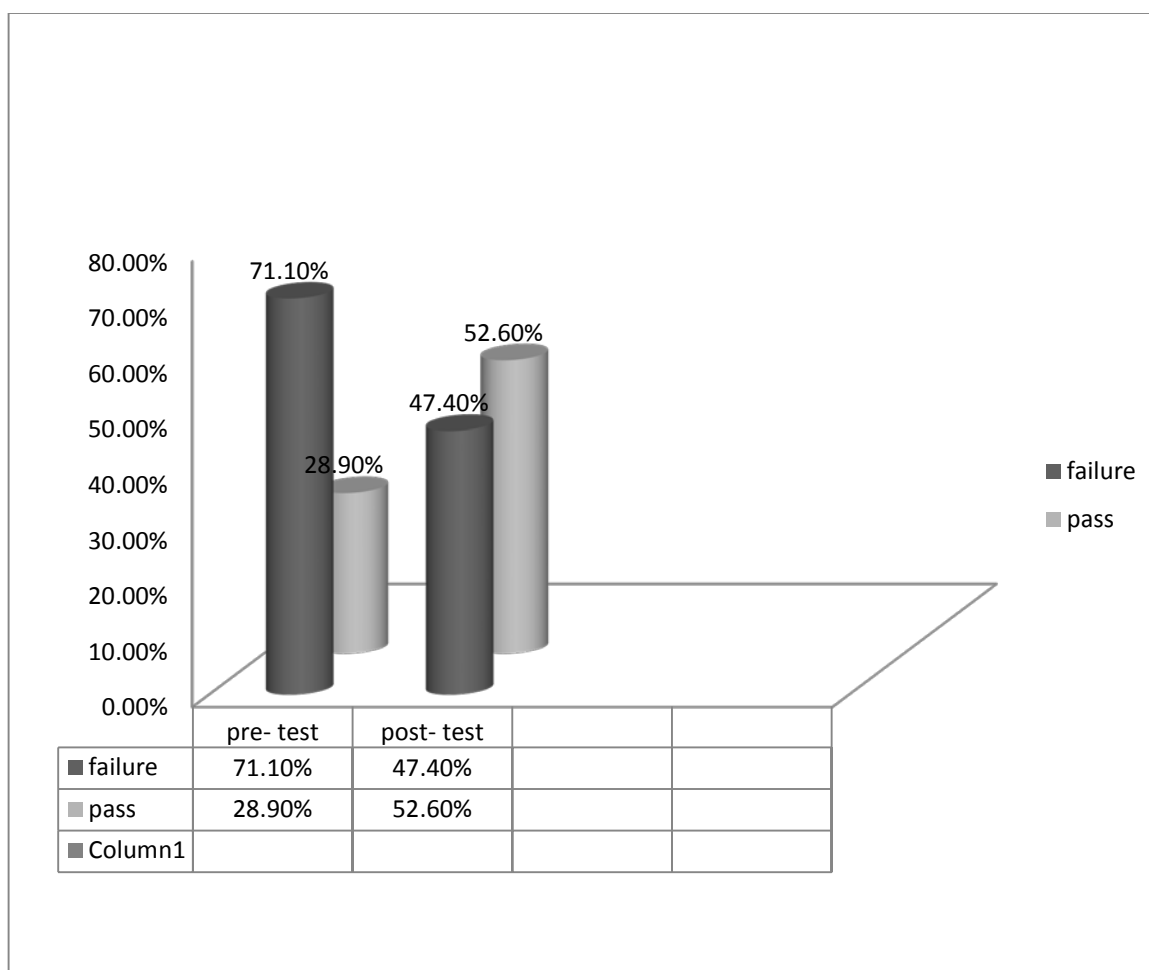


Figure (4.37) displays distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (28.90%) and failure by (71.10%) and post- test pass by (52.60%) and failure by (47.40%).

Table (4.38) shows the frequency and percentage for question six underline the stressed syllable for the polysyllabic word... *photography* (*n*)

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	10	26.30%	18	47.40%
failure	28	73.70%	20	52.60%
total	38	100%	38	100%

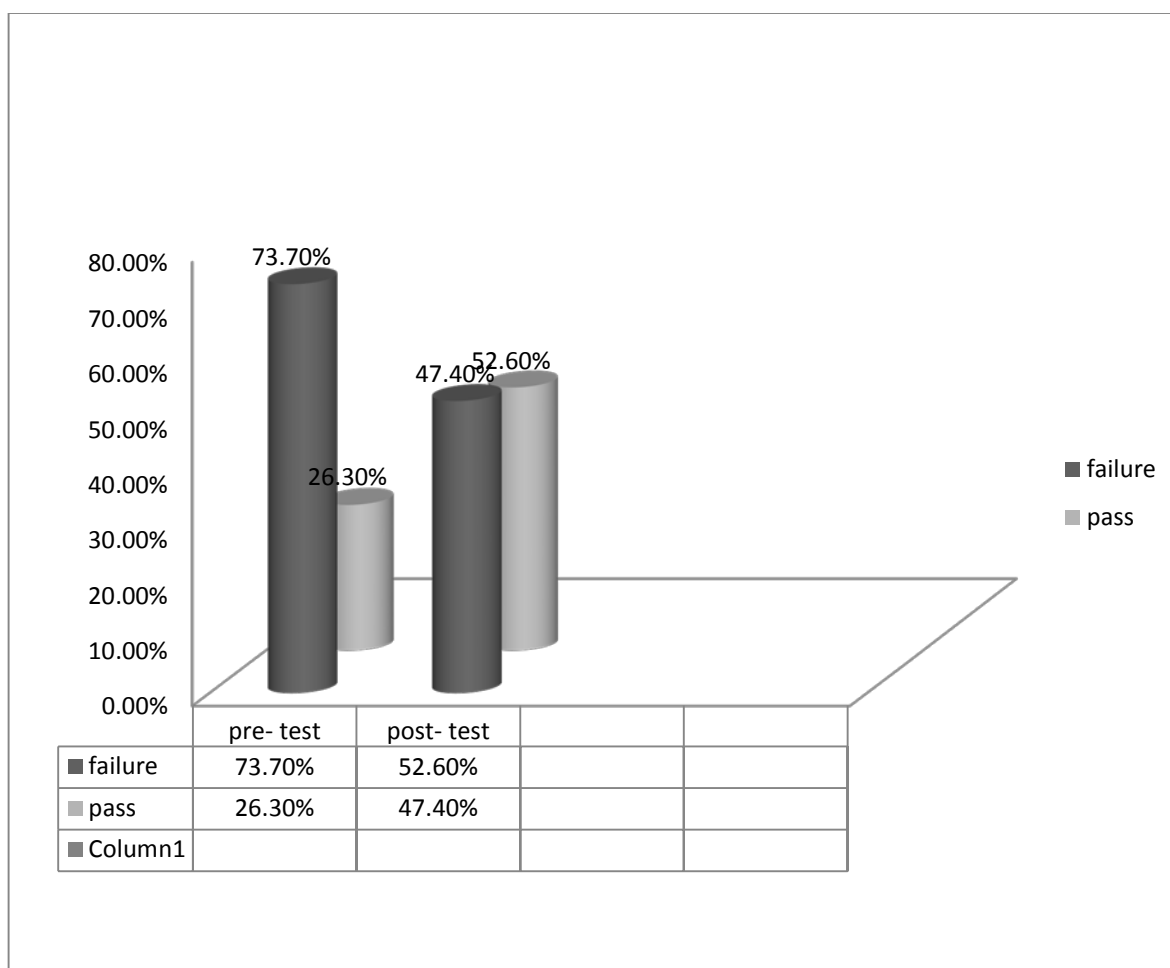


Figure (4.38) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (26.30%) and failure by (73.70%) and post- test pass by (47.40%) and failure by (52.60%).

Table (4.39) the frequency and percentage of question eight underline the stressed syllable for the poly- syllabic word... *opportunity* (n)

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	09	22.00%	17	37.50%
failure	29	78.00%	21	62.50%
total	38	100%	38	100%

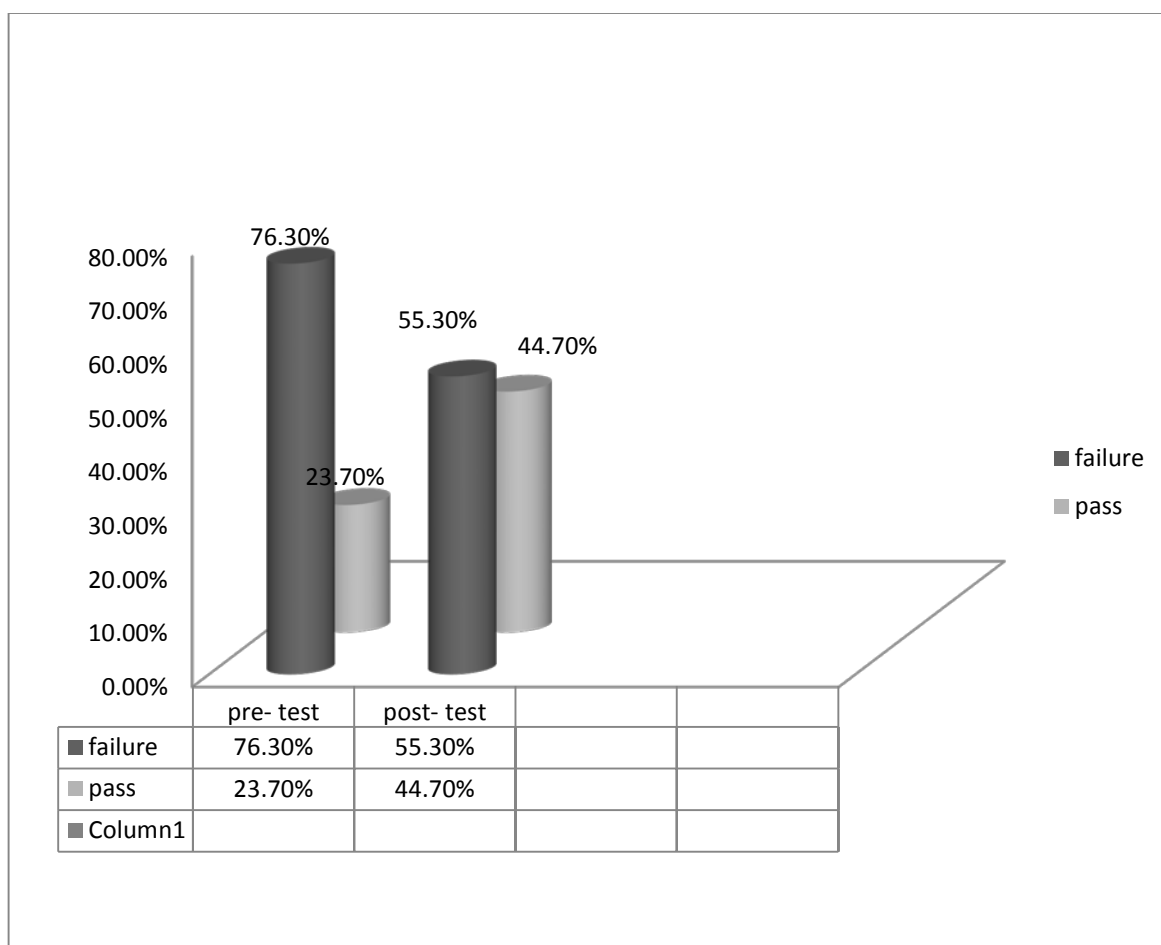


Figure (4.39) shows distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (23.70%) and failure by (76.30%) and post- test pass by (44.70%) and failure by (55.30%).

Table (4.40) the frequency and percentage of question nine underline the stressed syllable for the polysyllabic word... *bibliography* (n)

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	12	68.40%	22	42,10%
failure	26	31.60%	16	57.90%
total	38	100%	38	100%



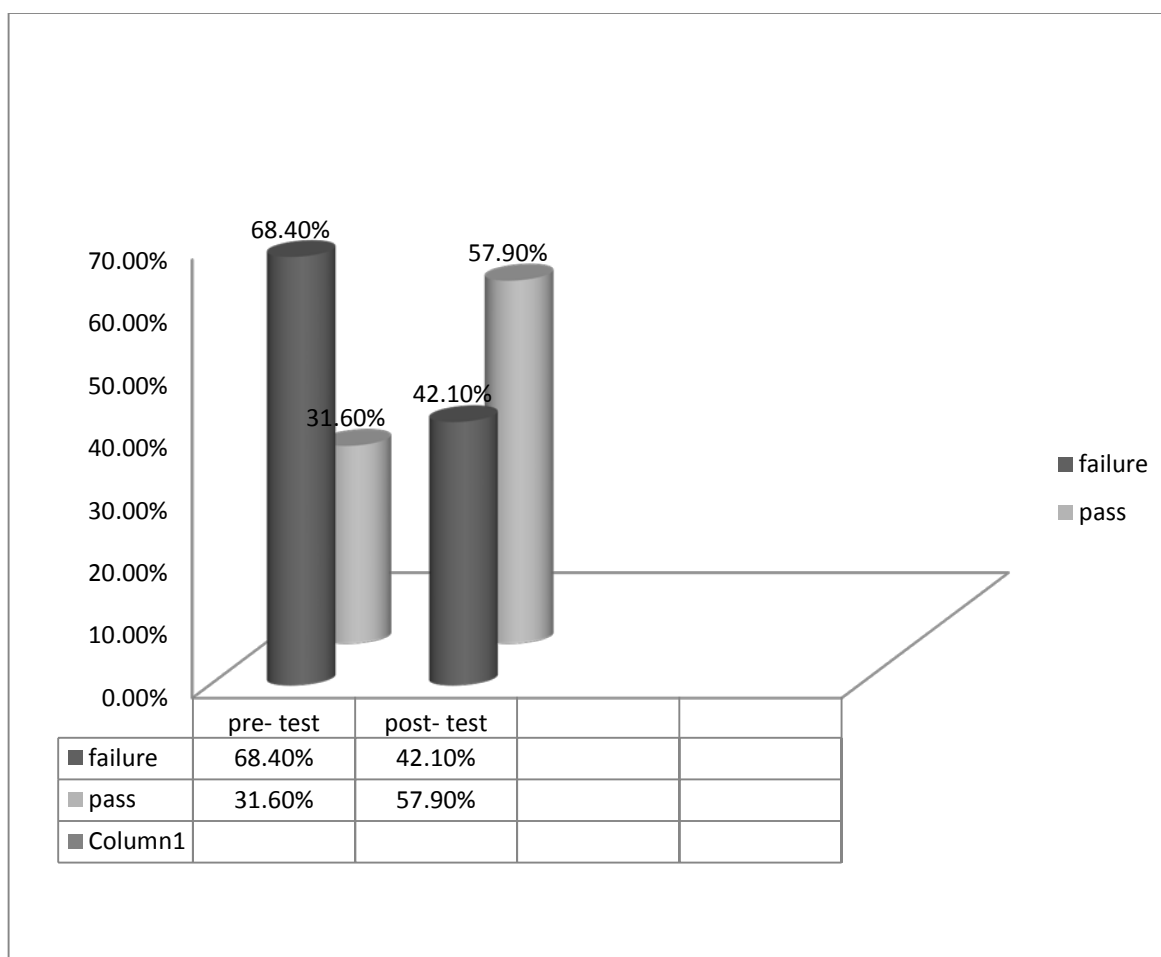


Figure (4.40) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (31.60%) and failure by (68.40%) and post- test pass by (57.90%) and failure by (42.10%).

Table (4.41) the frequency and percentage of question ten underline the stressed syllable for the polysyllabic word... *responsibility* (n)

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	11	25.00%	17	34.40%
failure	27	75.00%	21	65.60%
total	38	100%	38	100%

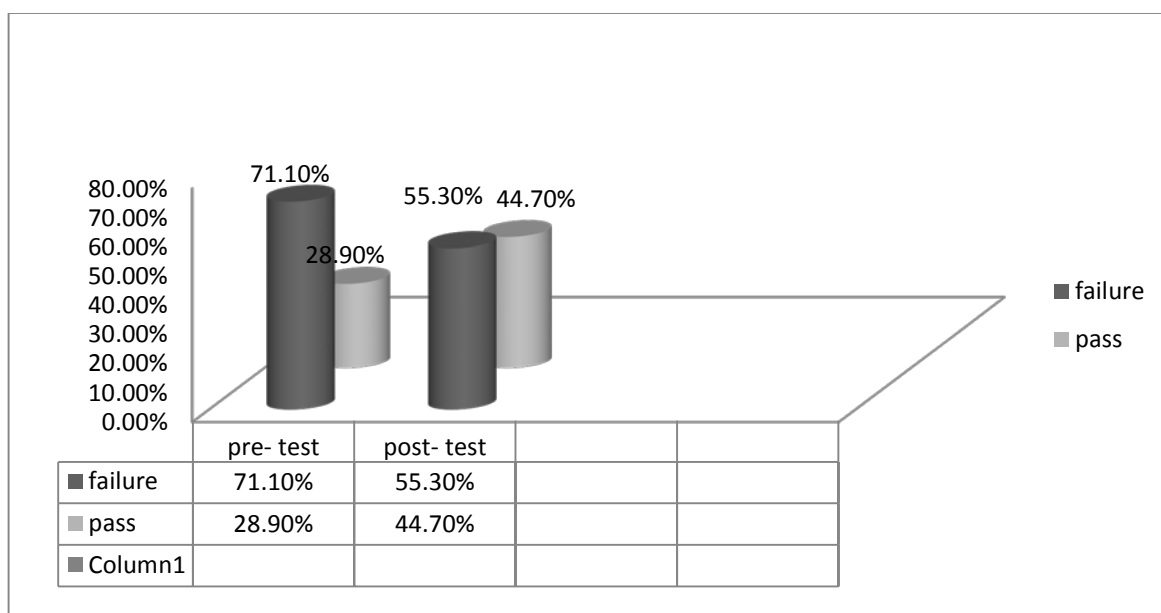


Figure (4.41) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (28.90%) and failure by (71.10%) and post- test pass by (44.70%) and failure by (55.30%).

Based on statistical results, there was little progress concerning questions six to ten which were about placement of polysyllabic words stress comparing to questions one to five which were about two- syllable words stress. Although of classroom interventions, the results displayed that the subjects encountered difficulties in placement of polysyllabic word stress.

Table (4.42) the frequency and percentage of questions (11-13) “stress words in a sentence ... *“the cat might have been eating the cheese.”*”

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	16	42.10%	25	65.80%
failure	22	57.90%	13	34.20%
total	38	100%	38	100%

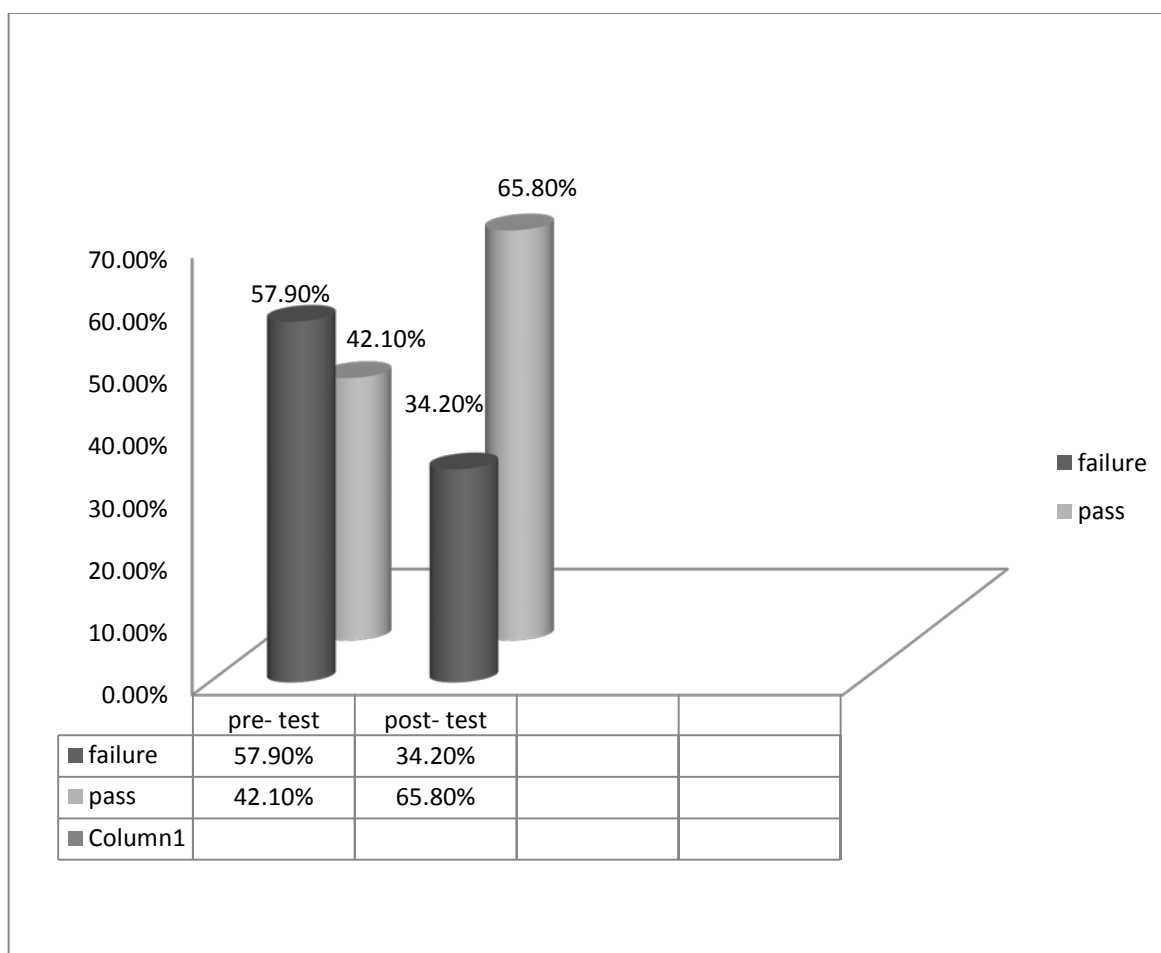


Figure (4.42) displays distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (42.10%) and failure by (57.90%) and post- test pass by (56.80%) and failure by (34.20%).

Table (4.43) the frequency and percentage of questions (14-16) stress words in a sentence ... *“yesterday I went to the dentist I had to have two teeth out.”*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	14	36.80%	18	52.60%
failure	24	63.20%	20	47.40%
total	38	100%	38	100%

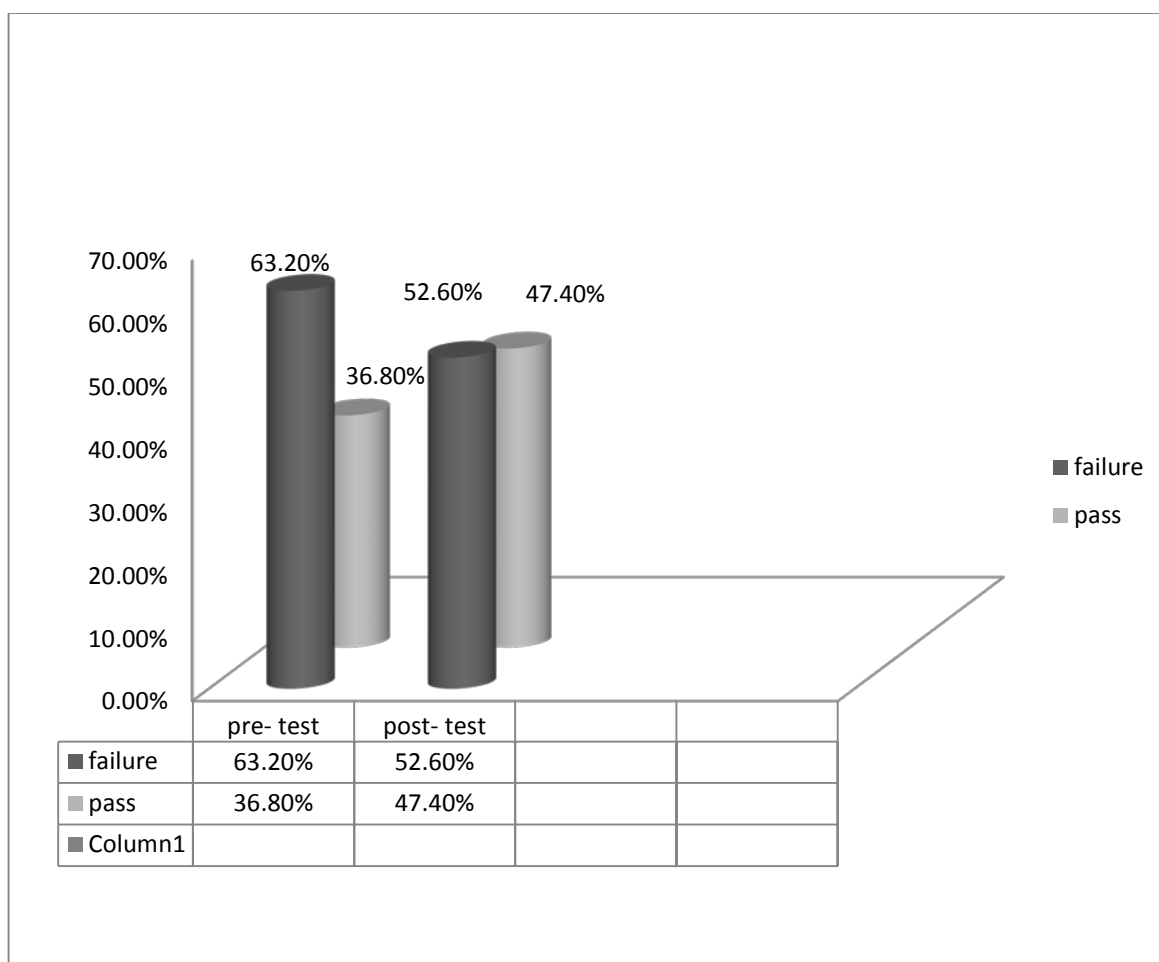


Figure (4.43) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (36.80%) and failure by (63.20%) and post- test pass by (47.40%) and failure by (52.60%).

Table (4.44) the frequency and percentage of questions (17-21) stress words in a sentence “*when life knocks you down get up and turn down to the God.*”

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	13	34.20%	21	55.30%
failure	25	65.80%	17	44.70%
total	38	100%	38	100%

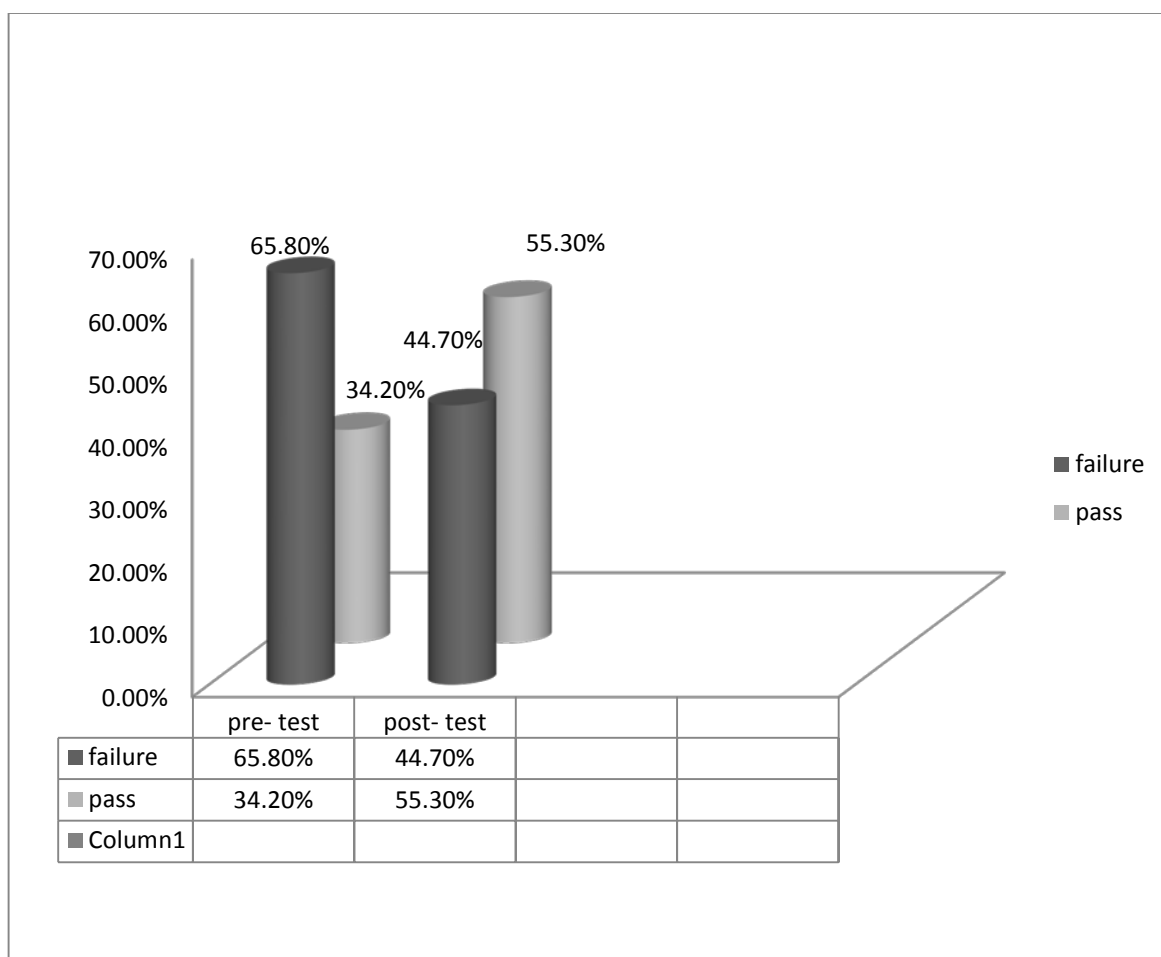


Figure (4.44) point out distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (34.20%) and failure by (65.80%) and post- test pass by (55.30%) and failure by (44.70%).

Table (4.45) the frequency and percentage of questions (22-24) stress words in a sentence ... *“the land has been farmed organically since 1995.”*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	14	36.80%	22	57.90%
failure	24	63.20%	16	42.10%
total	38	100%	38	100%

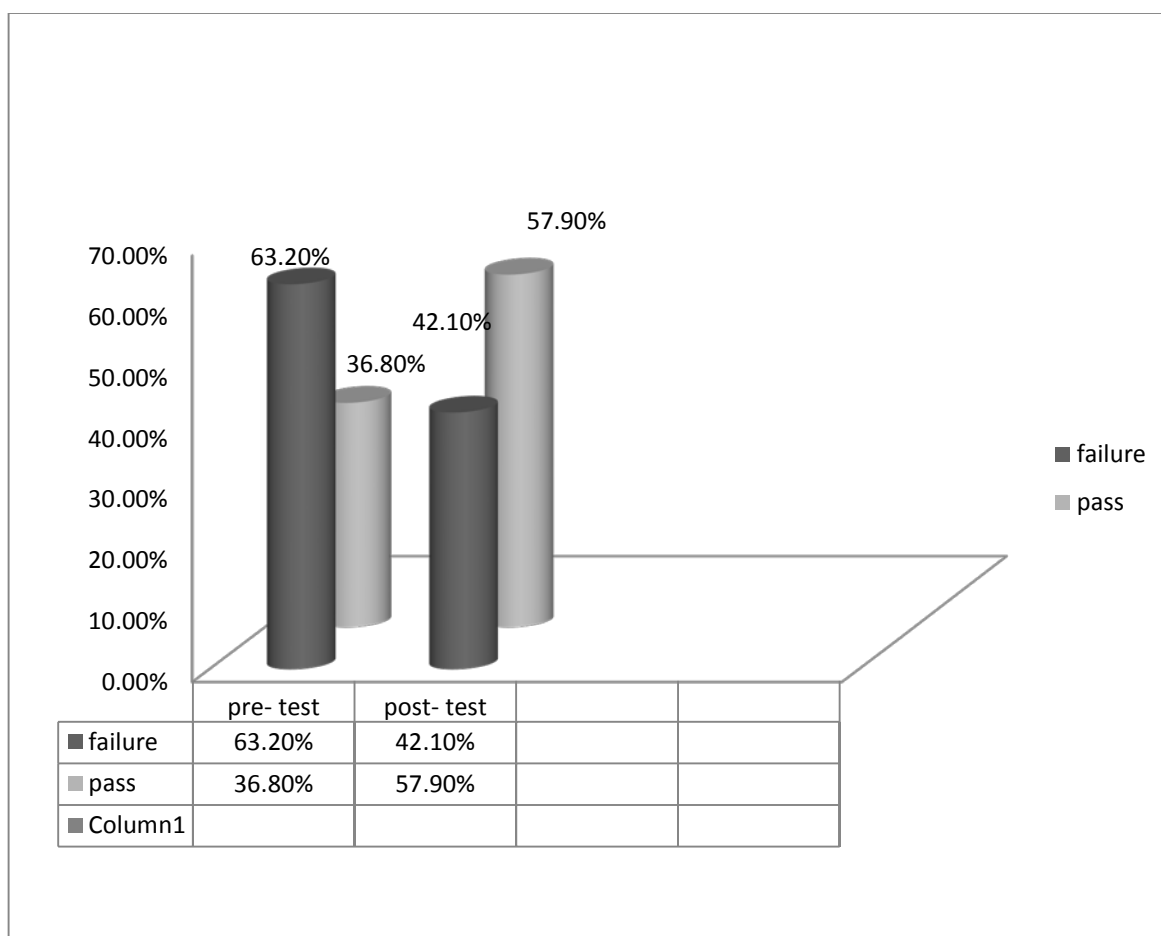


Figure (4.45) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (36.80%) and failure by (63.20%) and post- test pass by (57.90%) and failure by (42.10%).

Table (4.46) the frequency and percentage of questions; (25- 27) stress words in a sentence ... “the *meal was absolutely delicious*”.

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	15	39.50%	22	57.90%
failure	23	60.50%	16	42.10%
total	38	100%	38	100%

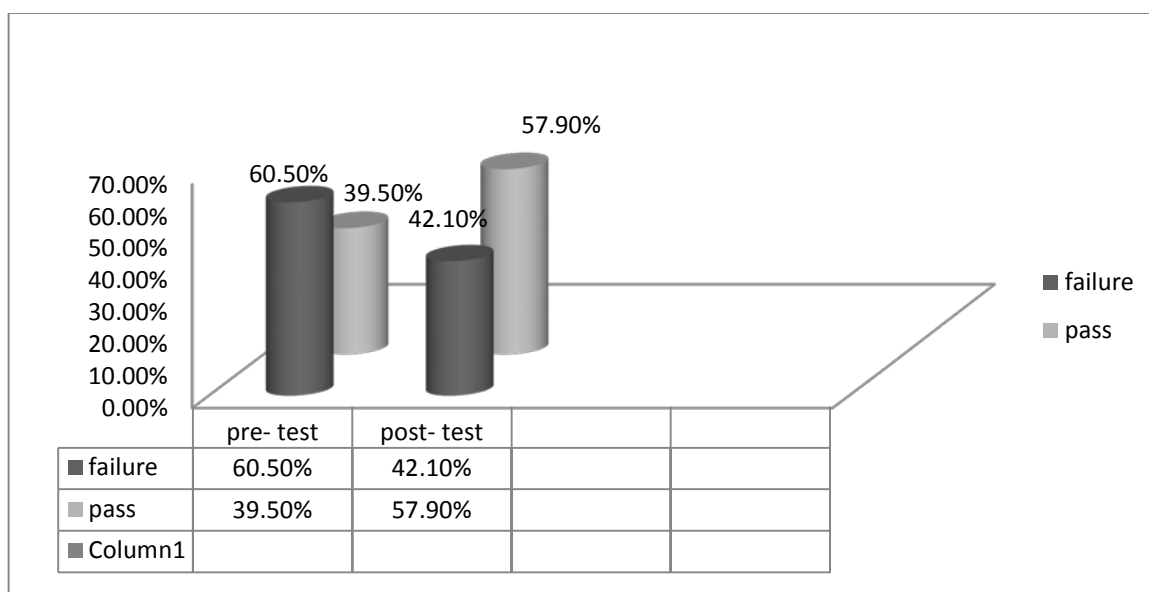


Figure (4.46) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (39.50%) and failure by (60.50%) and post- test pass by (57.90%) and failure by (42.10%).

Based on statistical results, there was noticeable enhancement of placement of sentence stress in post-test. This progress has taken place because of straightforward rules of sentence stress that were given to the subjects by the researcher in classroom interventions. (See appendix one: Handouts)

### Experimental group (female students)

Table (4.47) the frequency and percentage of question one; listen to audio-material to underline the stressed syllable for the word ...*record* (v).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	20	52.60%	29	76.30%
failure	18	47.40%	09	23.70%
total	38	100%	38	100%

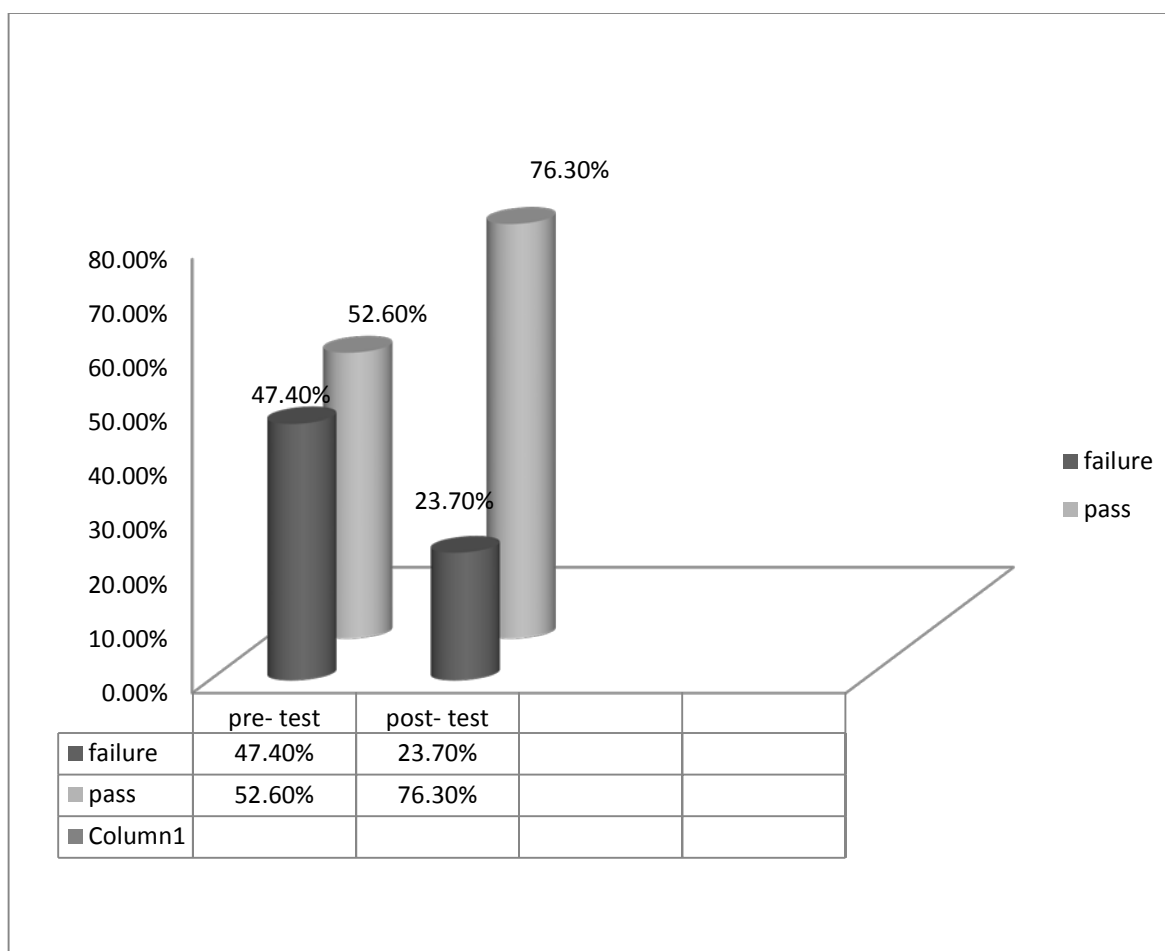


Figure (4.47) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (52.60%) and failure by (47.40%) and post- test pass by (76.30%) and failure by (23.70%).

Table (4.48) the frequency and percentage of question two; listen to audio-materials to underline the stressed syllable for the word ...*critic* (n).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	23	60.50%	31	81.60%
failure	15	39.50%	07	18.40%
total	38	100%	38	100%



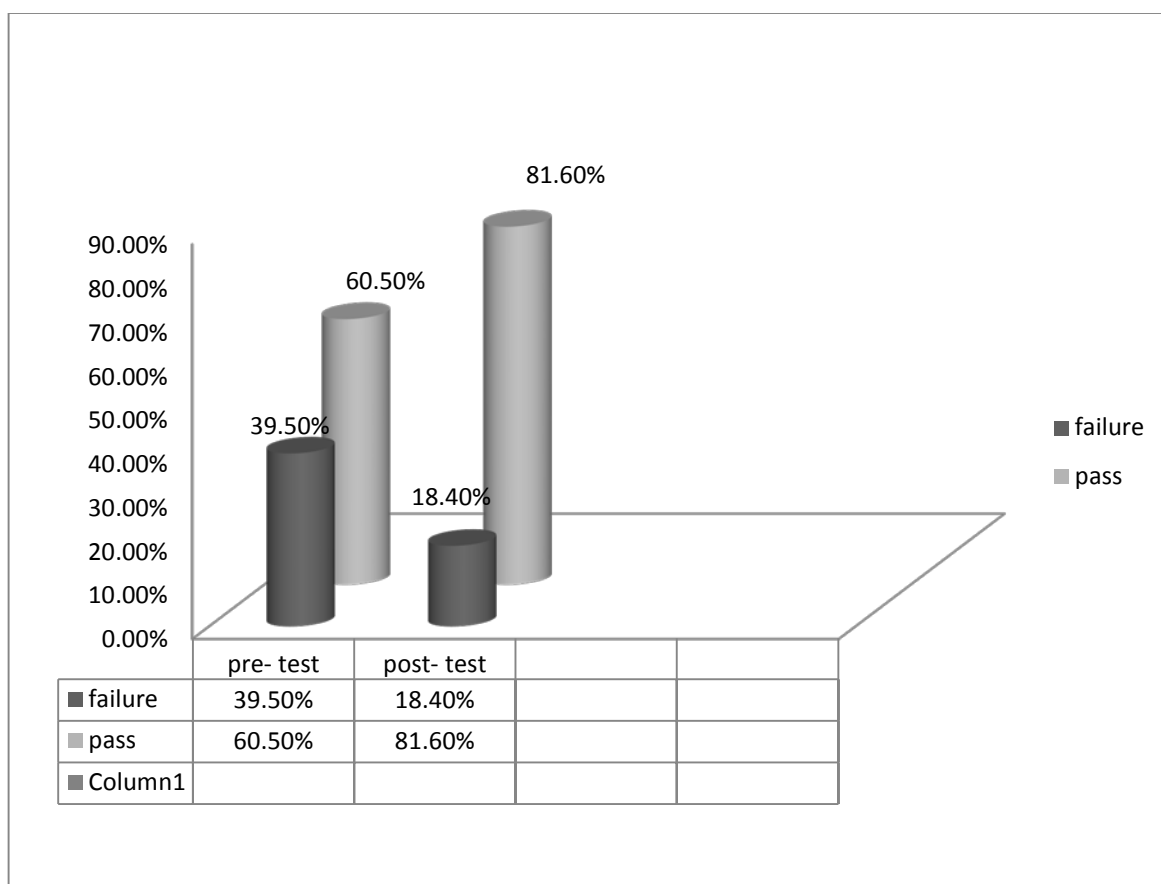


Figure (4.48) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (60.50%) and failure by (39.50%) and post- test pass by (81.60%) and failure by (18.40%).

Table (4.49) the frequency and percentage of question three; listen to audio-material and then underline the stressed syllable for the word ...*precious*. (*adj*).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	21	55.30%	30	78.90%
failure	17	44.70%	08	21.10%
total	38	100%	38	100%

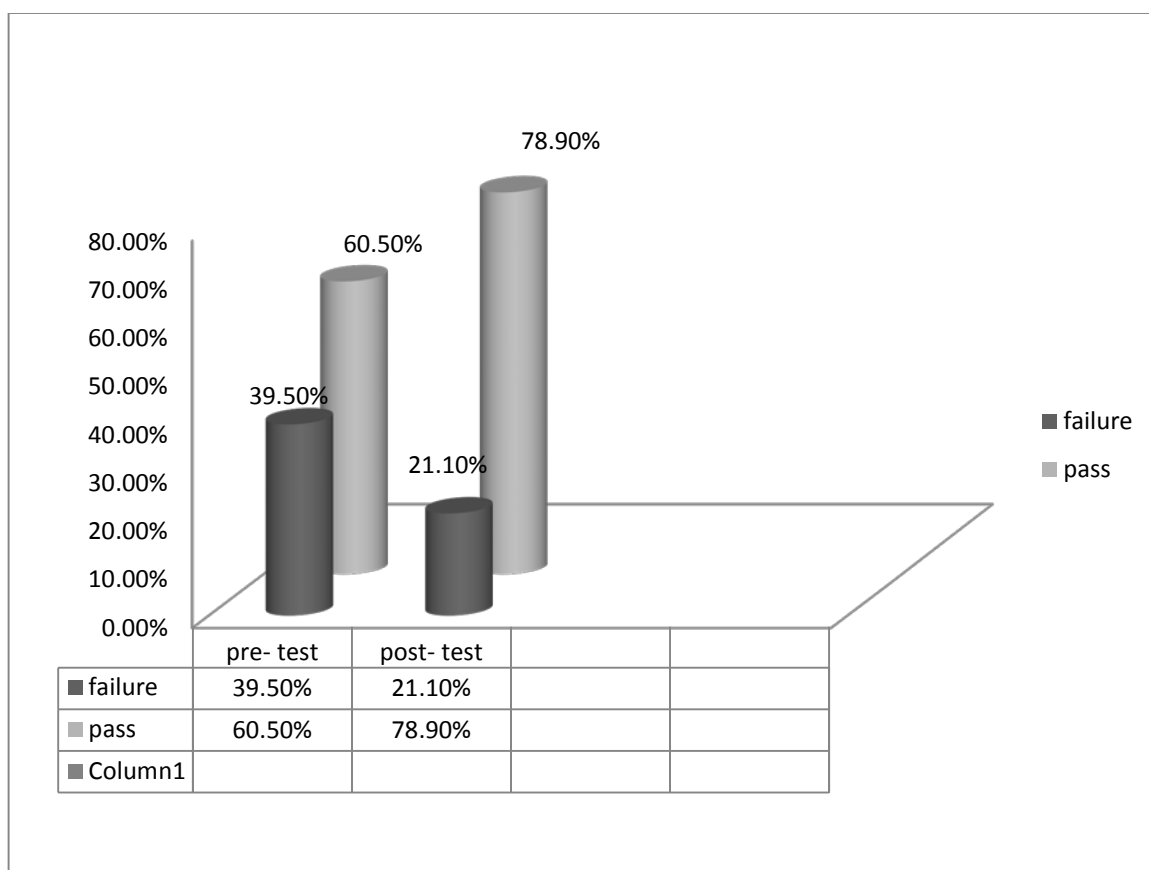


Figure (4.49) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (60.50%) and failure by (39.50%) and post- test pass by (78.90%) and failure by (21.10%).

Table (4.50) the frequency and percentage of question four; listen to audio-material and then underline the stressed syllable for the word ...*seldom*. (*adj*).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	24	63.20%	32	84.20%
failure	14	36.80%	06	15.80%
total	38	100%	38	100%

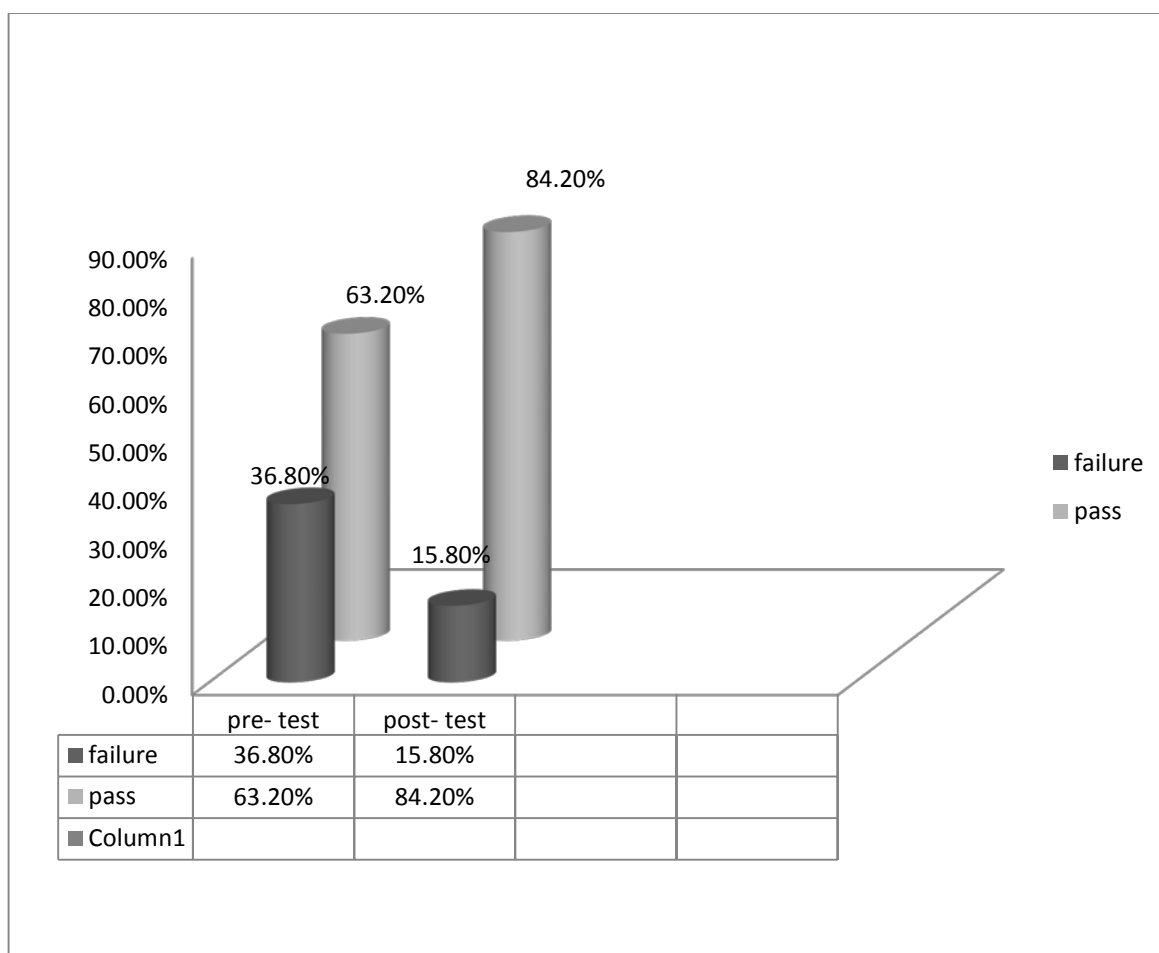


Figure (4.50) points out distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (63.20%) and failure by (36.80%) and post- test pass by (84.20%) and failure by (15.80%).

Table (4.51) the frequency and percentage of question five; listens to audio-material and then underline the stressed syllable for the word ...*realise*. (*adj*).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	25	65.80%	33	86.80%
failure	13	34.20%	05	13.20%
total	38	100%	38	100%

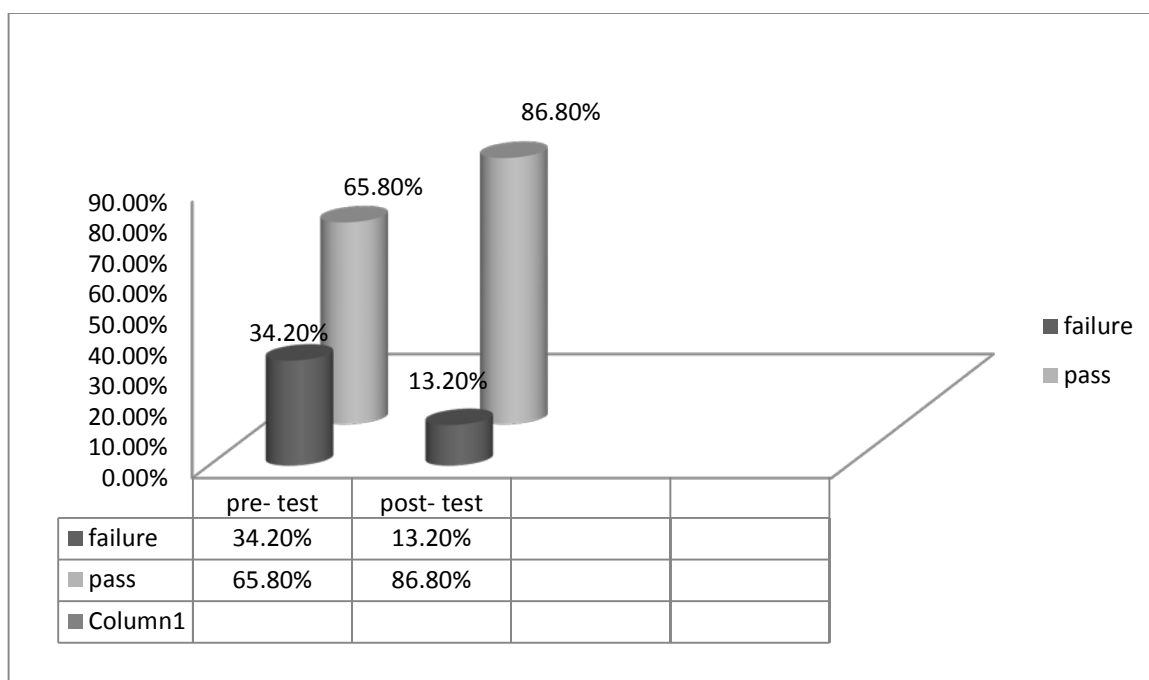


Figure (4.51) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (65.80%) and failure by (34.20%) and post- test pass by (86.80%) and failure by (13.20%).

This considerable improvement of placement of two-syllable word stress in questions one to five was due to listening to audio- materials by native speakers which were given to the subjects during four weeks teaching by the researcher.

Table (4.52) the frequency and percentage of question six; listens to audio- material to stress polysyllabic word ...*realisation*. (n).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	22	57.90%	29	76.30%
failure	16	42.10%	09	23.70%
total	38	100%	38	100%

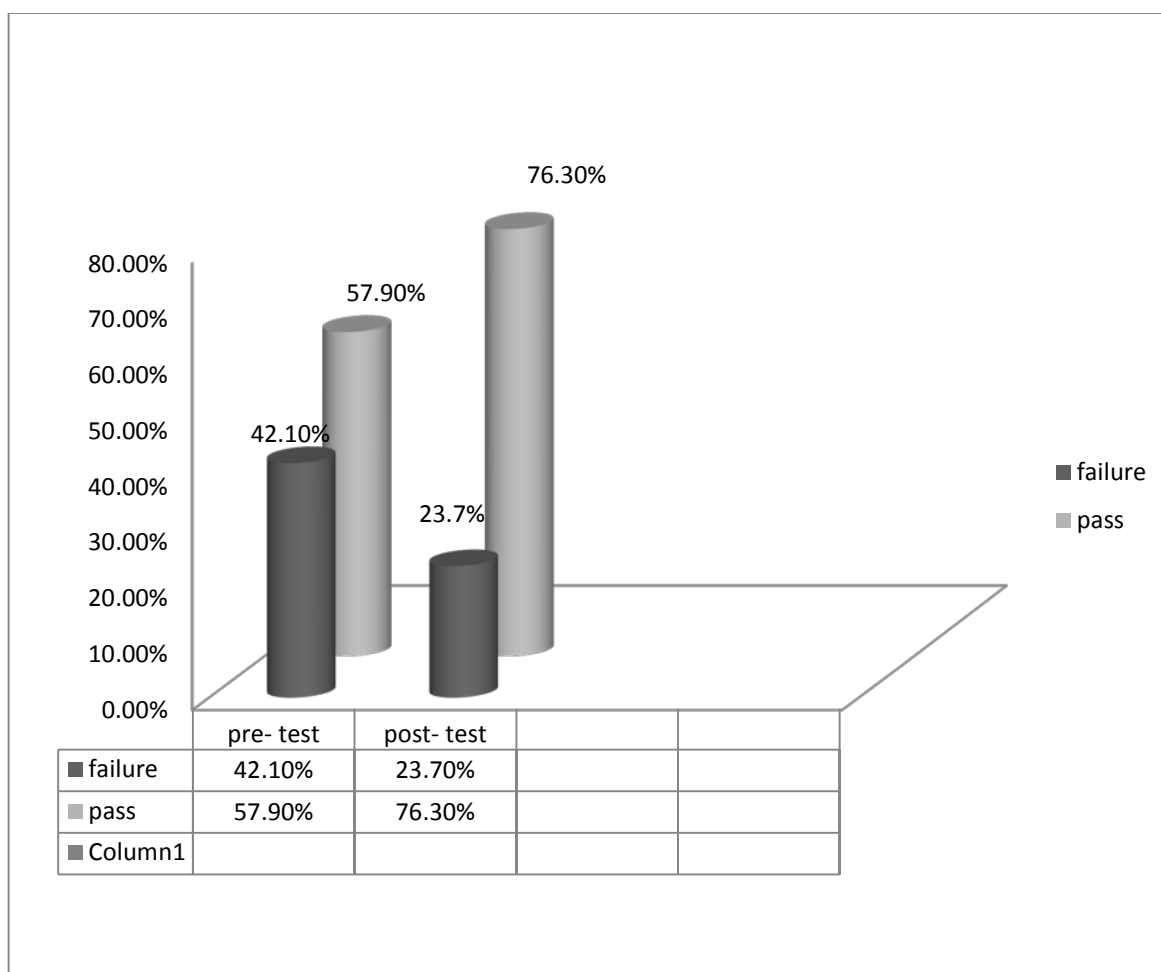


Figure (4.52) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (57.90%) and failure by (42.10%) and post- test pass by (76.30%) and failure by (23.70%).

Table (4.53) the frequency and percentage of question seven; listens to audio-material and then underline the stressed syllable for the word ...*criticism*. (n).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	21	55.30%	30	78.90%
failure	17	44.70%	08	21.10%
total	38	100%	38	100%

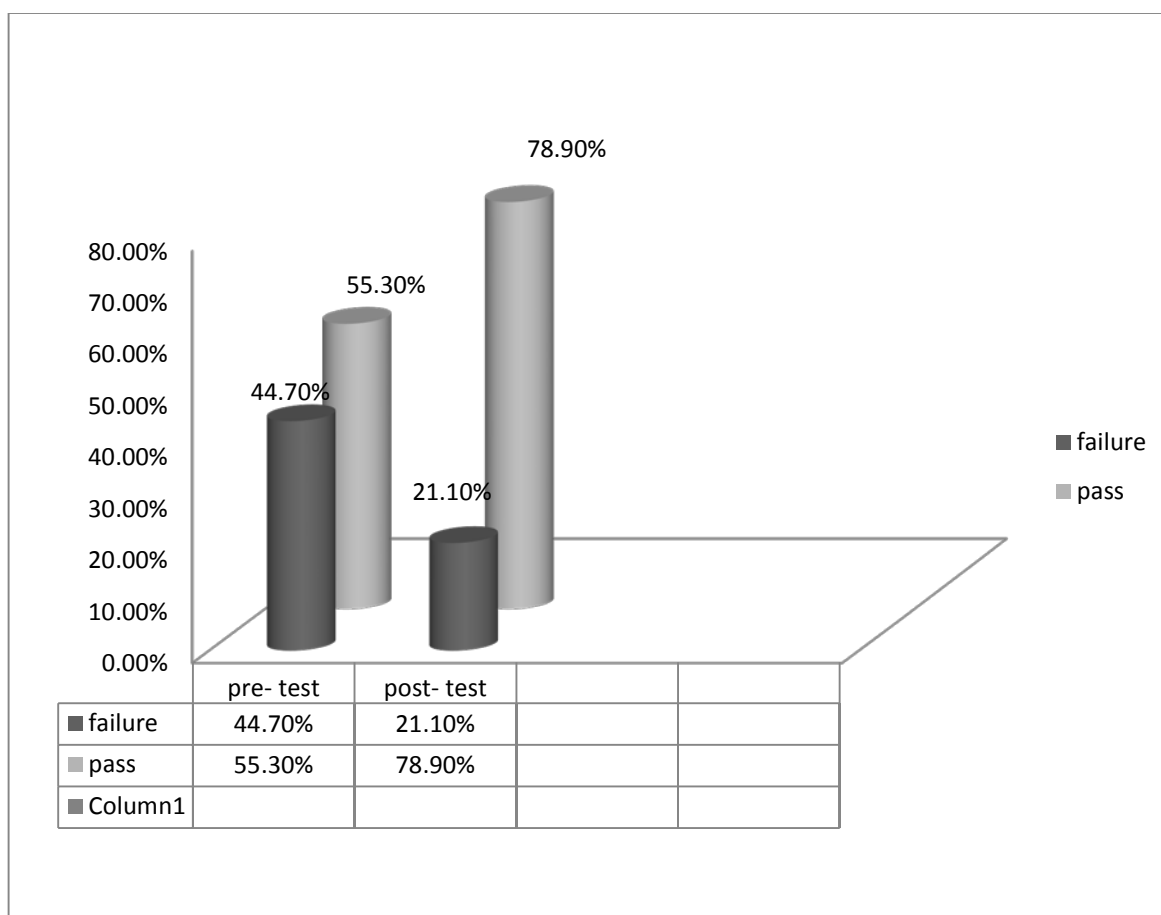


Figure (4.53) displays distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (55.30%) and failure by (44.70%) and post- test pass by (78.90%) and failure by (21.10%).

Table (4.54) the frequency and percentage of question eight; listens to audio-material and then underline the stressed syllable for the word ...*democracy*. (n).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	20	52.60%	32	84.20%
failure	18	47.40%	06	15.80%
total	38	100%	38	100%

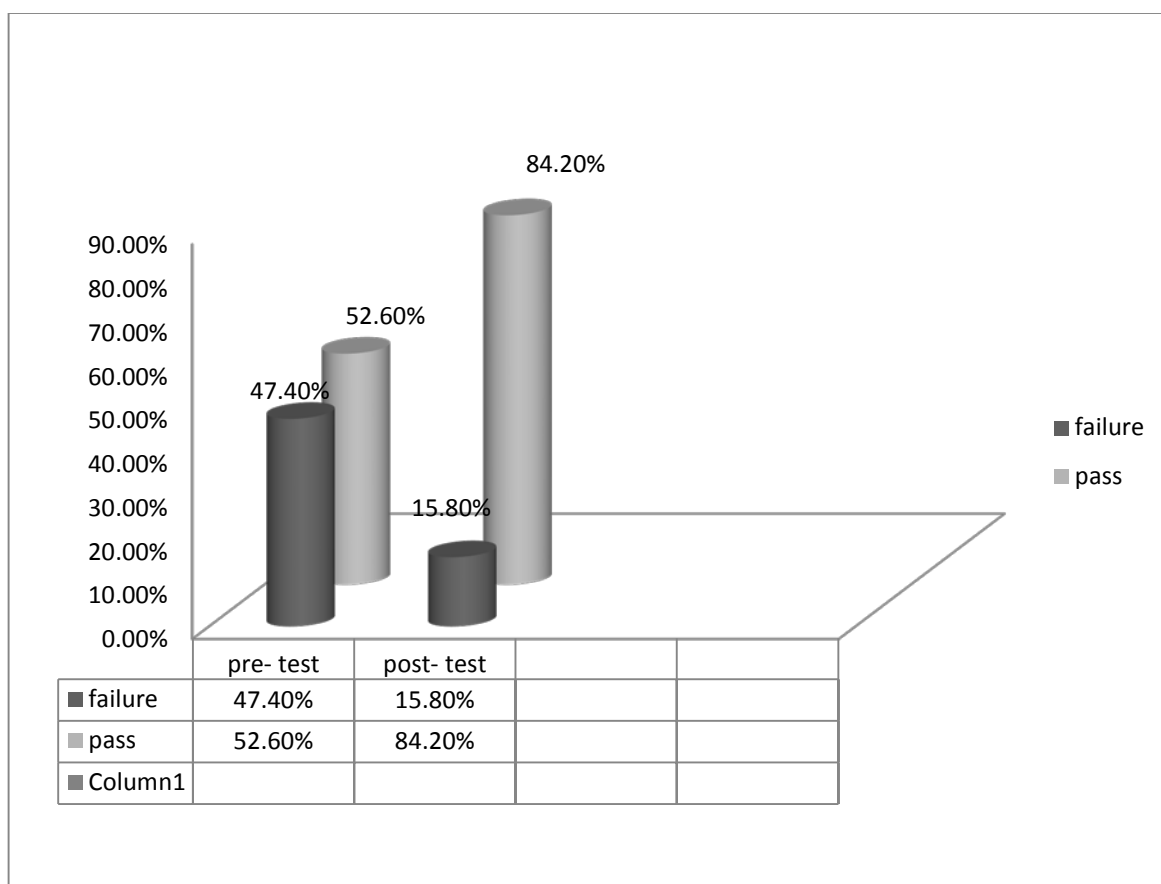


Figure (4.54) shows distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (52.60%) and failure by (47.40%) and post- test pass by (84.20%) and failure by (15.80%).

Table (4.55) the frequency and percentage of question nine; listens to audio-material and then underline the stressed syllable for the word ...*emergency*. (n).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	20	52.60%	28	73.70%
failure	18	47.40%	10	26.30%
total	38	100%	38	100%

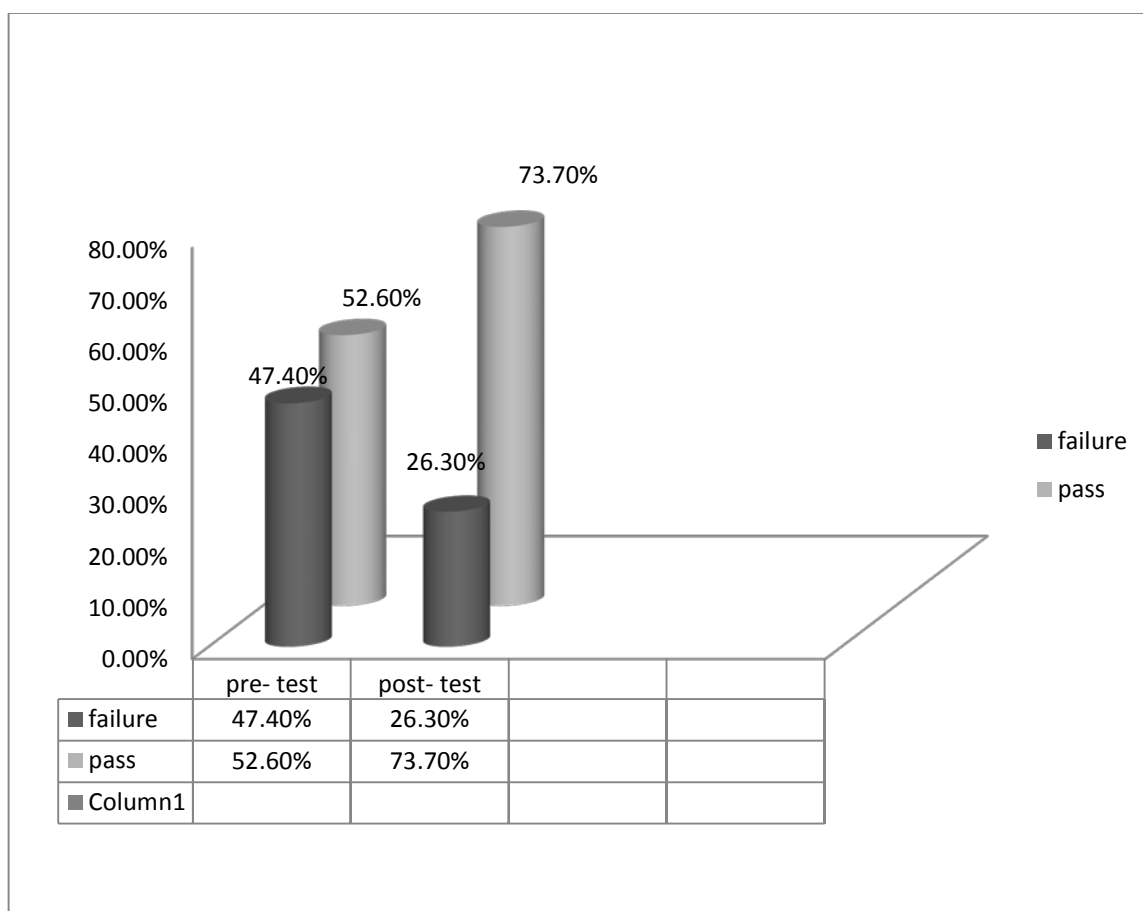


Figure (4.55) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (52.60%) and failure by (47.40%) and post- test pass by (73.70%) and failure by (26.30%).

Table (4.56) the frequency and percentage of question ten; listens to audio-material and then underline the stressed syllable for the word ...*advantage*. (n).

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	22	57.90%	29	76.30%
failure	16	42.10%	09	23.70%
total	38	100%	38	100%



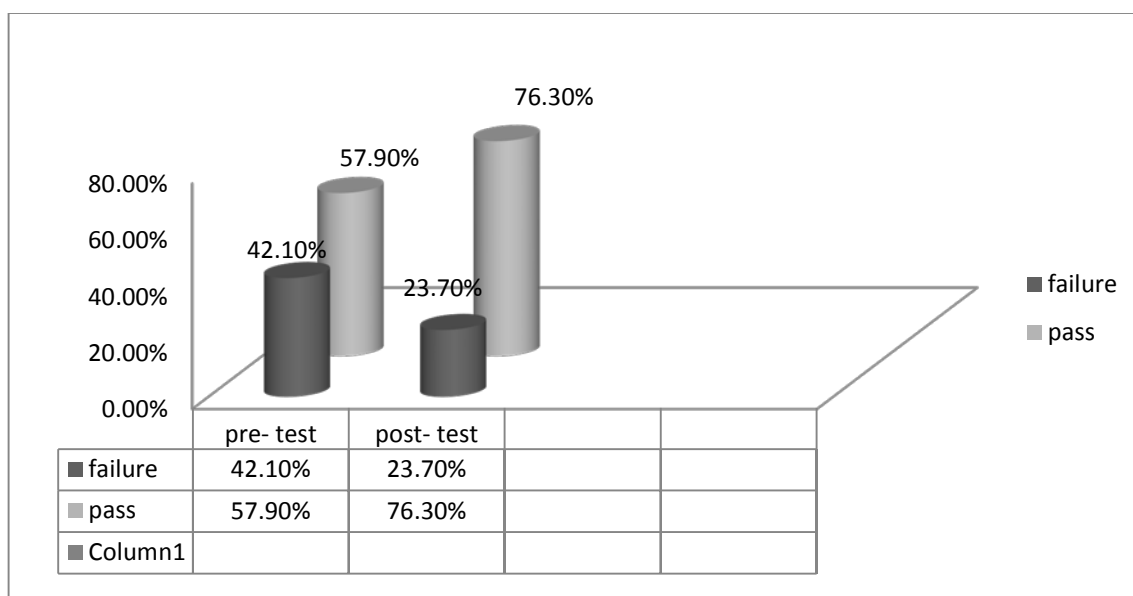


Figure (4.56) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (57.90%) and failure by (42.10%) and post- test pass by (76.30%) and failure by (23.70%).

There was improvement of placement of polysyllabic words stress in post- test compared to control group. This enhancement in placement of polysyllabic words stress was due to listening to audio- materials by native speakers which was given by the researcher as classroom interventions during four weeks teaching.

Table (4.57) frequency and percentage of questions(11-13) listens to audio- material to stress words in a sentence ... *do you have a pen, honey?*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	24	63.20%	34	89.50%
failure	14	36.80%	04	10.50%
total	38	100%	38	100%

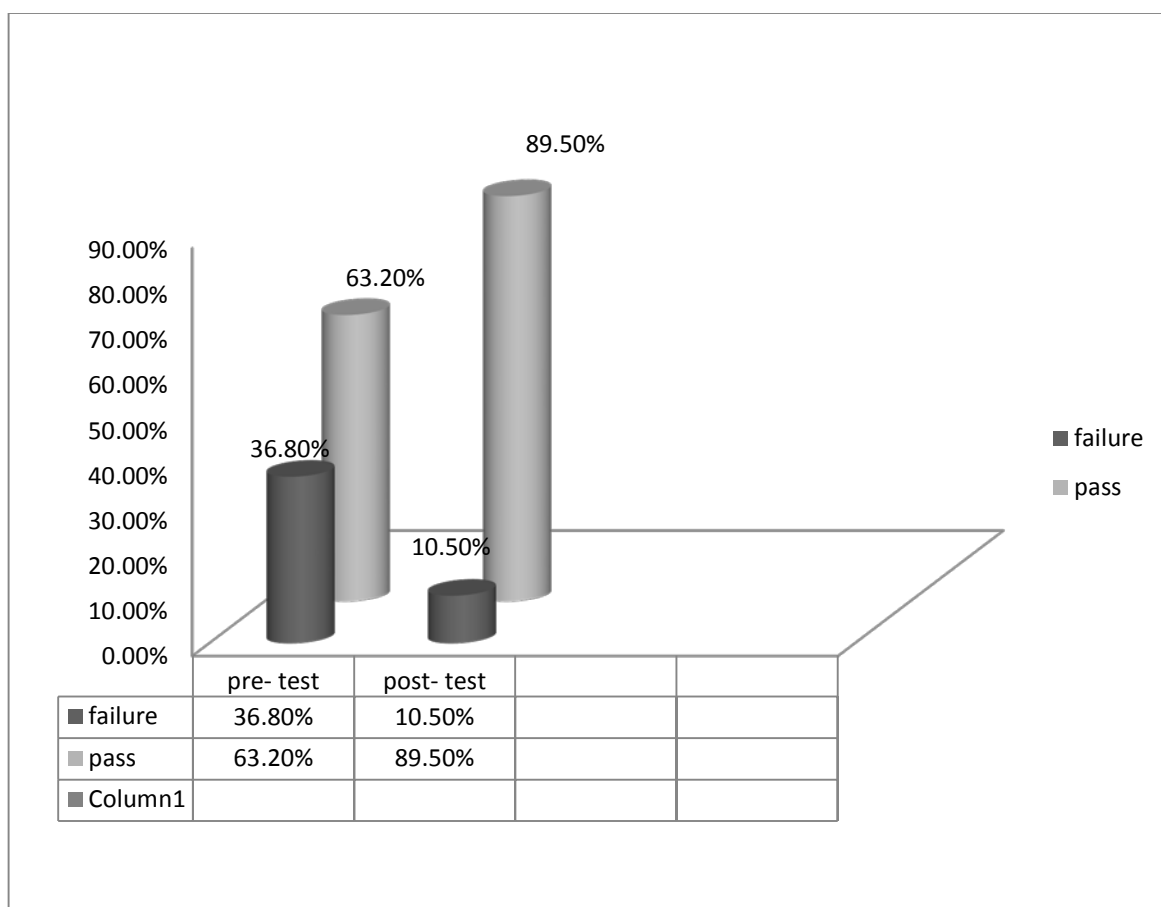


Figure (4.57) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (63.20%) and failure by (36.80%) and post- test pass by (89.50%) and failure by (10.50%).

Table (4.58) the frequency and percentage of the questions fourteen to sixteen; listens to audio- material to underline certain words which are stressed in a sentence ... *a queue of people are waiting for a bus.*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	23	60.50%	33	86.80%
failure	15	39.50%	05	13.20%
total	38	100%	38	100%

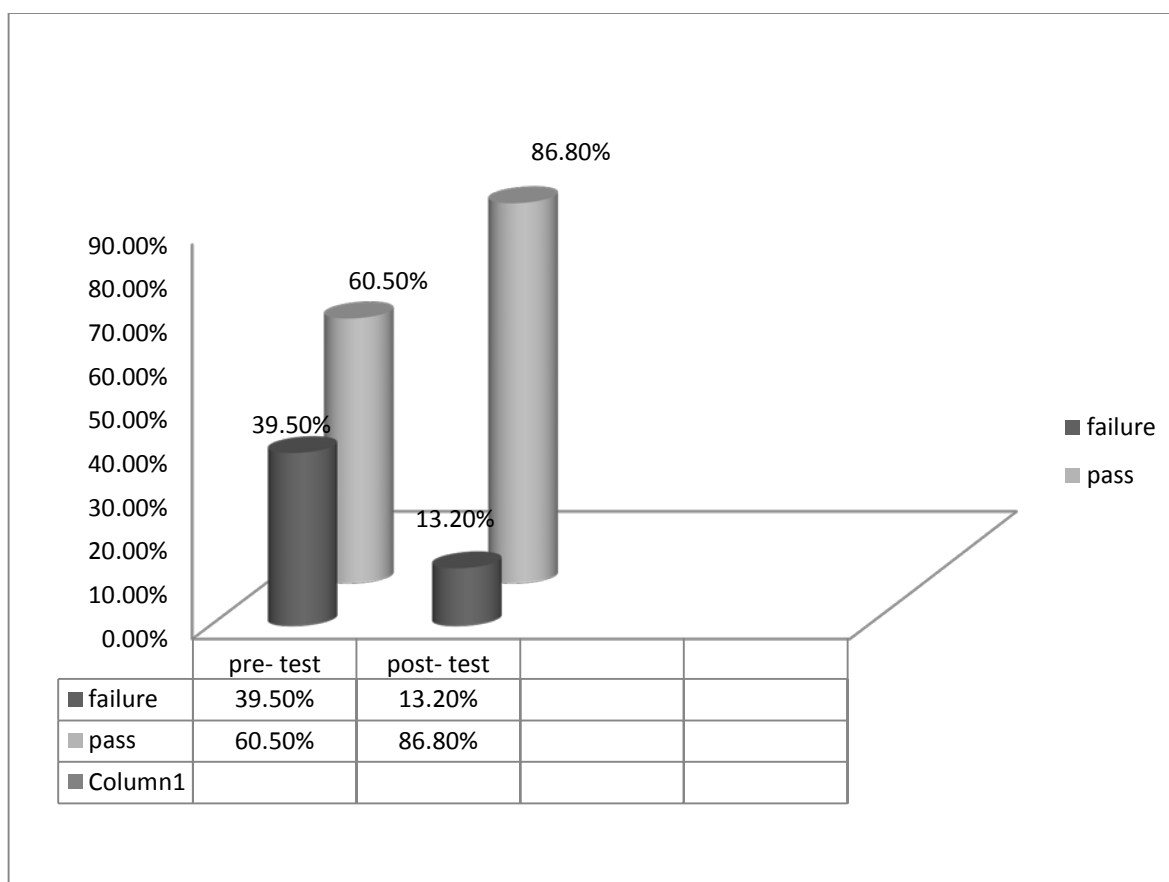


Figure (4.58) displays distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (60.50%) and failure by (39.50%) and post- test pass by (86.80%) and failure by (13.20%).

Table (4.59) the frequency and percentage of questions seventeen to twenty; listens to audio- material to stress certain words in a sentence ... *“the waitress comes and we order a pizza.”*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	27	71.10%	35	92.10%
failure	11	28.90%	03	07.90%
total	38	100%	38	100%

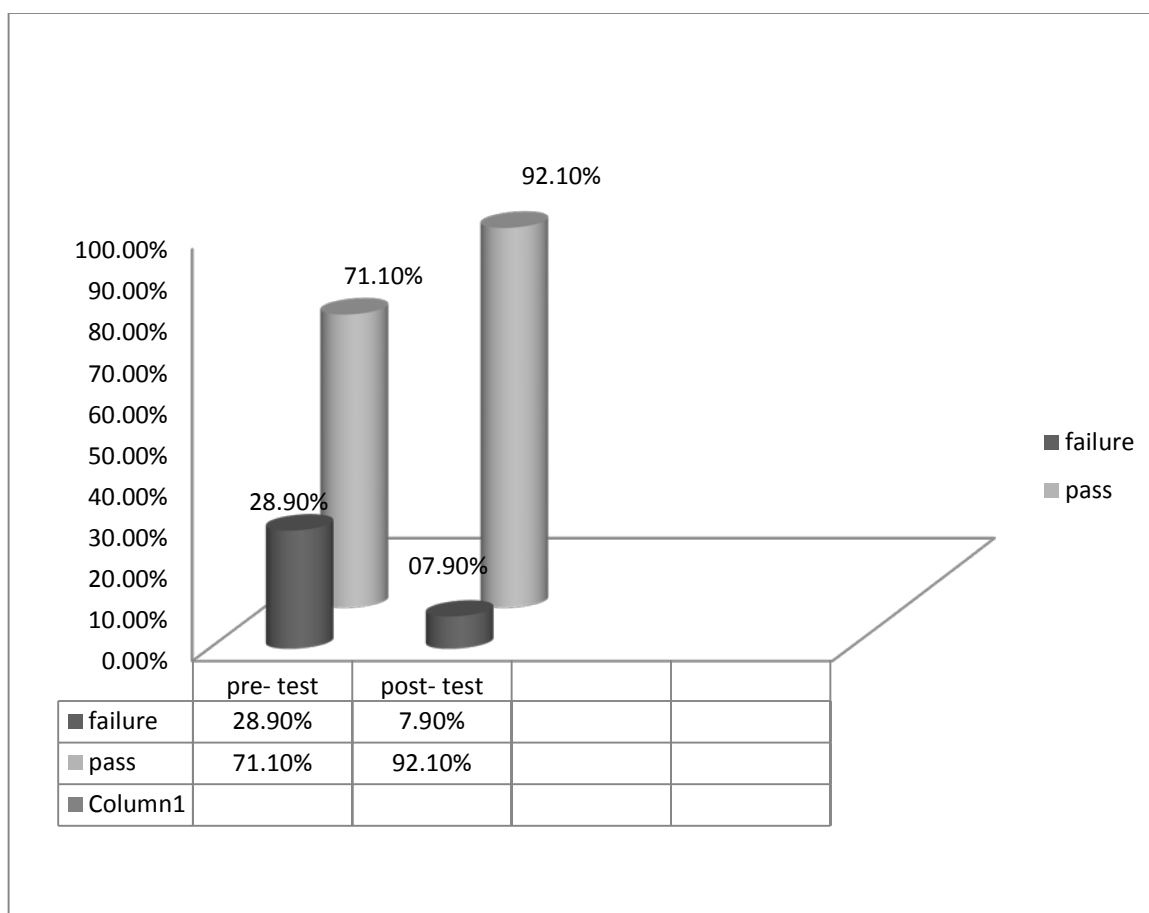


Figure (4.59) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (71.10%) and failure by (28.90%) and post- test pass by (92.10%) and failure by (07.90%).

Table (4.60) the frequency and percentage of questions twenty-one to twenty-three; listens to audio- material to underline stressed words in a sentence ... *the dog has been barking at the strangers.*

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	25	65.80%	31	81.60%
failure	13	34.20%	07	18.40%
total	38	100%	38	100%

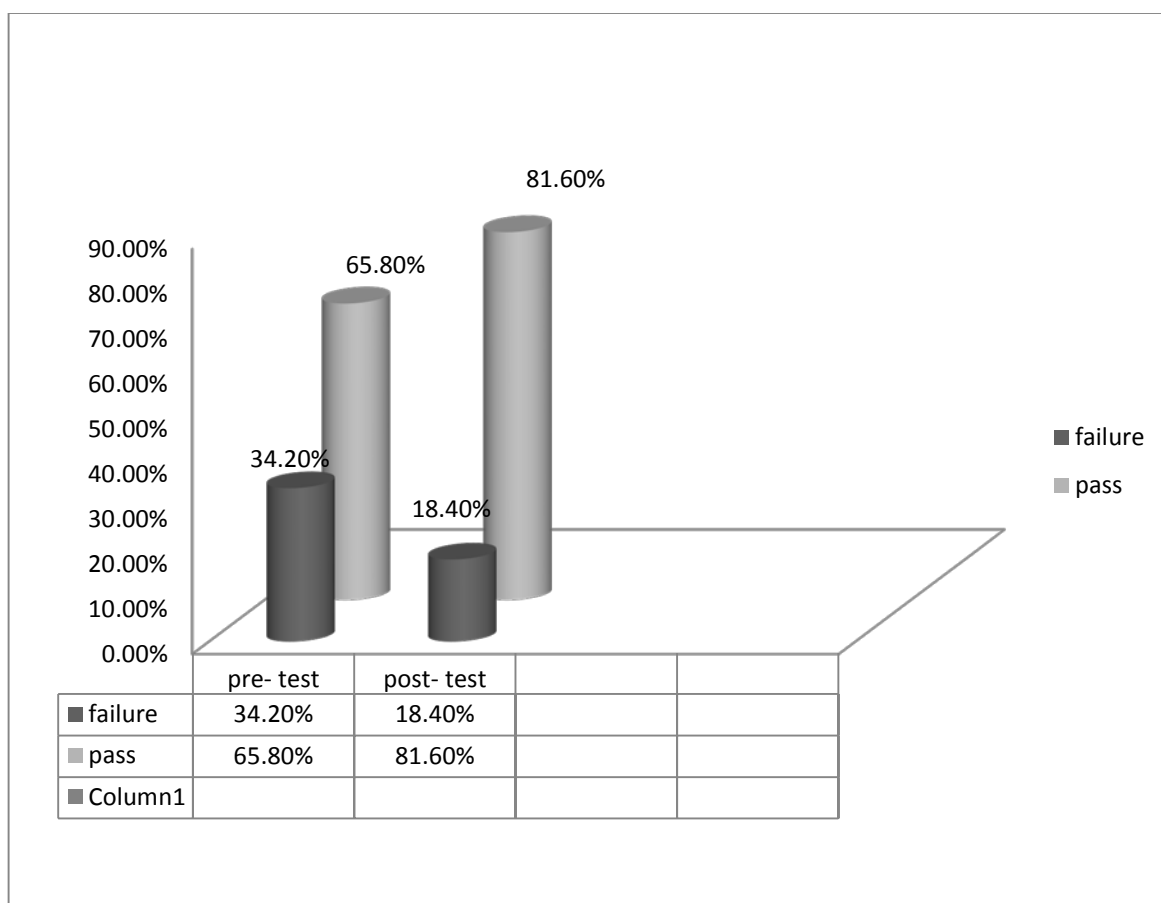


Figure (4.60) shows distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (65.80%) and failure by (34.20%) and post- test pass by (81.60%) and failure by (18.40%).

Table (4.61) out the frequency and percentage of questions twenty-four to twenty-six listens to audio- material to underline stressed words in a sentence *“the cat has been chasing the mice”*.

valid	Pre- test		Post- test	
	frequency	percent	frequency	percent
pass	26	68.40%	33	86.80%
failure	12	31.60%	05	13.20%
total	32	100%	32	100%

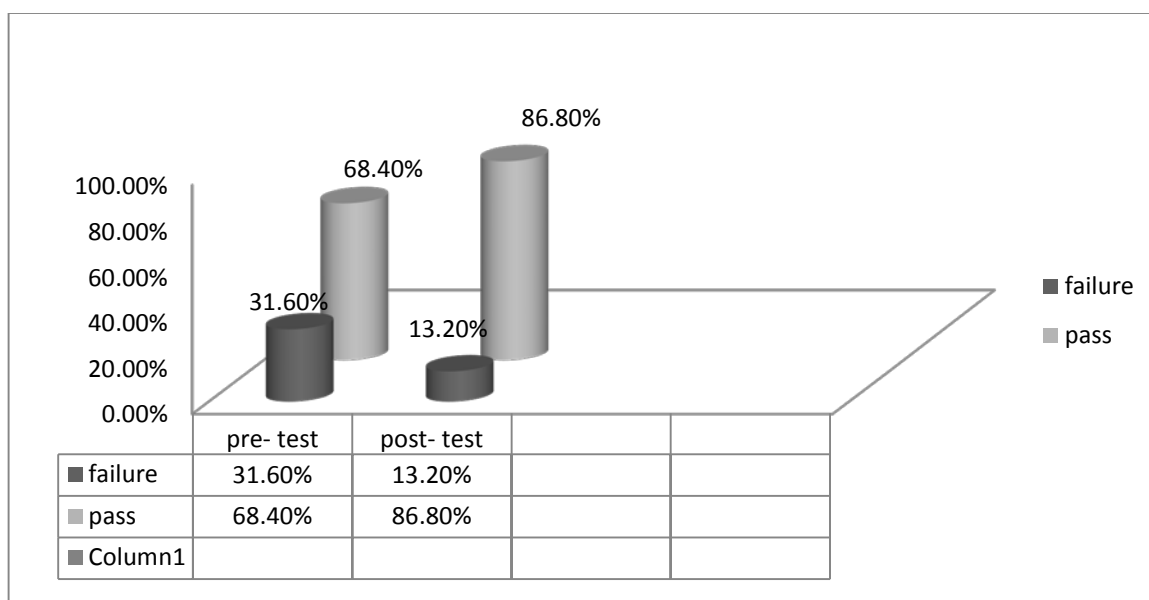


Figure (4.61) illustrates distribution views of experimental group (female subjects) sample by the statement as follow; pre- test pass by (68.40%) and failure by (31.60%) and post- test pass by (86.80%) and failure by (13.20%).

Based on statistical results, there was noticeable and remarkable improvement of placement of sentence stress in post-test compared to control group. This progress has taken place because of straightforward rules of sentence stress that were given to the subjects by the researcher in classroom interventions and they have been trained by the researcher in how to listen to native speakers to place sentence stress correctly during four weeks teaching. (See appendix one: Handouts)

Table (4.62) points out t- test of control and experimental groups (female subjects)

Groups	N	Mean	Std. Deviation	df	t. test	Sig
Control	38	4.1928	1.01031	37	-3.5175	.000
Experimental	38	6.4139	1.94162			

The value of t- test is calculated to signify differences between number of subjects of the study for the hypothesis as it is viewed in above table (-3.5175) with the signify value (00.0) which is less than significant value (0.05). This statistical result refers to the existence of significant statistical differences between experimental and control groups (female subjects).

Table (4.63) points out t- test showing group mean of the pre- test part one question (1-10)

Groups	N	Mean	Std. Deviation	Df	t. test	Sig
Control	70	3.5857	1.50836	69	-5.033	.000
Experimental	70	4.7429	1.48114			

Key: N= number of subjects    DF= Degree of Freedom (N- 1)

Sig= Signified value.

The value of t- test is calculated to signify and represent differences between number of subjects of the study for the hypothesis as it is viewed above table (-5.033) with the signify value (00.0) which is less than significant value (0.05). This statically result supports and strengthens what was hypothesized in chapter one and it refers to the existence of statistically differences between experimental and control groups.

Table (4.64) displays t- test results group mean of pre- test (part two questions from 11 - 27)

Groups	N	Mean	Std. Deviation	Df	t. test	Sig
Control	70	8.9429	1.88730	69	-6.157	.000
Experimental	70	10.9571	1.95185			

The value of t- test is calculated to signify and represent differences between number of subjects of the study for the hypothesis as it is viewed above table (-6.157) with the signify value (00.0) which is less than significant value (0.05). This statistical result refers to the existence of statistically differences between experimental and control groups.

Table (4.65) points out t- test showing group mean of post- test part one questions (1-10).

Groups	N	Mean	Std. Deviation	df	t .test	Sig
Control	70	5.5429	1.49090	69	-3.872	.000
Experimental	70	6.5143	1.32690			

The value of t- test is calculated to signify and represent differences between number of subjects of the study for the hypothesis as it is viewed in above table (-3.872) with the signify value (00.0) which is less than significant value (0.05). This statistical result refers to the existence of statistically differences between experimental and control groups.

Table (4.66) displays t- test showing group mean of post- test part two questions (11-26).

Groups	N	Mean	Std. Deviation	df	t .test	Sig
Control	70	9.3857	2.24120	69	-5.035	.000
Experimental	70	10.7571	1.88384			

The value of t- test is calculated to signify differences between number of subjects of the study for the hypothesis as it is viewed in above table (-5.035)



with the signify value (00.0) which is less than significant value (0.05). This statistical result refers to the existence of statistically differences between experimental and control groups.

Table (4.67) t-test showing statistical significant gender differences

Groups	Gender	N	Mean	Std. Deviation	df	t-.test	Sig
Experimental -post- test	Male	32	9.5625	1.52268	68	-	.000
	Female	38	11.7632	1.54979		5.966	

The value of t- test is calculated to signify differences between number of subjects of the study for the hypothesis as it is viewed in above table (-5.966) with the signify value (00.0) which is less than significant value (0.05). This statistical result shows a significant gender difference.

### Oral Test

Table (4.68) Displays frequency and percentage for oral test; overall marks given to participant male subjects for producing word and sentence stress.

Statement	Very weak		Weak		Good		Very good		Excellent	
	F	P	F	P	F	P	F	P	F	P
Two- syllable word stress	10	31.4%	14	43.8%	4	12.5%	3	09.4%	1	03.1%
Polysyllabic word stress	13	40.6%	15	46.9%	3	09.4%	1	03.1%	0	00.%
Sentence stress	7	21.9%	6	18.8%	10	31.2%	7	21.9%	2	06.2%

Key: F= frequency P= percentage

The above table results view:

Producing two- syllable word stress by very weak (31.25%), weak (43.75%), good (12.5%), very good (09.4%) and excellent (03.1%).

Producing polysyllabic word stress by very weak (40.6%), weak (46.9%), good (09.4%), very good (03.1%) and excellent (00.000%).

Producing sentence stress by very weak (21.9%), weak (18.75%), good (31.25%), very good (21.9%) and excellent (6.25%).

Table (4.69) illustrates frequency and percentage for oral test; overall marks are given to participant female subjects for producing word and sentence stress.

statement	Very weak		Weak		Good		Very good		Excellent	
	F	P	F	P	F	P	F	P	F	P
Producing two- syllable word stress	10	26.3%	11	28.9%	9	23.7%	8	21.1%	0	00.00%
Producing polysyllabic word stress	13	34.2%	10	26.3%	8	21.1%	6	15.8%	1	02.6%
Producing sentence stress	6	13.2%	9	23.7%	14	36.8%	8	21.1%	2	05.3%

Key: F= Frequency P=percentage

The above table results view:

Producing two- syllable word stress by very weak (34.2%), weak (26.3%), good (21.10%), very good (15.8%) and excellent (02.6%).

Producing polysyllabic word stress by very weak (26.3%), weak (28.9%), good (23.7%), very good (21.1%) and excellent (00.000%).

Producing sentence stress by very weak (15.8%), weak (23.7%), good (36.8%), very good (18.4%) and excellent (5.3%).

## **4.2 Discussion of the Results**

The collected data was analyzed and then results of the study were presented in tables and figures so as to be discussed in the following two sub-titles:

### **4.2.1 Discussion of Written and Listening Tests Results**

Based on statistical results, the subjects encountered difficulties in placing polysyllabic word stress. This result was clearly seen in subjects' failure percentages (see tables and figures (4.6 - 4.7) male subjects). But, there was improvement of placement of polysyllabic words stress in experimental group post- test compared to control group. This limit enhancement in placement of polysyllabic words stress was due to listening to audio- materials by native speakers which was given by the researcher as classroom interventions during four weeks teaching (see tables and figures (4.21- 4.25). There was remarkable and considerable enhancement of placement of two-syllable word stress in questions one to five compared to polysyllabic word stress.

Concerning placement of sentence stress, the subjects did well (see tables and figures (4.26 - 4.30). This progress has taken place because of straightforward rules of sentence stress that were given to the subjects by the researcher in classroom interventions and they have been trained by the researcher in how to listen to native speakers to place sentence stress correctly during four weeks teaching. Generally, female subjects did better than male subjects in placing word and sentence stress. This result was clearly seen or

noticed from presentation of data analysis in tables and figures (4.52- 4.56/ 4.21- 4.25).

#### **4.2.2 Discussion of Oral Test Results**

Oral test was designed to collect data from the subjects about their production of word and sentence stress. Based on table (4.68), the subjects encountered difficulties in producing word and sentence stress. So, thirty-two male subjects were asked individually by the researcher to produce word and sentence stress. There were three questions: in question one which was about producing two-syllable word stress, the overwhelming majority (24 participants) 75% failed to produce correct two-syllable word stress. The small minority (8 participants) 25% succeeded to give correct two-syllable word stress. Question two which was about producing polysyllabic word stress the vast majority (28 participants) 87.5 failed to produce correct polysyllabic word stress. The tiny minority (4 participants) 12.5% succeeded to give correct polysyllabic word stress. This result showed that the subjects encountered difficulties in producing two-syllable and polysyllabic word stress. Question three which was about sentence stress, 40.7% (13 participants) failed to produce correct sentence stress while 59.3% (19 participants) succeeded to give correct sentence stress. To some extent, male subjects did well in producing sentence stress.

On the other hand, thirty- eight female subjects were asked individually by the researcher to produce word and sentence stress. There were three questions: In question one which was about producing two-syllable word stress; twenty-one participants (55.2%) failed to produce polysyllabic word stress while seventeen (44.8%) succeeded to produce polysyllabic word stress,

concerning question two which was about producing polysyllabic word stress, 60.5% (23 participants) failed to produce correct polysyllabic word stress while 39.5% (15 participants) succeeded to give correct polysyllabic word stress. Question three which was about sentence stress, 36.9% (14 participants) failed to produce correct sentence stress while 63.1% (24 participants) succeeded to give correct sentence stress. (See table 4.69).

To sum up discussion of the results, female subjects did better in producing word and sentence stress than male subjects as it was clearly shown in tables (4.68 and 4.69).

### **4.3 Testing Hypotheses**

Testing hypotheses is an act in statistical analysis whereby an assumption is tested regarding collected data. It is a process used to assess the strength of evidence from the sample.

- (1) Percentages of failure which are in tables and figures (4.1- 4.15) are in favor of the first hypothesis which is “SEFLLs make mistakes when they produce and place word and sentence stress.”
- (2) A statistical result which is shown in table (4.65) supports the second hypothesis of the study which is “There is a significant effect of listening to audio materials by native speakers on SEFLLs’ production and placement of word and sentence stress.”
- (3) A statistical significant result shown in table (4.66) strengthens and supports the third hypothesis which is “There are significant differences between experimental and control groups concerning listening to audio-materials by native speaker.”

(4) A statistical significant gender differences which is shown in table (4.67) supports the fourth hypothesis which is “There are significant gender differences between experimental groups In favor of female subjects”.

#### **4.4 Summary of the Chapter**

Data was collected from male and female subjects and then the collected data was analyzed using SPSS. So, the results were presented and tabulated in terms of mean, standard deviation and t-test values. In conclusion the main findings obtained from the results were that there was noticeable statistical significant between experiment and control groups of the subjects In favor of female subjects..

## **CHAPTER FIVE**

### **Summary of the study, Conclusion, Recommendations and suggestions for further studies**

#### **5.0 Summary of the Study**

The present study was conducted to examine to what extent listening to some recorded materials by native speakers had an impact on placement and production of word and sentence stress. So, this study was set out to answer the following questions: first how far do SEFLs make mistakes in producing and placing word and sentence stress? Second to what extent there is a significant impact of listening to audio- materials by native speakers on placement and production of word and sentence stress? Third to what extent are there significant differences between experimental groups and control groups which concern with listening to record speech by native speakers and developing EFLs pronunciation? Finally to what extent are there significant gender differences between male and female subjects of the experimental groups? So, for investigating the aims of the present study the following hypotheses were formulated in hypothetical statements from above questions as follows: 1- SEFLs make mistakes when they produce and place word and sentence stress., 2- there is a significant positive effect of listening to recorded materials by native speakers on SEFLs' production and placement of word and sentence stress, 3- there are significant differences between the experimental groups and control groups concerning listening to recorded material by native speakers 4- there are significant gender differences between male and female subjects of the experimental groups in favor of female subjects.

## **5.1 Findings**

Based on statistical results which were stated in chapter four, the researcher summarized the following findings:

- 1- Listening to audio materials by native speaker had positive effect on placement and production of word and sentence stress.
- 2- Classroom interventions such as listening to audio materials and handouts which were given to the subjects have positive impact on subjects' intelligibility.
- 3- The result of this study indicated that there was noticeable improvement in placement of word and sentence stress. But, the subjects still encountered difficulties in producing word and sentence stress mainly male subjects.
- 4- The subjects expressed absolute confidence in speaking due to intelligibility which they gained. So, the amount of time students spent listening to and practicing along with the audio- materials is also a good indication that they are headed in the right direction of improving their pronunciation as well as intelligibility.

## **5.2 Recommendations**

Based on the main findings of the study, the following recommendations are suggested.

- 1- Teaching word and sentence stress should be taught as part of lessons provided by a teacher such as teaching new vocabulary.
- 2- Providing audio- visual aids in a classroom helps students emphasize word and sentence stress such as underlining stressed syllables, giving prominence to



certain words within a sentence, using bold type, upper -case, clapping, and tapping relevant word stress. Also, a teacher can use a piece of elastic to stretch when modeling word and sentence stress.

3- Teachers need to be more aware of using Computerize- Assisted Language Learning (CALL) because on the credit side (CALL) has an effect on placement and production of word and sentence stress.

4- Syllabus designers should concentrate on word and sentence stress when tailoring syllabus for EFLs.

5- The researcher recommends more drills and exercise should be accompanied with pronunciation lessons on text books.

### **5.3 Suggestions for Further Studies**

Finally, the researcher offers some suggestions for further studies to be carried out by some candidates such as:

- 1- The effectiveness of intonation and assimilation in intelligibility.
- 2- The effectiveness of supra segmental features in pronunciation.

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# Appendices

## Appendix One: Handouts

### (1) Word Stress Placement Exercise

Can you highlight, underline, or circle the syllable that receives the primary stress for each word of this list?

- |                  |                   |                 |                    |
|------------------|-------------------|-----------------|--------------------|
| 1. accessible    | 26. competitive   | 51. historical  | 76. potential      |
| 2. accomplish    | 27. conclusion    | 52. homogeneous | 77. precious       |
| 3. accuracy      | 28. courageous    | 53. horrible    | 78. pregnancy      |
| 4. activity      | 29. courteous     | 54. impression  | 79. primitive      |
| 5. actual        | 30. criticize     | 55. likely      | 80. punish         |
| 6. actually      | 31. currency      | 56. likelihood  | 81. quality        |
| 7. advantageous  | 32. democracy     | 57. majority    | 82. radical        |
| 8. ambitious     | 33. discussion    | 58. material    | 83. realize        |
| 9. analogy       | 34. efficiency    | 59. maximize    | 84. recognize      |
| 10. apologize    | 35. emergency     | 60. meaning     | 85. regard         |
| 11. apology      | 36. emphasize     | 61. meaningless | 86. regardless     |
| 12. authority    | 37. essential     | 62. methodology | 87. responsibility |
| 13. authorize    | 38. event         | 63. militia     | 88. security       |
| 14. aware        | 39. eventually    | 64. minimize    | 89. sensible       |
| 15. awareness    | 40. expression    | 65. musical     | 90. sensitive      |
| 16. bacteria     | 41. finance       | 66. nostalgia   | 91. session        |
| 17. bibliography | 42. financial     | 67. occasion    | 92. shampoo        |
| 18. biography    | 43. flexible      | 68. official    | 93. social         |
| 19. biology      | 44. frequency     | 69. opportunity | 94. sociology      |
| 20. brother      | 45. furnish       | 70. organize    | 95. special        |
| 21. brotherhood  | 46. geography     | 71. person      | 96. specialize     |
| 22. characterize | 47. happiness     | 72. personal    | 97. summarize      |
| 23. cigarette    | 48. happy         | 73. philosophy  | 98. suspicious     |
| 24. classical    | 49. heterogeneous | 74. photography | 99. television     |
| 25. community    | 50. hideous       | 75. positive    | 100. tolerance     |



## (2) Sentence Stress in English – Exercise

**Listen carefully and then underline words that are stressed**

1-Cats chase mice.

2-The cats chase mice.

3-The cats have chased mice.

4-The cats have chased the mice.

5-The cats have been chasing the mice.

6-The cats might have been chasing the mice.

\*\*\*\*\*

Listen and mark the stressed words in the following dialogue:

Ben: Honey, I'm home!

Maria: Hi! How are you? How was your day at work?

Ben: It was great! I got a promotion! I'll have more responsibilities in the office, but the best news is that I'll have more money at the end of each month.

Maria: That's great! Congratulations! I'm really happy.

Ben: Unfortunately, I have to go to a conference this weekend so I won't be able to go to dinner with your parents this Friday. Sorry to let you down.

Maria: You're sorry? You're sorry?!?! I'm afraid "sorry" isn't good enough. I've already told them you're going, Ben!

Ben: I know, I know. And I am sorry about it. But as long as you have the chance to see them it's okay, right?

Maria: Fine. But we're going to dinner with them next Friday. No excuses.

## Sentence Stress in English - Exercise 2

A. Where did you get these flowers from? The cemetery?

B. Yes....

A. You weren't supposed to steal them!

---

A. Here are the flowers Bob asked me to get.

B. Eh? Bob didn't say anything,

---

A. Why do these roses have your mother's name on them? Name on them?

B. I got them for my mother, just like you asked.

A. In what world would I ask you to buy your mother flowers on our anniversary?

---

A. John, why are there yellow roses on the table?

---

A. Oh, lilies, they're beautiful, but

---

A. I was kind of busy today, so my secretary did me the favour of ordering you the flowers you wanted.

B. What?! \_\_\_\_\_

Why do I want roses from your secretary?

A. Listen, I know a single rose is supposed to be very romantic, but

---

A. Susie, you're always bossing me around.

Ordering me to buy you flowers is the last straw.

B. Fred, honestly, I don't understand what you're talking about.

\_\_\_\_\_, not order!

(3) Listen and mark the stressed words in the following dialogue:

Ben: Honey, I'm home!

Maria: Hi! How are you? How was your day at work?

Ben: It was great! I got a promotion! I'll have more responsibilities in the office, but the best

news is that I'll have more money at the end of each month.

Maria: That's great! Congratulations! I'm really happy.

Ben: Unfortunately, I have to go to a conference this weekend so I won't be able to go to

dinner with your parents this Friday. Sorry to let you down.

Maria: You're sorry? You're sorry?!?! I'm afraid "sorry" isn't good enough.

I've already told

them you're going, Ben!

Ben: I know, I know. And I am sorry about it. But as long as you have the chance to see them

it's okay, right?

Maria: Fine. But we're going to dinner with them next Friday.

**Appendix Two: tools of the Study**  
**Sudan University of Science and Technology**  
**College of Languages**  
**Department of English Language**  
**PhD Programme in English Language**  
**Students' written test**

**Name (optional)** \_\_\_\_\_

**Gender** male ( ☐ ) female ( ☐ ) please tick ( )

**Test time: 30 minutes**

**Test scores: 27 points**

**Answer all questions**

**Part one: word stress. (10 scores)**

Instructions: underline the syllable that is stressed (a syllable that is longer, louder and has pitch than unstressed one.)

**Question One: 1-5 two- syllable words (5 scores)**

1- furnish (v) \_\_\_\_\_ (1)

2- social (adj) \_\_\_\_\_ (2)

3- often (adv) \_\_\_\_\_ (3)

4- event (n) \_\_\_\_\_ (4)

5- desert (v) \_\_\_\_\_ (5)

**Question two: (6-10) polysyllabic words (5 scores)**

6- television \_\_\_\_\_ (6)

7- photography \_\_\_\_\_ (7)

8- opportunity \_\_\_\_\_ (8)

9- bibliography \_\_\_\_\_ (9)

10- responsibility \_\_\_\_\_ (10)

**Part two: sentence stress. (11-27) (17 points)**

Underline certain words, within a sentence, that are stressed or given prominence.

1- The cat might have been eating the cheese.

(11) \_\_\_\_\_ (12) \_\_\_\_\_ (13) \_\_\_\_\_

2- Yesterday, I went to the dentist I had to have two teeth out.

(14) \_\_\_\_\_ (15) \_\_\_\_\_ (16) \_\_\_\_\_

3- When life knocks you down, get up and turn to the God.

(17) \_\_\_\_\_ (18) \_\_\_\_\_ (19) \_\_\_\_\_ (20) \_\_\_\_\_ (21) \_\_\_\_\_

4- The land has been farmed organically since 1995.

(22) \_\_\_\_\_ (23) \_\_\_\_\_ (24) \_\_\_\_\_

5- The meal was absolutely delicious.

(225) \_\_\_\_\_ (26) \_\_\_\_\_ (27) \_\_\_\_\_

The end of test

**GOODLUCK**

**Sudan University of Science and Technology**

**College of Languages**

**Department of English Language**

**PhD Programme in English Language**

**Students' Listening test**

**Name: (optional)** \_\_\_\_\_

**Gender: male ( )      female ( )      please tick**

**Test Time: 30 minutes**

**Test Scores: 26 points**

**Answer all questions**

**Part one: word stress.**

Instructions: you are going to listen twice to audio- materials and then underline a stressed syllable (a syllable which louder, longer and has pitch than unstressed one.)

**Question One: (1-5) two- syllable words (5 points)**

- 1- Record (v) \_\_\_\_\_ (1)
- 2- Critic (n) \_\_\_\_\_ (2)
- 3- Precious (adj) \_\_\_\_\_ (3)
- 4- seldom (adv) \_\_\_\_\_ (4)
- 5- Realize (v) \_\_\_\_\_ (5)

**Question Two: (6-10) polysyllabic words (5 points)**

- 6-realization (n) \_\_\_\_\_ (6)
- 7-criticism (n) \_\_\_\_\_ (7)
- 8-democracy (n) \_\_\_\_\_ (8)

9-emergency (n) \_\_\_\_\_ (9)

10-advantage (n) \_\_\_\_\_ (10)

**Part two: sentence stress (11-26) (16 points)**

Listen twice to audio materials and then underline certain words, within a sentence, which are stressed or given prominence.

1- Do you have a pen, honey?

(11) \_\_\_\_\_ (12) \_\_\_\_\_ (13) \_\_\_\_\_

2- A queue of people waiting for a bus.

(14) \_\_\_\_\_ (15) \_\_\_\_\_ (16) \_\_\_\_\_

3- The waitress comes and we order a pizza.

(17) \_\_\_\_\_ (18) \_\_\_\_\_ (19) \_\_\_\_\_ (20) \_\_\_\_\_

4- The dog has been barking at the strangers.

(21) \_\_\_\_\_ (22) \_\_\_\_\_ (23) \_\_\_\_\_

5- The cat has been chasing the mice.

(24) \_\_\_\_\_ (25) \_\_\_\_\_ (26) \_\_\_\_\_

The end of test

GOODLUCK

**Sudan University of Science and Technology**

**College of Languages**

**Department of English Language**

**PhD Programme in English Language**

**Students 'Oral (spoken test)**

**Name: (optional)** \_\_\_\_\_

**Gender: male ( ) female ( ) please tick**

**Answer all questions.**

**Part one: word stress.**

Instructions: pronounce the following words to produce a stressed syllable (a syllable which is louder, longer and has pitch than other ones).

**Question one: (1 - 5) two- syllable word**

- 1- brother
- 2- aware
- 3- person
- 4- punish
- 5- women

**Question two: (6-10) polysyllabic words**

- 6- characterize
- 7- suspicious
- 8- discussion
- 9- geography



10- happiness

**Part two: Sentence Stress.**

Which word(s) are stressed in the following conversation between (A) and (B)?  
Produce stressed words.

A: I've lost an umbrella.

B: A lady's umbrella.

A: Yes. A lady's umbrella with stars on it. Green stars.

The end of the test

### **Names of Doctors who checked the tools of the study**

No	Titles	Names	Universities
1	professor	Albadri abbas alzubair	Omdurman Islamic University
2	professor	Abdel Gallel Abdellah Salih	Gezira University
3	doctor	Ahmed Mukhtar	Omdurman Islamic University
4	doctor	Muhammad Abdel Rahman Ahmed	Gezira University