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The Effect of Consciousness-Raising Activities and Instruction on Improving Algerian EFL Learners' Perception and Production of Complex Word Stress:

The Case of Second Year Students in the English Department of the University of Algiers

Dissertation submitted to the Department of English in partial fulfillment of the degree of Magister in Linguistics

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Declaration:

I declare hereby that the substance of this dissertation is entirely the result of my investigation and that due reference or acknowledgement is made, whenever necessary to the work of other researchers.

Date:

Signed:

Dedication

To the dearest persons in my life:

My mother and my father

My husband

My sisters

My brothers

Acknowledgement

I would like, first, to express my gratitude to my supervisor,

Dr. Fatiha Hamitouche, for her guidance and for her insightful comments made on each draft of this study.

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My deep gratitude is also to be expressed for all my teachers in the department of English.

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Abstract

The present work, a whole of five chapters including an experimental programme, aimed to shed light on the role of classroom instruction and awareness activities in improving Algerian EFL learners' abilities of perceiving and producing stress in morphologically complex words.

Through an experiment conducted on second year students at the department of English, University of Algiers, we attempted to test the effect of the instructional programme based on the consciousness-raising activities on learners' perception and production of complex word stress. Twenty two students participated in the experiment. They were divided equally into an experimental group and a control group.

In order to accomplish the aim of the present research, data was gathered using pre-treatment and post-treatment questionnaires, and pre-treatment and post-treatment tests. The results obtained indicated a positive improvement in the ability to perceive and produce complex word stress among the members of the experimental group. The positive findings of the present experiment are aimed to be applied in the teaching of word stress, in general, and in teaching complex word stress, in particular for EFL learners.

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List of abbreviations

IPA	International Phonetic Alphabet
EFL	English as a Foreign Language
SLA	Second Language Acquisition
PPP	Presentation. Practice. Production
t_{crit}	Critical value of t
t_{obs}	Observed value of t
H_0	Null hypothesis
H_1	First research hypothesis
H_2	Second research hypothesis
x_e	Mean of the experimental group
x_c	Mean of the control group
sd_e	Standard deviation of the experimental group
sd_c	Standard deviation of the control group
n_e	Number of participants in the experimental group
n_c	Number of participants in the control group
df	Degrees of freedom
eta^2	Strength of association
N	Number of participants
P	Percentage

General Introduction

The study of the interaction between morphology and phonology is referred to as 'morphophonology'. The inclusion of morphology within the phonological system has a great impact on shaping some phonological rules. For this reason, Booij (2000) points out that "morphological information plays an important role in the phonological system of a language because the distribution of sounds and the occurrence of alternations is partially determined by morphological structure of words" (2000: 335). One morhophonological aspect which second year Algerian university students of English as a foreign language (EFL) find difficulties with is the placement of stress in morphologically complex words.

For EFL learners, speaking English as a foreign language does not seem to be an easy task, because English is full of complex pronunciation features, such as word stress, which the foreign learners have to pay attention to. EFL speakers of English are not free to stress whatever syllable they want. English word stress is tied by rules. "English word stress is highly rule-governed, and learners have problems in acquiring these rules" (Jenkins 2000: 39), which is the case of Algerian EFL learners who on the one hand find difficulties in acquiring the patterns of complex word stress, and difficulties in perceiving and producing correctly complex word stress on the other hand.

EFL learners find difficulties in acquiring the patterns of stress of polysyllabic complex words, which results in difficulties in perceiving and producing complex word stress. Correct word stress patterns are important for the perception and the production of English (Kenworthy 1987: 28). The misperception and the incorrect production of stress of complex words will harm the intelligibility of the spoken discourse. When speakers misproduce stress in complex words, listeners misunderstand the meaning of words, which leads to a breakup of conversation. The same is true when listeners mishear the correct placement of stress in complex words, a misunderstanding between speakers and listeners will be noticed, which will lead to the breakup of the conversation. In fact, understandability between speakers and listeners is a crucial factor to keep the flow of communication going on. The

understandability of speech is affected by the prosodic aspects of English pronunciation, such as word stress (Jenkins 2000: 32, Kenworthy 1987: 14), for this reason, it is necessary to make EFL learners aware of the patterns of complex word stress, as it is necessary to raise their consciousness about the important effect of perceiving and producing complex word stress on preserving understandability of speech.

1. Statement of the Problem

It has been noticed in the English department at the University of Algiers, that most learners either misplace stress when they produce complex words or they produce complex words without stressing any syllable in most of the words. The misplacement of stress in complex words and the non-stressing of complex words result from the learners' unawareness of the function of stressing the right syllable, and they, also, result from the complexity and the difficulty of acquiring the patterns of English word stress. Moreover, it has been noticed that learners misproduce complex words and they, also, misrecognize the placement of stress when they hear complex words due to absence of teaching tasks which involve learners to perceive and to produce stress in complex words.

The traditional teaching of pronunciation used to focus more on segmental features of pronunciation ignoring the role which the suprasegmentals play in transmitting the meaning of the spoken discourse. The traditional teaching of pronunciation paid full attention to vowels and consonants. Whenever the old teaching of pronunciation dealt with phonological features, such as complex word stress, it included the rules and the application of the rules, without explaining to the learners the reasons which lie behind the importance of acquiring the phonology of the foreign language, and without mentioning the communication purpose of complex word stress. Learners, in fact, used not to be made aware of the importance of acquiring complex word stress' patterns. They were not motivated to acquire complex word stress' rules, which created a difficulty in acquiring the rules of complex word stress.

The second reason which causes a difficulty in acquiring the patterns of complex word stress is the complexity of the rules of English word stress. English is a free-stress language, which means that each lexical word in English has a specific stress pattern. English word stress is highly rule-governed; this is why EFL learners have difficulties in acquiring these rules (Jenkins 2000). It has been noticed, by being a student in the English department and as a novice teacher, that most Algerian EFL learners are unconscious that the morphological construction of complex words uses different types of suffixes and they are, also, unconscious that each type of affix has a phonological implication on the placement of stress. The complexity of the phonological implication on the morphological construction of complex words made it difficult for learners to acquire the patterns of complex word stress, which needed an intervention of rule instruction and awareness-raising tasks in order to improve the learners' abilities to acquire the patterns of complex word stress.

Being a student in the English department allowed observing that during the two years we were learning stress, we noticed absence of activities which neither require learners to perceive and recognize the stress placement in complex words nor ask them to produce stress in complex words. Lack of such activities seems to lead learners to become unable to correctly produce stress in complex words, and become handicap in perceiving the correct placement when hearing complex words. As a consequence, the inabilities of producing and perceiving complex word stress seem to disallow foreign learners of English to communicate with each other and with native speakers.

2. Statement of Research Question and Research Hypotheses

2.1. Research Question

The present study attempts to investigate the effect of rule instruction and awareness-raising tasks of simple word stress and complex word stress on the EFL learners' ability to perceive and produce stress in complex words. In order to reach this aim, the present research adopts the following research question and the research hypotheses:

RQ: Do rule instruction and consciousness-raising activities of simple word stress and of complex word stress have an effect on EFL learners' perception and production of complex word stress?

Through the research question, we understand that this research aims to find out whether classroom instruction of all the possible rules of simple word stress and complex word stress, with all the exceptions which these rules bear and whether the activities practised concerning each rule help Algerian learners of English as a foreign language to improve their abilities to perceive and produce stress in morphologically complex words.

The above statement of the research question is summarized in the following research hypotheses.

H_0: Rule instruction and awareness-raising tasks of stress in simple words and in complex words result neither in a better perception nor in a better production of complex word stress.

H_1: Rule instruction and consciousness-raising tasks of simple word stress and of complex word stress lead to a better achievement in the perception of complex word stress.

H_2: Rule instruction and awareness-raising activities of stress in simple words and in complex words result in a better production of complex word stress.

Before explaining the aim of this research, it is important to define the most essential constructs, which are used in the research question and the research hypotheses.

3. Definition of Constructs

Rule Instruction:

Ellis (1990) speaks about formal instruction as being the direct pedagogic intervention (1990: 130). In this research, the term formal instruction is used to mean the

explanation of the aspects and the rules of simple word stress and complex word stress.

Consciousness-Raising Activities (or Awareness-Raising Tasks):

The term consciousness-raising is used to describe the way learners become aware, or are made aware, of features of the language they are learning (Thornbury 2006). It also refers to techniques that encourage learners to pay attention to language form in the relief that an awareness of form will contribute indirectly to language acquisition (Richards and Schmidt 1985). By including the term activities to consciousness-raising, it becomes clear that this research works on the activities which encourage learners to pay attention to a language form aiming to facilitate the acquisition of that specific language form.

Simple Word Stress:

Simple word stress is a phrase used to indicate the stress which falls on isolated simple words. Simple words are morphologically composed of one free morpheme. The morpheme is "a minimal unit of meaning or grammatical function" (Yule: 1996: 75). In this study, simple words are used to mean minimal units of meaning, which cannot be divided to give other units of meaning or other units of grammatical function.

Complex Word Stress:

Complex word stress refers to stress falling on morphologically isolated complex words. Complex words are constructed by free morphemes and bound morphemes. Free morphemes represent the morphemes which can stand alone (simple words), whereas, bound morphemes are those which cannot stand alone and which need to be linked to free morphemes in order to give meaning. Free morphemes are considered as the set of separate English word forms, and bound morphemes are all English affixes (Yule 1996: 75).

Perception:

The term perception in this context is used to mean the recognition of the placement of stress when a learner hears isolated simple or complex words.

Production:

This term is used in this research to mean the action of uttering the correct place of stress in complex words, and to produce orally the stressed syllables using all the features of the stressed syllables which are; loudness, length, change of pitch and vowel quality (Roach 1990).

Because of the problems stated previously, and as a consequence to the research question and the research hypotheses, the aim of the present study comes to test the efficiency of the rule instruction and the consciousness-raising activities on learners' perception and production of complex word stress through conducting an experiment. To emphasise, the aim of the present research is to test whether providing learners with the different rules of word stress and whether testing their perception and production abilities of simple and complex word stress have any significant impacts on the learners' perception and production of complex word stress.

4. Rationale

The present study attempts to investigate the effect of consciousness-raising activities and rule instruction of simple word stress and complex word stress on increasing the ability to perceive and produce complex word stress. This issue is worth investigating for the following reasons.

First of all, throughout our readings, we have noticed that research did not give much importance to the role of the consciousness-raising activities on improving the acquisition, the perception and the production of stress patterns of complex words. Most researchers in the field of phonology gave more attention to the acquisition of the rules of simple word stress. Even when phonologists speak about simple word stress' acquisition, they do not give more attention to the great importance of the focused teaching and the consciousness-tasks in helping the acquisition of word stress.

Besides, it is noticed, also, that only few researchers discussed the role of correct word stress' (complex word stress) perception and production in increasing the understandability between speakers and listeners.

Another important reason for working on the effect of the consciousness-raising tasks on the perception and the production of complex word stress is the problems which the students face in perceiving complex word stress, in recognizing its rules and in producing complex word stress. On the one hand, these problems occur because of the complexity of complex word stress' rules (generalized to the rules of complex word stress), which are difficult to EFL learners (Jenkins 2000: 39). On the other hand, EFL learners fall in problems of placing stress correctly on complex words when they hear the complex words and when they produce them because learners do not give the placement of stress much importance when they encounter new complex words. In fact, when most Algerian EFL learners encounter new complex words, they pay more attention to the meaning of the words, they also pay attention to their phonetic pronunciation ignoring their prosodic features, which are necessary for preserving the understandability of the words.

Therefore, since it is not sufficient to know only how to pronounce English sounds, and since Algerian EFL learners need to grasp the prosodic features of English complex words, this study comes to emphasise the need to focus on the importance of raising learners' awareness of the suprasegmentals when learning the pronunciation of English. The suprasegmentals, such as complex word stress, play a crucial role in transmitting the spoken message and in enlightening the communication of meaning. Mc Nervy and Mendelsohn (1992) focus on the role of the suprasegmentals in controlling the structure of information (1992: 185). Thus, errors in complex word stress can lead to misunderstanding the message, because "…errors most damaging to comprehensibility occur at this level" (Jenkins 2000: 39).

Finally, working on stress in isolated complex words is justified by the fact that the placement of stress in disconnected complex words will change when the complex words are said in a continuous speech. The stress placement of a word which is said in isolation can be changed when the same word is said in a sentence (Ladefoged 2006:

112, cited in Lodge 2009: 116, Clark and Yallop 1990: 296), for this reason, the present study prefers to work on isolated complex words in order to avoid the influence of the context on the acquisition of the patterns of stress.

5. Organization of the Study

The present work is divided into two major parts; the theoretical part and the practical part. Each part contains two chapters, in addition to the last chapter of the second part, which discusses the implications of this research.

Chapter one: Theoretical Background of Word Stress.

The first chapter presents the different characteristics and rules of English word stress. This chapter provides more concrete items to the reader aiming to facilitate him understand the purpose of the research through reading this chapter.

Because stress is a feature of the syllable as a whole, this chapter starts by examining the syllable. In this section, there appears a presentation of the possible types of syllables and the relation between syllable weight and stress. The second concern of this chapter is defining stress, presenting the different characteristics of this prosodic feature, and discussing the different degrees of stress. The next point which the present chapter considers is the detailed rules of both simple word stress and complex word stress, which the learners need to raise their awareness about.

Chapter two: Intelligibility and Word Stress Acquisition

This chapter deals with abstract aspects, deeply examines the importance of acquiring the patterns of word stress, generally, and the patterns of complex word stress, specifically. It sheds light on the functions of complex word stress and the impact of complex word stress acquisition on intelligibility. The present chapter begins with presenting the weakness of the traditional teaching of pronunciation, and the main focus which the expected teaching of pronunciation should move towards. This part, indeed, explains clearly how important it is to take into account the communication purpose when teaching pronunciation. This chapter provides further other important functions of acquiring the patterns of complex word stress.

Since the present work examines the effect of consciousness-raising tasks on the perception and the production of complex word stress, this chapter puts emphasis on the consciousness-raising activities, as it discusses the most effective approaches of language learning and language teaching. This chapter presents, also, the approach to teaching complex word stress which allows implementing rule instruction and consciousness-raising philosophy, during the treatment period, and seeing clearly their results on learners performance when perceiving and when producing complex word stress.

Chapter three: Research Methodology and Design

As title suggests, this chapter presents how the methodology of the research is designed. This third chapter starts by stating the research question and the research hypotheses. Then it moves to expose the method chosen to conduct this research. It justifies the reasons behind choosing this research methodology, and it supports its choice by what other methodologists said about the method chosen for this research. Presenting the subjects which are selected to conduct this research is the following point which this chapter discusses. The presentation of the subjects is followed by discussing the tools that are used to gather data to this research and by explaining how the research is taking place. The last point which is exposed by this chapter is the statistic method chosen to analyse the data of this research.

Chapter four: Data Presentation and Discussion

The fourth chapter involves the presentation of the results, on one hand, and their discussion, on the other hand. The presentation and the discussion of the results go hand in hand in this study. They are presented together. This chapter begins with presenting the results of the tests, and then come the analysis of the questionnaires. By the end of the chapter, there appears a summary of the results of both test and questionnaires, which are discussed in relation to the research hypotheses.

Chapter five: Implications for Teaching

The results of the present investigation are meant to be applied on teaching complex word stress to Algerian learners of English as a foreign language. This chapter exposes three major issues which the teaching of word stress (complex word stress) is aimed to move towards, which are; replacing the old teaching of pronunciation by moving towards teaching pronunciation for preserving intelligibility, including the communication purpose when teaching pronunciation and the implications on the teaching activities according to what is achieved in this investigation. Before concluding this work, we aim to put the reader in the picture of the difficulties that we faced when this experiment was conducted, which led us to present two limitations of the study.

Chapter One

Theoretical Backgrounds of Word Stress

Introduction

English is a stress language since any lexical word in a spoken discourse must have a stressed syllable. The word stress in English falls on either a monosyllabic word or on one syllable among a polysyllabic word. The notion of word stress is related to the stressed syllables which compose the word. For this reason, it seems important to begin this chapter by defining what the syllable is, the components of the syllable and the types of syllables which can be stressed. In addition, the present chapter presents the different characteristics and the components of the stressed syllable.

1.1. Stress and Syllable Structure

1.1.1. The Syllable

Defining what the syllable is is not an easy task. Speakers have an intuitive idea of what the syllable is. They think that they can define it and can count the number of syllables in the word. The syllable is defined as the smallest rhythmic unit of the spoken language, as it can be defined as a unit that is typically larger than a single sound and smaller than a word. However, when people are asked to count the number of syllables in a word or in a sequence of words, there appear a considerable disagreement among them (Skandera and Burleigh 2005: 65), this is why, Ladefoged (2006) comments that there is no satisfactory definition of the syllable (2006: 237-243, cited in Lodge 2009: 121).

Other phoneticians, on the contrary, suggest different definitions of the syllable. Hancock (2003) considers the syllable as a group of one or more sounds among which the vowel sound is the most essential part (2003: 50).

Phonetically speaking, the syllable is described as having a centre which is produced with little or no obstruction to airflow (Roach 1991: 67). In other words, the syllable consists of a **peak**. The peak may be preceded by one or more consonants which become known as **onset**. Following the vocalic part of the syllable (the peak) there may exist one or more consonants referred to as **coda** (Giegerich 1992: 138).

Syllables are of different types which come as follow:

- The first type of syllables appears in the form of isolated sounds preceded and followed by silence. This type of syllables is called the 'minimum syllable'. It can involve a single vowel sound like the words: ah, oh, eh, as it can involve a single consonant sound, such as /m/ which refers to an agreement and /□/ which is used to ask for silence.
- Some syllables have more than silence preceding their centre. The sound which precedes the centre of the syllable is known as onset.
- Other syllables may have no onset but a coda, which refers to the sounds that follow the centre.
- The last type of syllables is the syllable which is composed of onset, peak (refers to the centre of the syllable which is also known as **nucleus** (Lodge 2009)) and coda.

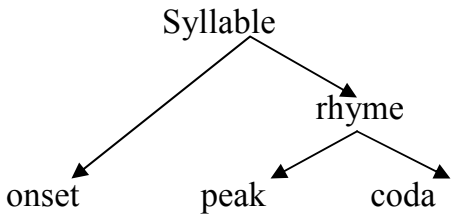
(Roach 1991: 67)

This concludes that the onset and the coda can be noticed to be the greater obstruction to the flow of air which may occur before and after the centre.

A syllable that ends with a coda is referred to as a closed syllable, irrespective of whether it has an onset or not (Skandera and Burleigh 2005: 66).

The peak and the coda when grouped together form a unit called the rhyme of the syllable (Roach 1991: 73, Giegerich 1992:138).

Lodge (2009) proposes the basic (but not finite) structure of a syllable as follows:



Lodge 2009: 124

The reason for naming that part of the syllable the rhyme is because it is this part which plays the role in the rhyming conventions of poetry. In addition, the reason for having the rhyme as a unit "…is that peak and coda function together rather than separately in a number of ways" (Giegerich 1992: 143).

1.1.2. Stressed and Unstressed Syllables vs Strong and Weak Syllables

Syllable weight is a major factor in determining the position of stress in a word (McMahon 2002: 114). Syllable weight is a way to deal with syllable structure; it has a relation with the structure of the syllable.

The word can be stressed if it contains syllables bearing stress. Most of the syllables which bear stress are strong syllables, whereas, the weak syllables never bear stress.

What is meant by strong and weak syllables?

1.1.2.1. Strong (Heavy) Syllables

When dealing with the strength of the syllable, the centre, on the one hand, and the rhyme, on the other hand, are the most important parts of the syllable which will be taken into account. On the contrary, onset presence is not included in the calculation of syllable weight (McMahon 2002: 114).

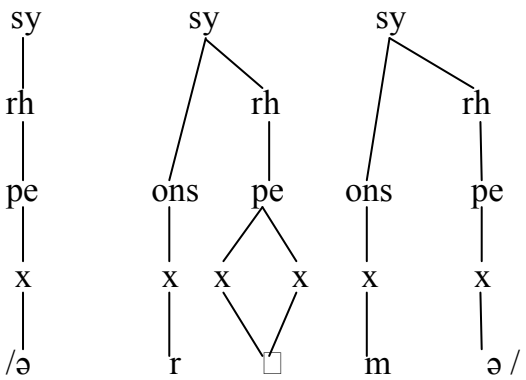
Stressed syllables are noticed to be strong and long (Kreidler 1997: 102). They can include any vowel phoneme, diphthongs or possibly triphthongs as their peaks except the schwa /ə/ sound (Skandera and Burleigh 2005: 72, Roach 1991: 75). The vowels in stressed syllables have full and original sound quality. A full and an unstressed vowel (whether stressed or not) forms a strong vowel which becomes a centre of a strong syllable.

Another face of heavy syllables is their construction of complex rhymes (Giegerich 1992: 146, McMahon 2002: 114). This is to claim that if a syllable is characterized as heavy or strong, it must consist of either a strong, a full and an unreduced vowel for the peak or its rhyme must be complex.

The complexity of the rhyme appears in two ways:

- The syllable is considered as heavy when its rhyme is composed of a branching nucleus. The latter consists of either a long vowel or a diphthong, no matter if it has a coda or not (McMahon 2002: 114). In addition, Giegerich (1992) proposes that a heavy syllable has two x-positions in the rhyme which allows this heavy syllable to become stressed (1992:146). Any stressed syllable must have more than a single x-position in its rhyme. This indicates that all stressed syllables must have complex rhymes among them the monosyllabic lexical words which are stressed and which explain the fact that they are heavy syllables consisting of two x-positions in their rhymes.

For example: aroma



Giegerich 1992: 182

- A complex rhyme may, also, appear in the form of having a heavy syllable by consisting of a short vowel with one or more coda consonants (McMahon 2002).

1.1.2.2. Weak (Light) Syllables

One of the most noticeable features of English is that many syllables are weak. Contrarily to strong syllables, weak syllables are characterized by consisting of a one single-x rhyme (one x-position in the rhyme).

According to McMahon (2002), a syllable is considered as light if it contains a short vowel in the rhyme with no coda (2002: 114). However, this idea has been contrasted by most phonologists who believe that the weakness of the syllable has to do with the centre of the syllable not with what precedes or what follows the centre.

Unstressed syllables are weak and short (Kreidler 1997: 102). The weakness of the syllable is related to the kind of vowels its centre includes. Most light syllables consist of short, reduced vowels which are characterized by lower intensity (Roach 1991: 75). The common weak vowels come as follow; / □ /, /□ /, /ə / and syllabic consonants (Roach 1991: 75). From his side, Kreidler (1997) observes that most phonologists agree that the nucleus of the weak syllable is more likely to be a schwa or a syllabic consonant (1997: 102).

The relation which can be concluded between syllable weight and stress is that all stressed syllables are strong, but not all strong syllables are stressed. This point can be illustrated by long words in which we may find two or more strong syllables but only one strong syllable can bear primary stress. On the contrary, all weak syllables are unstressed (Kreidler 2004: 75).

1.2. Word Stress

Stress is a relative feature. A syllable is perceived as stressed in relation to another syllable in the same word (Lodge 2009: 110). Word stress, which is also known as lexical stress (Clark and Yallop 1990: 287), has to do with different types of content

words; verbs, nouns, adjectives and adverbs, whereas, it is not observed to be a feature of function words like prepositions, articles…etc.

1.2.1. Definition and Characteristics of Stressed Syllables

To define the stressed syllables, two levels are noticed to be important; the production level and the perception level. Stress is defined in relation to how it is produced and how it is perceived by the listener.

From the production point of view, stressed syllables are characterised by the use of more muscular energy by the speaker than is used for unstressed syllables. When producing stressed syllables, the muscles that are used to expel air from the lungs are more active. In a sequence of syllables making up a word, one syllable is always more prominent than the others. In the production of this syllable, more muscular efforts are involved than the surrounding syllables. This more prominent syllable is said to bear stress. In fact, Lodge (2009) agrees with Davenport and Hannah (2005) that a stressed syllable is produced with more muscular energy which allows that syllable to be distinguished from the unstressed ones around it (2005: 78 and 2009: 116).

Jones' (1972) description of stress involves the behavior of the speaker when he produces the stressed syllables. Jones (1972) observes:

> "stress may be described as the degree of force with which a sound or a syllable is uttered. It is essentially a subjective action. A strong force of utterance means energetic action of all articulatory organs; it is usually accompanied by a gesture with the hand or head or other parts of the body…."
>
> (1972: 245)

The above description indicates that if one syllable among a polysyllabic word is said with more force, and if it is said to be stronger than its neighbors, it is that syllable

which is stressed. The strong force with which the stressed syllable is produced is a result of the action of speech organs, and it is accompanied with head or hand gestures. So that, it can be understood that stressed syllables reflect the degree of force with which they are uttered.

As far as the behavior of the speaker when producing stress is concerned, Brown (1990) agrees with Jones (1972) that stressed syllables are given a visual clue by the face of the speaker. The speaker makes larger gestures with his jaws and lips when producing the initial consonants and the initial vowels of stressed syllables than in producing unstressed syllables (1990: 45).

From the perceptual point of view, stressed syllables are recognized as stressed because they are perceived to be more prominent than unstressed syllables. The prominence of the stressed syllables appears in the ways that; stressed syllables sound louder than unstressed ones, each stressed syllable in a word witnesses a change in the pitch and the vowel of the stressed syllable is heard to be lengthened (Kelly 2000: 66). Giegerich (1992) observes stressed syllables are produced with a more powerful contraction of the chest muscles than an unstressed syllable is (1992: 180). This enhanced energy leads to produce syllables with greater loudness, increased duration and a change of pitch (1992: 180).

In fact, most phonologists agree that stressed syllables have three features which are; loudness, length and change of pitch (level of speaker's voice), which allow the syllable to be distinct from its neighbors and to be more prominent than them. Roach (1991), in addition, points out that there exists a fourth characteristic of stressed syllables which is the quality of vowels (1991: 86).

Before going further, it is necessary to define the four characteristics of the stressed syllables.

- **Loudness**: loudness is a feature of stress. The stressed syllables are heard as being louder than unstressed syllables. Loudness refers to the increase in the

volume (Harmer 2001: 32). Loudness is related to the breadth of the vocal cords. It is this feature which helps to distinguish between nouns and verbs in noun-verb pairs (Skandera and Burleigh 2005: 9). Brookes (1994), from his side, suggests that a syllable sounds louder because it is produced with more muscular energy than other syllables (1994: 24). In addition, loudness is considered by Roach (1991) to be a feature which brings with it changes in the characteristics of the syllable (1991: 86).

- **Length**: if one syllable among a polysyllabic word is heard to be stronger and more prominent than others, there will be a strong tendency for that syllable to be heard as long, since length is an important factor in determining prominence (Roach 1991: 86).

- **Pitch**: pitch is related to the vibration of the vocal folds. The faster the vocal folds vibrate the higher the pitch is. Roach (1991) points out that pitch is related to the frequency of the vocal folds and to the musical notion of high and low pitched notes (1991: 86). Every syllable is said on some pitch. If one syllable among a polysyllabic word is produced with higher pitch than the other syllables, the high-pitched syllable is stressed (Roach 1991: 86).

  Brookes (1994) defines pitch as "the auditory property of a sound which enables the listener to place on a scale going from high to low" (1994: 25). Brookes (1994) considers this feature as the most important because it allows the listener to distinguish between stressed and unstressed syllables.

- **Quality of Vowels**: if all the vowels of the word are the same except one vowel which is different in quality, the syllable containing the different vowel is stressed (Roach 1991: 86).

Most phonologists agree that the four characteristics of stress are combined together to give the stressed syllables, while others suggest that prominence may be made by means of one or two features only. Through experiments, Roach (1991) concluded

that the strongest effects on prominence can be made by pitch and length as compared with loudness and vowel quality (1991: 86).

1.2.2. Degrees (Levels) of Stress

Working on stress in words in isolation allows the present study to distinguish the different degrees of stress.

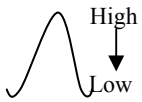
It may appear artificial to work on stress placement in disconnected words because it is rare to notice native speakers produce words in isolation. However, this aspect helps to see the different levels of stress more clearly than studying them in a continuous speech context. This what Kenworthy (1987) confirms when he proposes that it is only when words are said in isolation three degrees of stress can be distinguished (1987: 61).

Within longer words, syllables can witness different degrees of stress. Early years witnessed a disagreement between scholars for how many levels of stress a word can have. At the beginning, Jones (1972) believed that a word can bear four or five degrees of stress (1972: 247).But after many studies, Jones (1972) modifies this idea claiming that the most stress languages use two degrees of stress which are strong and weak. According to Jones (1972), intermediate degrees between the strongest and the weakest degrees of prominence are due to other phonetic features, such as vowel quality, duration or pitch rather than stress (1972: 247). This indicates that for teaching phonology purposes it is sufficient to distinguish between stressed and unstressed syllables. Kelly (2000) agrees with Jones (1972) in the distinction of only two levels of stress which are, according to him, sufficient to make learners aware of the functioning of stress (2000: 70). He suggests that the semantic function of more than two degrees of stress in English appears to be confirmed to sentences or to compound words (2000: 70).

On the other hand, most other phonologists believe that there exists three levels of stress; primary (or the main) stress, secondary (or intermediate) stress and unstressed (Brookes 1994, Giegerich 1992, Kenworthy 1987 and Roach 1991).

Primary Stress

On the stressed syllables, the pitch does not remain level, it usually moves from high to low.



Roach 1991: 87

This movement of pitch results in prominence, which gives the strongest type of stress (Roach 1991: 87). This explains that the primary stress occurs when the pitch is at the highest level. Primary stress applies to when the syllable is stressed the most. According to the IPA (International Phonetic Alphabet) conventions, primary stress is marked by putting a small vertical line /□/above and preceding the stressed syllable.

Secondary Stress

Secondary stress refers to a syllable among a polysyllabic word that is stressed to a certain extent but not as strong as the primary stress (Brookes 1994: 25). Secondary stress is weaker than the primary stress but stronger than unstressed syllables.

If a word contains two syllables preceding the primary stress, it becomes necessary to mark the secondary stress on the first syllable, while, if the primary stress is preceded by three syllables, either the first syllable or the second syllable takes the secondary stress (Brookes 1994: 27).

The notation of the secondary stress, according to the IPA conventions, is represented in transcriptions by a small vertical line below and preceding the concerned syllable /□/.

As far as the English stress system is concerned, it is obligatory to separate the primary stress and the secondary stress by an unstressed syllable.

Unstressed

The unstressed syllables are known for the absence of any recognizable amount of prominence (Roach 1991: 88). This means, unstressed syllables are known for the absence of any feature by which the stressed syllables are characterised, which are; pitch change, loudness, vowel length and the quality of vowels.

To sum up, Kenworthy (1987) comments that is not easy to hear three degrees of stress in long words, except when the word is said in isolation or when the word is in a position in a sentence when it is strongly stressed (1987:62).

1.2.3. Simple Word Stress

Through the idea of simple word stress we want to discuss the placement of stress in simple words.

1.2.3.1. Simple Words

Simple words are the words which are morphologically composed of one free morpheme. Yule (1996) defines the morpheme as "a minimal unit of meaning or grammatical function" (1996: 75). In this context, simple words are minimal units of meaning. They are minimal units because they cannot be divided to give other units of meaning or other units of grammatical function, this what Roach (1991) sums up saying that they are 'not composed of more than one grammatical unit' (Roach 1991: 95).

Simple words are free morphemes (also called lexical morphemes, Yule 1996: 76), because by standing alone they give meaning. Simple words are not linked to bound morphemes. The latter are known in English as prefixes and suffixes.

1.2.3.2. Patterns Underlying Simple Word Stress

The objective of being aware of the patterns of simple word stress is to be able to decide which syllable in a word should receive primary stress.

The placement of stress in simple words is considered by most researchers in the scope of phonology as a highly complex matter. For this reason, some scholars concluded, after many studies, that there is no need to generalize rules of stress placement of English words.

Because it is believed that English word stress placement is a complex issue, some scholars conclude that a foreign learner will find difficulties in placing stress on the right syllable for each word. As a solution, some phonologists propose that each new word introduced to the foreign learner has to be introduced with its correct placement of stress. In this issue, Harmer (2001) suggests that when students meet new words, teachers should mark the stress of those words (2001: 1991). Jones (1972) confirms this idea by noting that "….there are no rules determining which syllable or syllables of polysyllabic English words bear the main stress. The foreign learner is obliged to learn the stress of each word individually" (1972: 248). According to Jones (1972), the foreign learner of English has to learn where to place stress for each word because the generalization of the patterns of English word stress cannot be made. What explains Jones' (1972) refusal to make generalizations of the patterns of word stress is if the stress patterns of all English words are generalized - knowing that English language is rich with vocabulary and each word has a different stress pattern-, there would occur plenty of exceptions.

In contrast to Jones' (1972) and Harmer's (2001) views, other phonologists (Brookes 1994, Hancock 2004, Giegerich 1992, Kenworthy 1987 and Roach 1991) have established the rules of simple word stress.

The establishment of the patterns of stress in simple words took into consideration the grammatical category to which the word belongs (nouns, verbs…etc) and it took into account the number of syllables which the word has (Roach 1991). Every bi-syllabic noun, verb, adjective (and adverb) has a specific rule; the same is true for nouns, verbs, adjectives (and adverbs) which consist of three syllables. It has to be noticed that stress is assigned only to lexical words which are members of syntactic categories (nouns, verbs, adjectives and adverbs), whereas, function words like prepositions and articles do not bear stress (Giegerich 1992: 190).

Raising the learners' awareness on the patterns which underlie the placement of stress in simple words is useful for the sake of increasing the understandability of the oral message between the speaker and the listener. In addition, English foreign learners should be made conscious of the exceptions that these generalizations bear.

The Rules

1.2.3.2.1. Monosyllabic Words

Monosyllable words cannot be said to have word stress. They consist of one syllable, whereas, to recognize whether a syllable is stressed or not it should be compared to an unstressed syllable in the same word. Stress is a relative feature; a syllable is defined as stressed in relation to an unstressed syllable in the word.

All monosyllabic words are heavy, therefore, they are stressed.

Monosyllabic words do not pose any problem in the placement of stress, while, the rules of stress placement in words with more than one syllable present some difficulties for the English foreign learner to acquire them and to produce the words correctly.

1.2.3.2.2. Bi-Syllabic Simple Words

Stress on the words which are composed of two syllables relies on the grammatical category of the word. The placement of stress is stable for each word. Stress may be found on the first or on the second syllable depending on the following rules:

Two Syllable Verbs

- If the second syllable consists of a long vowel, a diphthong or if it ends with more than one syllable, it will be stressed.
- If the second syllable contains a short vowel, one (or no) consonant, then the first syllable will be stressed.
- The first syllable is stressed if the final syllable includes the diphthong /ə□/.

Two Syllable Nouns

- If the second syllable has a short vowel, the first will be stressed, and if the first syllable has a short vowel, the second will be stressed.

Two Syllable Adjectives

- If the second syllable of the adjective includes a long vowel, a diphthong or if it ends with more than one consonant, that syllable will be stressed.
- If the final syllable consists of a short vowel or one (or no) consonant, the first syllable will be stressed.
- The final syllable cannot be stressed if it contains the diphthong /ə□/.

Exceptions to the above rules are: □honest and □perfect (Roach 1991).

Some words are both nouns and verbs. The placement of stress in the words derived from the noun-verb pairs allows making a distinction in the class of the word. The stress placement in the noun-verb pairs obey to the following rules:

- If the word is a noun, the first syllable takes the stress.
- If the word is a verb, the stress falls on the second syllable.

Such words (noun-verb pairs) are: record, contrast, desert, export, object, present, produce, protest, rebel and report (Hancock 2003).

On the contrary, in the following noun-verb pairs, the stress is at the same place (on the first syllable) even if the word is a noun in one case or a verb in the other case: answer, picture, promise, reply, travel and visit.

Two Syllable Adverbs: adverbs behave in the same way as verbs and adjectives do.

1.2.3.2.3. Three Syllable Simple Words

Similar to the patterns of stress placement in bi-syllabic words, the stress placement patterns of the words containing three syllables are governed by the grammatical category to which the word belongs.

Three Syllable Verbs

- If the last syllable contains a short vowel or only one consonant, stress will fall on the penultimate syllable.
- If the last syllable is characterized to have a long vowel, a diphthong, or more than one consonant, that syllable will take the stress.

Three Syllable Nouns

- If the last syllable contains a short vowel or the diphthong /ə□/, and if the penultimate syllable contains a long vowel or a diphthong or more than one consonant, stress will fall on the penultimate syllable.
- If the second and the third syllables consist of short vowels, no diphthongs and if they consist of no more than one consonant, stress will fall on the first syllable.

So far, the above rules show that the placement of stress on syllables relies on the strength of the syllable by means of a long vowel, a diphthong or more than one consonant. Another rule of three syllable simple words comes as follows:

- If the final syllable has a long vowel, two consonants and more, or a diphthong, stress will fall on the first syllable because the last syllable will be heard quite prominent.

Three Syllable Adjectives

- If the last syllable consists of a long vowel, two consonants and more or if it consists of a diphthong, stress will fall on the first syllable because the last syllable will be heard quite prominent.

(Roach 1991: 89)

The above rules represent the generalizations which the phonologists made for the placement of stress in simple words. In addition to establishing the patterns of simple word stress, phonologists have established a number of rules for the placement of stress in complex words.

1.2.4. Complex Word Stress

Similar to simple word stress, the notion of complex word stress is said to indicate complex words bearing stress. Despite the fact that different degrees of stress exist, in dealing with raising learners' awareness of complex word stress, the primary stress in comparison to the secondary stress was given more importance.

1.2.4.1. Complex Words

The discipline which deals with word formation process is known as morphology. Morphology is "concerned with the structure of words" (Skandera and Burleigh 2005: 51). Other scholars consider it as the "study of forms" (Yule 1996: 75).

When dealing with the effect of the different structures of words (word formation) on the pronunciation level, we become, therefore, dealing with morphophonology. In other words, the overlap between two core areas of linguistics; phonology and morphology is known as morphophonology or morphonology (Skandera and Burleigh 2005: 52). Morphophonology is "the study of the phonological structures of morphemes" (Malmkjær 1991: 431), it studies phonemic variation within morphemes.

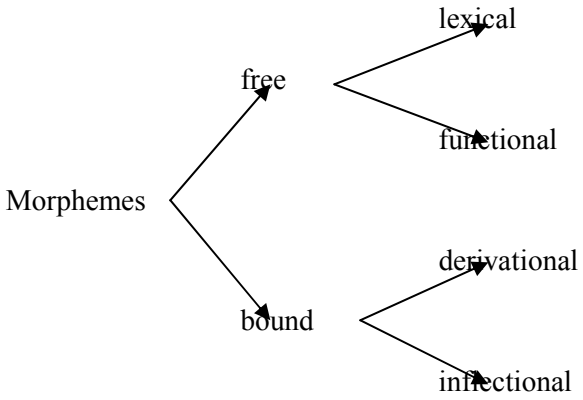
As opposite to simple words, complex words are composed of more than one grammatical unit. The grammatical units are morphemes, which indicate that complex words are morphologically constructed by more than one morpheme. Complex words

cannot be composed of two or more free morphemes (lexical morphemes), as they cannot be formed by two bound morphemes. Complex words must be composed of one free morpheme and one or more bound morphemes. In other words, complex words are a set of free morphemes linked to bound morphemes. The latter represent a kind of morphemes which cannot stand alone and which must be attached to a free morpheme (Yule 1996: 75). When the bound morphemes stand alone, they do not give meaning, this is why, they must be attached to a free morpheme (a simple word). The simple words when used with bound morphemes they become known as the **stem** (Yule 1996: 75).

Bound morphemes are divided into two different types; **derivational bound morphemes** and **inflectional bound morphemes** (Yule 1996: 76-77). The different types of the bound morphemes are also known as **affixes**, which explain that all the affixes are bound morphemes which are divided, in English, into **prefixes** and **suffixes**. The prefixes are the bound morphemes which precede the root word (the stem), whereas the suffixes are the bound morphemes which come after the original word.

The derivational bound morphemes change the grammatical category of the free morphemes (which become known as stems) when they are linked to them. They are mainly used with the objective of producing new words (Yule 1996: 76). By adding the derivational affixes to the simple words, new words with new categories appear to be derived from the stem. To illustrate, through some affixes it is possible to derive adverbs from adjectives, as it is possible to derive nouns from verbs by adding a set of affixes. On the other side, the inflectional bound morphemes do not produce new words from the stem. They are mainly used to indicate aspects of the grammatical function of the words which are; past tense (ed), plural (s), third person singular present tense (s), and present participle (ing).

The following chart summarizes the different categories of morphemes as follows:



Yule 1996: 78

According to Roach (1991), complex words are of two types; affix words and compound words. The latter are constructed by means of two independent words, whereas the former refer to the basic word with the inclusion of one or more affixes (Roach 1991: 95). The present study, however, is dealing with affix words (referred to in the present study as complex words) and how the stress placement changes or how it is kept the same as of the simple words after adding affixes to the simple words.

The distinction between simple words and complex words can be noticed as being hard sometimes to decide whether polysyllabic words are complex or simple because most of them have come from other languages. Such illustrations are the words which have Latin origin and which are formed by adding the prefixes ‘sub’, ‘per’ and ‘com’ to ‘mit’. The result will be the following words; submit, permit and commit. In addition, other words come from Greek origin, such words are catalogue, analogue, dialogue and monologue. All the English words, mentioned previously, cannot be analysed in terms of root words linked to prefixes (Roach 1991: 95). If they would be analysed, each of the two parts alone would have no meaning. The two parts of the words cannot be treated as separate grammatical units, which results the difficulty of studying the English morphology. As a conclusion, it can be noticed that sometimes the distinction between simple and complex words cannot be drawn.

1.2.4.2. Patterns Underlying Complex Word Stress

Morphophonologically speaking, the affixes which have effects on the shift of stress placement within the original words are the derivational affixes.

Simple words are noticed to have fixed stress placement, but when adding the derivational affixes to simple words (which in this case become known as stems) a few changes may occur on the placement of stress in the stems. On the other hand, the inflectional affixes, which are used to identify grammatical functions of the original words, have no effects on the shift of stress placement in the stems. For this reason, the present work in dealing with complex word stress has focused on the derivational bound morphemes neglecting the inflectional bound morphemes.

Like simple word stress, not all researchers in the scope of phonology agree on whether there might be regularities of complex word stress, and not all phonologists agree on whether there exist affixes which have effects on the placement of stress in complex words. Kelly (2000) considers prefixes and suffixes as not being stressed in English (2000: 69). Clark and Yallop (1990) agree with Kelly (2000) in the point that stress falls on the root regardless of prefixes and suffixes (1990:299). This means that the three phonologists believe that when modifying simple words with prefixes and (or) suffixes, the stress placement of the words before being modified will be kept the same as the stress placement of the stems.

In contrast to the preceding phonologists' point of views, research discovered that a considerable number of affixes play a great role in determining where to place stress in most English complex words. It is believed that the morphological construction of words plays a major part in the regularities that govern complex word stress. Brookes (1994), Giegerich (1992), Hancock (2003), Kenworthy (1987), Kreidler (2004) and Roach (1991) these phonologists and other phonologists agree on the fact that some affixes may shift the placement of stress of the simple words when modifying them. However, each phonologist considers the role of affixes differently. Some phonologists categorize the affixes into different kinds in relation to their origins, while others categorize the affixes in relation to their strengths and their weaknesses.

Kreidler (2004) proposes that the relation between stress and affixes returns back to the origin of the affix. If the prefixes and the suffixes are of Old English origin, they have no effects on the position of stress, while words of Greek, Latin or French origins often show a change of stress placement when an affix is added (Kreidler 2004: 79). On the other hand, stress is believed by Brookes (1994) to be determined by the strength and the weakness of the suffix. When the suffix is a strong ending, it takes stress, but when the suffix is a weak ending, it will not determine the placement of primary stress in the word (1994: 27-28).

According to Brookes (1994), the strong endings are divided into two types; strong stressed suffixes and strong unstressed suffixes (1994: 27-28). The latter determine the position of stress in the word but they do not bear the primary stress, whereas the former carry the primary stress themselves.

From Brookes' (1994) analysis of the relation of stress with the morphological structure of complex words, it appears clear that Brookes (1994) believes that only suffixes have effects on stress ignoring the role which prefixes might play.

Another identification of the role of affixes (mainly suffixes) on stress placement is the division of the suffixes into stress-neutral suffixes and stress-shifting suffixes (Giegerich 1992: 191, Roach 1991: 95). The stress-neutral suffixes never make any changes to the stress patterns of the base (the word to which they are attached). On the contrary, the stress-shifting suffixes are those which either receive the primary stress themselves or those which do not bear the primary stress, but when they modify the simple word, they determine on which syllable of the complex word the stress falls.

The Rules

The patterns of complex word stress are generalized according to the three different types of suffixes; **stress-neutral suffixes**, **stress-shifting suffixes which carry primary stress themselves** and **stress-shifting suffixes which determine the placement of stress in the root word.** These rules are concerned with suffixes because prefixes are known as not making any changes in the stress patterns of the

original word, except for the prefixes ‘bi’ and ‘dis’ which carry the primary stress themselves.

1.2.4.2.1. Stress-Neutral Suffixes

They are known as not bringing any changes to the patterns of stress of the root word before being modified. They involve the following suffixes:

able, ably, age, er, ment, less, ness, y, al, en, full, ish, ly, ous, fy, wise (Brookes 1994, Roach 1991) .

1.2.4.2.2. Stress-Shifting Suffixes

They are divided into strong stressed suffixes and suffixes influencing the change of the stress patterns in the stem.

1.2.4.2.2.1. Suffixes Carrying Primary Stress

With suffixes carrying primary stress, the complex words will have primary stress on the suffix. This indicates that simple words have stable stress placement on their syllables, when suffixes of this type are added to the simple words, the stress moves from the original syllable of the root word to be placed on the suffix. The suffixes which bear primary stress are listed below:

ese, ain, ee, ette, esque, eer, ique, ade, oo, oon, escence, osis, itis (Brookes 1994, Roach 1991).

1.2.4.2.2.2. Suffixes Determining the Placement of Stress in the Stem

There exists suffixes which are strong because they determine the placement of stress in the complex word, but they do not carry primary stress themselves. They are strong stressed suffixes. They influence the change in the placement of stress in the stem.

The determinism of the placement of stress by the suffixes is divided into **primary stress occurs immediately before the suffix** and **primary stress occurs two syllables before the suffix**.

A. Primary Stress Occurs Immediately before the Suffix

When suffixes of this type modify the simple words, the stress either moves to the syllable which precedes the suffix, or it must be kept on its place if it was placed on the last syllable of the simple word.

The following suffixes represent the type of suffixes with which we are dealing:

ian, io, ia, ial, ious, ior, ic, ish, it, ity, itive, ive, itude, itant, iable, ify, ible, graph, logy, logist, ual, al, uous and eous (Kenworthy 1987, Brookes 1994).

B. Primary Stress Occurs Two Syllables before the Suffix

With this kind of suffixes, the root word must be consisted of at least two syllables. When suffixes of this type modify simple words, the stress either changes its place by moving to the second syllable before the suffix, or it will be kept at its original place if it was placed on the syllable preceding the last in the original word.

The suffixes representing the present kind of stress-shifting suffixes are listed below:

ous, ism, ize and ate (Brookes 1994).

Conclusion

To be able to communicate in English with native speakers and with non-native speakers, foreign learners have to be made aware of the patterns of word stress, in general, and they have to be made conscious of the rules of complex word stress, in particular because the correct perception, acquisition and production of complex word stress help the transmission of the spoken message. The present chapter has provided us with the different characteristics of stress, and it has provided the rules which govern simple word stress and complex word stress. The foreign learners need to be made aware of the patterns of word stress, because they are of a vital role in the transmission of the spoken message. The reason, in fact, for believing that learners of

English as a foreign language have to be supplied with the rules of word stress is because at this level, errors most damaging to comprehensibility occurs, this what the following chapter discusses.

Chapter Two

Intelligibility and Word Stress Acquisition

Introduction

To communicate successfully, non-native speakers need to acquire the aspects of pronunciation. One of the aspects of English pronunciation the misuse of which can threaten the understanding of English spoken discourse is word stress. Speakers are not free to stress whatever syllable they want. There are specific rules for the placement of stress in English words, which the foreign learner has to respect.

The benefits which can be gained from acquiring the correct placement of stress when listening and when producing English words (simple and complex) will be discussed in the present chapter.

2.1. Raising Non-Native Speakers' Awareness of Aspects of Pronunciation

The traditional teaching of pronunciation used to focus on segmental aspects of pronunciation without taking into account the context in which the segmental features occur. The old teaching of pronunciation focused on vowels and on consonants, but more attention was given to vowels because they were believed to pose problems with EFL learners. The traditional teaching of pronunciation paid a superficial attention to suprasegmentals. Suprasegmentals are "those features of speech which extend over more than one segment, such as intonation [and stress]" (Crystal 1980: 314, cited in McNerney and Mendelsohn 1992: 185). Suprasegmentals deal with more than words in isolation; they refer to the prosodic features including stress, rhythm, intonation and features of connected speech (Jenkins 2000: 32). However, teachers and foreign language syllabus designers give more importance to the segmental features believing that they are sufficient to understand the meaning of the spoken discourse.

In acquiring a foreign language with the objective of communicating, learners should be equipped with authentic language materials. Teaching the suprasegmentals provide learners with the needed authentic language materials. The teaching/learning of suprasegmentals should be dominating because the prosodic features are significant

for the communication of meaning. The suprasegmentals control the structure of information (McNerney and Mendelsohn 1992: 185). On this issue Naiman (1992) observes that "English pronunciation is inextricably linked to meaning at the discourse level and must be presented to students in that way and practised accordingly" (1992: 163). This means, that teaching pronunciation has to take into consideration the spoken discourse which indicates that teaching pronunciation must involve the different aspects of suprasegmentals, through which the meaning of the oral message can be conveyed.

Suprasegmentals are more necessary for communication than the correct production of individual sounds. The latter can be inferred from the context when they are incorrectly pronounced (McNerney and Mendelsohn 1992: 185). Teaching pronunciation has to be tied to meaning to achieve communicative effectiveness. It should focus on teaching the suprasegmentals for the reason that they have an impact on the comprehensibility of learners' English.

Errors in the production of the segmental phonemes are less significant to overall intelligibility than errors in suprasegmentals (Evans 1993: 40). When learners of English as a foreign language mispronounce some of the vowels and the consonants and produce the prosodic features accurately, the meaning of the spoken discourse can be correctly conveyed to the listener(s). Contrarily, when the foreign learners do not produce correctly the suprasegmentals, even though they pronounce all the sounds correctly, the intended meaning of the spoken discourse cannot be received correctly by the listener(s). Besides, Jenkins' (2000) findings confirm the benefits of focusing on teaching the suprasegmentals rather than the segmental features since she discovered that the segmental variation has a rather minus effect on intelligibility of English speech than the suprasegmentals (2000: 32).

Since learning English as a foreign language occurs in a foreign context, teachers should provide learners with the correct pronunciation of its phonetics and phonology, and due to the importance of the suprasegmentals in understanding the spoken discourse, they have been incorporated into communicative

approaches to language teaching. In other words, the reasonable goal of learning the suprasegmentals of English is to avoid unintelligibility and to be comfortably intelligible when a non-native speaker interacts with native speakers or with non-native speakers. To achieve an intelligible conversation means to be understood by a listener. Kenworthy (1987) defines intelligibility as "being understood by a listener at a given time in a given situation" (1987: 13). Indeed, the more words a listener is able to identify when said by a particular speaker, the more intelligible the speaker is. In contrast, unintelligibility refers to when the speaker utters a word or a sequence of words with a mistaken feature of pronunciation which leads the listener to hear a different word or a different phrase from the one the speaker aimed to say. Kenworthy (1987) believes that it is important to be intelligible rather than achieving native-like pronunciation (1987: 13). Even if the foreign speaker does not produce exactly the same sounds of English, the most important issue is to be understood when heard.

Most applied linguists (like Ellis 2008 and Hedge 2000) agree on the crucial role which the awareness-raising activities play in raising the consciousness of the role of complex word stress patterns' acquisition on intelligibility, specifically if the activities are well structured. Because English phonology is a closed system, the awareness-activities and the rule instruction of aspects of phonology are necessary to try to overcome the difficulties that foreign learners face in producing the phonological forms of a foreign language in early stages (Ellis 2008: 103). Through the intensive exposure to aspects of a foreign language, learners will reach more advanced levels. Hedge (2000) observes the efficient impact of both the consciousness-raising and practice on making learners produce aspects of pronunciation correctly (2000: 286). Besides, she proposes that the teacher's supervision and the teacher's correction of learners' mistakes are of a crucial value which completes the good acquisition of aspects of pronunciation that is because learners cannot notice language features (2000: 288).

2.2. Importance of Learning Word Stress

Learning word stress is an important factor to overcome the difficulties that foreign learners face in acquiring, in perceiving and in producing word stress. There are some aspects which may enhance the difficulties of acquiring word stress, which the learners need to be made aware of are the predictability of word stress and the role which word stress plays in achieving an intelligible oral conversation.

2.2.1. Predictability of Word Stress

Word stress in many languages is predictable. It is, in this case, governed by a single rule which is applied to almost the vocabulary of the language. In fact, all the words in a specific language may be stressed on the initial syllable or on the final syllable without having exceptions that can damage the rule. These kinds of languages are said to have **fixed stress** (Skandera and Burleigh 2005: 73, Fudge 1990: 33). Such languages are; Czech, Polish, French and Hungarian. They have fixed stress placement, since the stress in Czech, for instance, falls always on the first syllable of all the words, whereas, the stress in French, for instance, falls always on the last syllable (Brookes 1994: 27). This means, in acquiring the placement of stress of the fixed stress languages, learners will not find difficulties in where to place stress for each word because all the words have the same placement of stress. However, because French learners of English, for instance, have a precise rule for placing stress in their native language, when learning English, which is not characterised as having free stress, they apply their native language rule for placing stress on the foreign language, for this reason foreign learners have to be made aware of the patterns of English word stress.

In other languages, such as English, word stress is more difficult to be predicted. English word stress is said to be unpredictable and variable. The variability of stress indicates that in polysyllabic words, the stress may be found on the first syllable, on the second syllable or on the third syllable…etc, which does not allow speakers to be free to put stress on whatever syllable they want (Kreidler 2004: 179). Languages

derived from this type of stressing their words are said to have **free stress** (also known as **movable stress**) (Skandera and Burleigh 2005: 73). In addition, Kenworthy (1987) points out that English has a free stress because a simple word in English has a stable stress pattern, but when we add some suffixes to it, the original stress placement will be changed (1987: 59). Since English word stress is variable, learners need to pay attention to the location of the main stress in English words. This attention can be drawn to the learners through the awareness-raising activities and through governing the rules of word stress which can solve, to an extent, the difficulties in which the foreign learners fall when learning the pronunciation system. The difficulties of acquiring stress placement rules lead the foreign learners to face an unintelligible oral communication with native speakers and with non-native speakers, for this reason, the rule instruction and the awareness-raising activities are of a vital role.

2.2.2. The Effect of Word Stress on Intelligibility

To be intelligible means to be understood by the partners of the conversation. Word stress, sentence stress, rhythm and intonation are aspects of pronunciation which have significant roles in affecting intelligibility. Kenworthy's (1987) findings discovered the important role of stressing the right syllable in achieving intelligibility. Kenworthy (1987) observes:

> "if the learner doesn't stress one syllable more than another, or stresses the wrong syllable, it may be very difficult for the listener to identify the word. This is because the stress pattern of a word is an important part of its identity for the native speaker."
>
> (1987: 18)

Native speakers rely very much on the placement of stress in the words when they are listening to the speech of their partners. Kenworthy (1987) justifies the impact of word stress by claiming that when a native speaker mishears a word, it is because the stress has been put on the wrong syllable by the foreigner or because no syllable of the word was stressed, but not because the sounds of the word have been mispronounced (1987:

18). This explains, indeed, the impact of the correct production of word stress on its perception and on understanding the intended meaning behind the uttered word.

Suprasegmentals are more vital for communication than the correct production of sounds is. Since stress is a suprasegmental feature, the correct production and the correct perception of word stress are important aspects for a successful communication. Stress has a crucial role in helping the transmission of the oral message, because native speakers rely very much on it to get at the intended meaning of speech (Naiman 1992: 163). Producing words without stress or with misplaced stress may distort the meaning of the word. In fact, making errors in stress placement causes more miscommunication than what errors in consonant or vowel sounds cause. Jenkins (2000) reinforces that stress, intonation and rhythm have the greatest impacts on intelligibility (2000: 32). It must be concluded, therefore, that foreign learners of English have to be supplied with the rules of word stress, because at this level the errors most damaging to comprehensibility occur.

Misplacing stress in English words leads the meaning of the words to be disappeared. The meaning of the words will be changed and replaced by another meaning. Instead of pronouncing the word ‘special’, for instance, with placing stress on the first syllable and with a schwa on the last syllable, the stress has been placed on the last syllable with lengthening its vowel, while the first syllable was unstressed (example adapted from Brookes 1994: 27). In another case, the word ‘written’ was pronounced with stress on the second syllable instead of the first, as a result the word became perceived by the listener as ‘retain’. ‘Comfortable’ was, also, mispronounced with stress on the first syllable and on the third syllable which led the listener to misunderstand the exact meaning of the word and he concluded that the speaker was saying ‘come for a table’ (examples adapted from Kenworthy 1987: 18).

Even when the speakers produced the sounds correctly in the previous examples, the listeners could not understand the meaning of the words because they relied on the

stress patterns of the words to identify their meaning. The three cases mentioned in the examples above show clearly the reliance of English native speakers on the production of stress by the speaker, as they explain the non-significant role of the segmental features in transmitting the message of the speaker. This indicates the importance of stress in the identification of words. On the other hand, if a non-native speaker misplaces stress on the correct syllable of any word when communicating with non-native speakers, listeners cannot identify the meaning of the word because they are less competent than native speakers to bring the contextual cues to interpret the mistakes in word stress (Jenkins 2000: 40).

To avoid the misunderstanding of the conversation between the speaker and the listener, non-native speakers need to become conscious of the patterns of word stress and they need to practise them. In fact, learners' mistakes in the placement of stress in complex words may be due to the fact that they are unaware of the rules of complex word stress, for this reason, the full explanation of the rules is needed to allow learners correct their mistakes (Hedge 2000: 288). Jenkins (2000) distinguishes between the features of pronunciation which are learnable among those which are teachable. English word stress is recognized to be a teachable feature because of the clear-cut, generative nature of its rules (2000: 02). The rules of word stress are very important; this is why the teacher should not pass by simply because they are of a significant use (Kelly 2000: 68). Indeed, making learners aware of the rules of word stress, in general, and making them aware of the patterns of complex word stress, in particular, help them improve the production and the perception of complex word stress. However, teaching the theoretical aspect of word stress alone does not seem to be sufficient, this is why it needs the practical aspect.

2.2.3. Other Functions of Word Stress

In addition to its principle function which is allowing speakers understand each other when communicating, word stress in English has the function of distinguishing the verbs from the nouns in noun-verb pairs. This function is a lexical distinction (Clark and Yallop 1990: 278). There are different lexical words in English which have the same spelling and the same pronunciation. Some words may be nouns and verbs at

the same time; they are derived from the noun-verb pairs. If such a word is written in isolation, the reader will not be able to distinguish the grammatical category to which the word belongs, unless if the word is written in a sentence. Besides, if a word is said in isolation without being stressed, the listener cannot distinguish whether the word is a verb or a noun, except when the word is said in a sentence where grammatical category will be easy to be distinguished. On the contrary, stressing the right syllable when producing the noun-verb pair words in isolation allows the listener to distinguish whether the word is a noun or a verb. In other words, when noun-verb pair words are produced in isolation with stress on the right syllable, the listener will be able to identify if the word is a noun or a verb with no need to be said in a sentence. However, to be able to distinguish a noun from a verb among noun-verb pairs, the non-native speaker has to know which stress placement pattern distinguishes a noun from a verb, where here appears the role of the rule instruction and the consciousness-raising activities to be important.

Another function of word stress is an instrumental function (Giegerich 1992: 181). The present function of word stress is to maintain the rhythm in connected speech. If the last word in a sentence, for instance, is stressed, the listener finds it easy to understand what is coming next. Indeed, stress in a spoken discourse has the function of organizing the information (Clark and Yallop 1990: 178, Gee 1999: 102).

2.3. The Consciousness-Raising Activities

The consciousness-raising activities involve techniques which encourage learners to pay attention to language forms in the relief that an awareness of form will contribute indirectly to language acquisition. The awareness-raising activities focus on specific aspects of a language. They provide learners with guidelines and activities which encourage them to think about a specific aspect of a language and to draw their own conclusions about how the language works (Willis and Willis 1996: 63).

One of the characteristics of consciousness-raising activities is the fact of isolating a specific language feature for focused attention (Ellis 1993, cited in Willis and Willis 1996: 64). Any existing language is rich with its different aspects (morphology,

phonology and syntax). Thus to allow learners acquire a foreign language there must be a focus on a specific aspect which they should be exposed to, followed by practising that aspect through the written and the spoken tasks. When the teacher observes that the learners have acquired the language aspect, he/she moves to another aspect to make them focus on.

To make the consciousness-raising activities successful, foreign learners have to be provided with data which illustrate the targeted feature (Ellis 1993, cited in Willis and Willis 1996: 64). If learners are in a process of acquiring a specific language feature, the role of the teacher is to bring them the illustration concerning this aspect from texts. The illustrations can facilitate the acquisition of the language aspect, as it can put the foreign learner in the appropriate context. The aim of providing learners with illustrations is, in fact, to enable them communicate accurately.

After raising the learners' awareness of a specific language feature, and after providing the necessary illustrations, the role of the learners in this stage is to make hypothesis about the language aspect (Ellis 1993, cited in Willis and Willis 1996: 64). Consciousness-raising is explained by the fact of encouraging learners to notice particular language features. The consciousness-raising activities encourage learners to draw conclusions from what they have noticed.

The aspects of the awareness-raising activities are allowing learners to focus on a specific language phenomenon and providing them with the necessary illustrations to facilitate the acquisition, which goes hand in hand with the aim of the present investigation. The principles of consciousness-raising activities can be successfully realized with the help of the teacher by implementing the most appropriate approach to language teaching.

2.4. PPP Approach to Teaching vs SLA Approach to Learning

A debate among applied linguists was raised on whether a foreign language acquisition is affected by rule instruction, or whether there is no effect of rule instruction on language acquisition. The first view was supported by the PPP approach

to language teaching, whereas, the contrasting view found supports among SLA researchers.

2.4.1. PPP Approach to Teaching

PPP approach to teaching involves three phases which are presentation, practice and production. The PPP approach is defined as "A focused presentation stage is followed by practice activities. These practice activities are designed to enable learners to produce rapidly and easily the material which has been presented" (Skehan 1996: 17). Skehan's (1996) definition of the PPP approach indicates that the first procedure of the PPP approach is to present the language aspect which the learners have to focus on. The first stage includes the explanation of the rules. After presenting and explaining the language phenomenon, learners are required to practise all that they have learned in order to use and to produce the language freely, fluently and flexibly.

The PPP approach to teaching is known for the role which the teacher plays to make its principles successful. The teacher has a clear, professional role which is organizing the operation of the different stages of the approach. The teacher is in charge of the proceedings (Skehan 1996: 17). The teacher has the role of controlling everything; he is the one who presents the aspects of the language, and he is the responsible for providing learners with the activities which will be practised. The teacher organises the activities in a way to allow learners produce the language accurately and fluently. In fact, the lessons are ordered by the teacher or by syllabus writers followed by an evaluation of what was taught (Skehan 1996: 17).

Learning under the PPP approach is 'focused on rules which are then automatised as a set of habits' (Skehan 1996: 17). The PPP approach to teaching allows learners to come across the rules which explain the language phenomenon. After a sufficient amount of time of exposure to language rules, learners will acquire the rules automatically. Ellis (1990) points out that instruction is more effective on the rate and on the level of second/foreign language acquisition than the exposure does (1990: 131). A number of studies were done to test the effect of instruction on language

acquisition. They almost achieved that rule instruction is a more effective way of learning English for adults than trying to learn it in the street (1990: 131).

The PPP approach to teaching was massively criticised because of a set of reasons. There is a belief that the rule instruction, which the PPP approach advocates, does not have any effects on language acquisition. Besides, Skehan (1996) observes that focusing on a specific language form leads to the automatization of learning, while learning a language involves the internal processes (1996: 18). Moreover, the teacher in the PPP approach is criticized as not being able to control the learning process. Any approach to teaching should not ignore the learners' contribution to learning. Learners make inferences, hypotheses and generalizations about the language system (Skehan 1996: 18).

Despite the deficiencies which the PPP approach has shown, its implementation in language teaching is still satisfactory for the role which the teacher plays.

2.4.2. SLA Approach to Learning

SLA is a new approach to learning which appeared in recent years. SLA researchers claim that teaching does not and cannot determine the way the learners' language will develop (Ellis 1985, 1994 cited in Skehan 1996: 19). Language learning is operated by natural (mental) processes. This means that without the instruction of a language rules, learners can learn the foreign language because they are borne ready to learn any language, but there is a need of just being exposed to the target language.

In acquiring an aspect of a foreign language, the learner goes through a series of stages, which indicates that the acquisition does not go directly to the target language (Hedge 2000: 11). 'It is through a hypothesis making and hypothesis testing learners make sense of the language input and impose a structure on it' (Hedge 2000: 11). The SLA approach supporters believe that learners acquire the structure of a language by being exposed to, with no need to an explicit explanation of rules. Since there is no rule instruction, learners will hypothesize and generalize the rules according to the

input. Rule hypothesis will never be correct, learners make mistakes for this reason they test their rules each time. Learners, in acquiring a foreign language, pass through different stages until they approximate the rules of the target language. This developing system is known as 'interlaguage'.

A major concern of SLA research is to take into account such changed views and to explore their implications for language teaching. SLA approach advocates the view that teachers should provide learners with varied input, which will automatically develop the learners' language system without language focused instruction (Krashen 1985).

As a criticism to SLA approach to learning, research has established the effect of instruction on language acquisition. Long (1983, 1988), for instance, has demonstrated that instruction does have an effect on language acquisition (cited in Skehan 1996: 19). Long (1983, 1988) emphasises that instructed learners make faster progress than uninstructed learners, and they reach higher levels of achievement. However, they acquire a language in their own way, following their own developmental sequence, not a sequence which is imposed by a teacher (Long1983, 1988, cited in Skehan 1996: 19).

Through the contrasting views of SLA approach and PPP approach we can conclude that language acquisition is a mixture of internal factors with external factors which are surrounding the learners. Experiments have shown the important role which the rule instruction plays in facilitating the acquisition of a specific aspect of a language. However, the language acquisition cannot occur without the mental processes of the learner. Learners are equipped naturally with processes which make them ready to acquire any language, that are helped by the external factors surrounding the learner. Indeed, the role of the teacher appears important in providing learners with the necessary materials and his role is reinforced by explaining the materials.

Teaching word stress (complex word stress) is highly rule governed, for this reason, implementing the PPP approach helps foreign learners to acquire this aspect successfully. In teaching word stress, the first aspect which the teacher has to equip learners with is all the possible rules of word stress. The teacher has to present the rules to the learners by explaining each rule, followed by the illustration with specific words according to each rule. After the rule instruction phase, learners have to practise the rules through the spoken and the written activities to confirm that the learners have acquired all the patterns of word stress (complex word stress). In fact, the practice phase does not only ensure that learners have acquired the stress placement of the foreign language, but it has also a role in allowing learners produce words with correct stress placement. The excessive production of word stress aims to help learners use what was learned when communicating.

Conclusion

Acquiring the correct placement of stress in a foreign language, mainly in English, is a crucial factor for achieving a successful communication. English native speakers rely very much on the placement of stress to identify the meaning of the word. If the foreign learner misplaces the stress on English complex words, the meaning of the word will be distorted and the communication will be broken down, this is why, acquiring the patterns of word stress is necessary to preserve intelligibility between speakers and listeners. The acquisition of complex word stress requires two essential factors; the internal factors with which the learners are equipped and the external factors which are represented in the exposure to the target language and the rule instruction which the teacher provides, in addition to the activities which the learners are required to practise.

Chapter Three

Research Methodology and Design

Introduction

The present chapter exposes the method chosen to accomplish this research and the reasons behind its choice, also, it presents the subjects with whom the experiment was conducted, the materials and the procedures. A number of justifications are put forward to explain the choice of the subjects, their number and the rationale behind the chosen materials and the chosen procedure. In addition, the present chapter presents the method through which the data was analysed.

The main purpose of the present study is to assess the extent to which the rule instruction and the awareness-raising activities of simple word stress and complex word stress can improve learners' ability to perceive and produce stress in complex words. To accomplish the purpose of this study, it seems important to answer the research question and refuse or accept the research hypotheses.

3.1. Statement of Research Question and Research Hypotheses

3.1.1. Research Question

The present study attempts to investigate the effect of the rule instruction and the consciousness-raising activities of stress in simple words and in complex words on the EFL learners' ability to perceive and produce stress in complex words.

The present study adopts the following research question:

Do instruction and the awareness-raising activities of simple word stress and of complex word stress have an effect on EFL learners' perception and the production of complex word stress?

Through the research question, we seek to find out whether the explanation of all the possible rules of simple word stress and of complex word stress, with all the exceptions that these rules bear and whether the activities practised concerning each

rule help the learners of English as a foreign language to improve their perception and their production of stress in morphologically complex words.

The above explanations of the research question will be summarized in the following research hypotheses.

3.1.2. Research Hypotheses

H_0: Rule instruction and awareness-raising tasks of stress in simple words and in complex words result neither in a better perception nor in a better production of complex word stress.

H_1: Rule instruction and consciousness-raising tasks of simple word stress and of complex word stress lead to a better achievement in the perception of complex word stress.

H_2: Rule instruction and awareness-raising activities of stress in simple words and in complex words result in a better production of complex word stress.

In what follows comes the experimental design of this research.

3.2. The Choice of Method

The method chosen for conducting the present study is the true-experimental method. The experimental research deals with measurable phenomena (Bell 1999: 14). It is a quantitative research which involves data collection procedures that result primarily in numerical data (D□rnyei 2007: 26). To collect data in an experimental research there must exist two groups randomly chosen; an experimental group and a control group. Subjects have to be randomly selected because this selection might give both high aptitude students and slow students in both groups (Nunan1992:26). If the students are not selected randomly, high aptitude students will be in one group and slow students will be in another group, this is why the random selection of the sample is advocated. In fact, the non-randomized selection of the subjects affects the lack of the internal validity since the conclusions of the causal relationship between variables are difficult to be drawn. The experimental group receives a treatment full of

instruction and awareness, whereas the control group should not receive any kind of treatment. To conduct a successful experiment, both groups must be tested before starting the experimental treatment. After the instruction period the two groups will be subjected to a post-treatment test to allow conclusions to be drawn about cause and effect relationship of the phenomenon (Bell 1999: 14-15).

Nunan (1992) claims that the reason behind carrying out the experimental method is exploring the strength of relationships between variables (1992: 25). Ellis (2008) observes that most researches in L2 phonology are theory driven i-e, researchers drive a theory and test it through an experiment (2008:103) The hypotheses are postulated and the research is structured in such a way as to enable the hypotheses to be tested (Bell 1999: 25) aiming to test the effect of rule instruction and awareness-raising activities on helping learners improve the production and the perception of stress in complex words. This cause/effect relationship can only be tested by conducting an experiment. Indeed, the experimental research is used to allow the manipulated independent variable **the rule instruction and the awareness-raising activities of stress in simple words and in complex words** to have its effects on the dependent variable **the perception and the production of complex word stress**.

The experimental research may face some intervening variables which destruct the validity of the research. In this study, two intervening variables exist. The first intervening variable is the varied regional accents of the subjects' mother tongue which affect their pronunciation of English. The subjects of this study come from different regions of Algeria, therefore, they have different accents with which they pronounce their native language, which might affect negatively the pronunciation of English prosodic features. Unfortunately, this intervening variable could not be controlled.

The second intervening variable which threatens the validity of this study if it is not controlled is the amount of the subjects' exposure to spoken English. To control this variable a pre-treatment-questionnaire is administered to forty students. As a result, the students who have a high amount of exposure to spoken English were excluded from the participation in this investigation, because it is believed that they might notice the

correct production of stress of some complex words through the high amount of their listening to the spoken English.

3.3. Subjects

The sample with whom the experiment was conducted are Algerian second year students of English as a foreign language in the English department, of the University of Algiers.

The subjects are students of the classical system. They are chosen because according to the classical system syllabus for teaching pronunciation, the deeper teaching of aspects of phonology starts from the second year. M aking learners aware of the correct use of complex word stress right from their first encounters with it will result in good achievements in the ability to perceive and to produce complex word stress.

The subjects of this investigation are composed of twenty two male and female students. The sampling of the subjects was based on their answers to the pre-treatment-questionnaire. Their age ranges from nineteen (19) to twenty two (22). The subjects came from different social background and regional background. The latter forms a threat to the validity of the present investigation. In fact, some of the twenty two came from the western part of Algeria, others came from the East and the rest came from the north. The accents of the native language of the subjects were, then, characterized by its variation. As a consequence, the accent with which English as a foreign language is produced is varied according to the different native accents of the students. These different accents may have their effects on the validity of the present study since it may happen that even with the consciousness-raising tasks and even with the training on the correct production of complex words, the subjects cannot produce correctly the stress on complex words because of the transfer of the accent of their native language on the prosodic features with which the foreign language is produced. As a result, the different regional backgrounds form a threatening variable on the study which cannot be controlled.

The students chosen for this investigation differ in their educational backgrounds because of their different fundamental educational streams (natural sciences, exact sciences, human sciences, arts and languages….). The subjects have background knowledge of English pronunciation system because they have been studying English for at least six (6) years. However, their proficiency level in distinguishing the patterns of stress placement in English complex words appeared limited. The selection of the subjects of this study was randomized because the method adopted for this research is the experimental method.

3.4. Data Gathering Tools

For collecting the data necessary for our research, two main data gathering tools were used; questionnaires and tests. They have provided us with useful insights about the research questions and the research hypotheses which were formulated at the beginning of this work.

3.4.1. Questionnaires

The questionnaires have the benefit of providing useful information about a large population in a relatively short time. Questionnaires are useful in collecting information about the role which the awareness-raising plays in resolving the problems of complex word stress placement.

3.4.1.1. Questionnaires Design

The questionnaires were designed in a way to fit with the needed information which the present research is investigating. The questions selected for the questionnaires correlate with the objectives of the present research (Bell 1999: 119).

The wording of the questionnaires of the present study was selected carefully to avoid ambiguity and imprecision. The questions are precise and clear. They are asked in a way to avoid double questions (Bell 1999: 123); this means that each question seeks to find answers about only one specific item (information).

3.4.1.2. Question Types

There are two major questions that most researchers use; open ended questions and closed questions. Open or verbal questions can appear in a form of a word, a phrase or an extended comment (Youngman (1986) cited in Bell 1999: 119). They provide useful information about the studied phenomenon, but their analyses can pose problems, for this reason the closed questions are preferred. Closed questions are those which provide choices for the respondents to select from. They are structured questions. The more structured a question is, the easier it will be to analyse (Bell 1999: 119). On this issue, Nunan (1992) observes that "responses to closed questions are easier to collate and analyse" (1992: 143).

Most of the items of the questionnaires of the present study are closed. This type of questions was chosen because their analyses will not pose problems. The questions used in this work vary between scales and list questions. However, in the post-treatment-questionnaire some open questions were included aiming to give the subjects more freedom to express their attitudes towards the treatment.

3.4.1.3. Piloting the Questionnaires

The questionnaires were piloted before being handled to the subjects. They were administered to some students who were not involved in the research and who constituted a small group which is similar to the group that formed the sample of this study.

The objective of piloting the questionnaires before administering them to the participants who are involved in the experiment was to check the clarity of the questions and the instructions and to check the necessary amount of time which the respondents needed to complete the questionnaires (Bell 1999: 127-128).

In the present investigation, the questionnaires are divided into two types; a questionnaire implemented prior to the experiment and another distributed when the treatment ended. Through each questionnaire we wanted to find out specific information.

3.4.1.4. Pre-Treatment Questionnaire

This questionnaire was handled before the experiment started aiming to sample the participants who could be involved in the present investigation. The objective of using a questionnaire before starting the experiment was to avoid the effect of the intervening variables on threatening the validity of this study. The intervening variable of this study which needed to be put under control was the daily amount of time of the participants' exposure to spoken English outside the university. For this purpose, the pre-treatment- questionnaire was divided into two parts.

The first part of the pre-treatment-questionnaire involves question 1 (see appendices 3 and 4). Through this part we intended to identify the learners who used to listen to higher amount of time to spoken English. The category of students (mentioned previously) was excluded from the participation in the present experiment since they formed a threat to the validity of the present research. By sampling the participants who would be involved in the experiment, the role of the first part of the pre-treatment-questionnaire ended and it became not necessary to analyse the responses of this part since this part is not considered as a tool to gather data for answering the research question or for accepting or rejecting the research hypotheses.

The second part of the pre-treatment-questionnaire includes items 2, 3, 4 and 5. The responses to these four questions provide us with useful insights on the subjects' level (experimental group) in placing stress when hearing simple and complex words and when producing simple and complex words. They are useful because they reveal the subjects' level before the treatment has started. The answers of the respondents will be compared to their answers at the end of the experiment to observe whether the intervention program helped the subjects improve their perception and their production of complex word stress.

Items 2 and 4

Through these two questions, we seek to find out the relation between the production and the perception of simple word stress and the production and the perception of complex word stress. In other words, through the questions 3 and 5 we

wanted to achieve the effect of subjects' level of stress placement in simple words on the placement of stress in complex words before the treatment took place. After the treatment period ended, the same questions were asked to observe whether the same ability of perceiving and producing simple word stress, before the treatment started, will be kept the same at the end of the experiment, and they were asked in order to compare this ability with the ability of perceiving and producing complex word stress before and after the treatment.

3.4.1.5. Post-Treatment-Questionnaire

The aim of this questionnaire is to examine any significant impacts of the awareness-raising activities on the improvement of the subjects' perception and production of complex word stress. Besides, this questionnaire seeks to find out any possible improvements in simple word stress' perception and production which will be compared with the perception and the production of complex word stress.

The post-treatment questionnaire is divided into four sections, each provides necessary information helping to answer the research question and to accept or reject the research hypotheses.

Part one: items 1, 2 and 3.

The aim of including this part in the present questionnaire is to observe whether after the instruction learners have become aware of the importance of learning pronunciation.

Item 1: through the present item we aimed to know on which scale learners place the importance of learning English pronunciation. The answers of the respondents indicate whether learners have become aware of the importance of pronunciation in speech.

Item 2: this question goes deeply into observing the subjects' awareness of the importance of mastering complex word stress placement. It is a list question with two items: **yes/no**.

If the answer of the respondents was yes, the subjects were required to specify for which skill the mastery of complex word stress is important; listening or speaking.

Item 3: the objective of this question is to identify the role of the consciousness-raising tasks and the explicit explanation of rules on the acquisition of the rules of stress in complex words.

Part Two: Items 4 and 5.

The objective of including this part in the post-treatment questionnaire was to find out the impact of the rule instruction and the awareness-raising activities of simple word stress and of complex word stress on complex word stress perception and production. The items 4 and 5 are list questions with **yes/no** items. The respondents were asked to select one item. If the item **no** was chosen in one of the two questions or in both questions, the respondents were asked to give verbal justifications to their choice. The aim of justifying the **no** choice was find out why the experiment could not be successful in improving the perception and the production of complex word stress.

The second part of the post-treatment-questionnaire appears clearly that it looks for answers to the research question of the study. In fact, since it is not easy to rely only on the results of the tests to answer the research question, this part helps to find answers on the impact of the rule instruction and the awareness-raising activities of stress in simple words and in complex words on perceiving and on producing stress in complex words.

Part Three: Items 6 and 7.

These questions were asked to find out the effect of the awareness tasks and the rule instruction of simple word stress on improving the ability to perceive and produce correctly stress in complex words. In other words, during the treatment period, the subjects (experimental group) were made aware of the patterns of stress in simple words, not with the objective of knowing only how the regularities of simple word stress function, but also with the objective of helping them acquire the patterns of complex word stress and become able to perceive and produce complex word stress

correctly. Indeed, it appears clearly that this work has noticed that one of the reasons which makes learners not being able to produce and perceive correctly complex word stress is their misplacement and misuse of stress in simple words. This is why; it was observed that making EFL learners aware of the patterns of stress in simple words will help improving them to perceive and produce correctly stress in complex words.

Part Four: Items 8, 9, 10 and 11.

The last part of the post-treatment-questionnaire has the role of knowing the proficiency level of the students concerning the perception and the production of word stress after the intervention program ended. The four questions which are used in this part were asked in the pre-treatment-questionnaire and they were re-asked in the post-treatment-questionnaire. The repetition of the same questions in the two questionnaires aimed to compare the level of the participants in the study, before the treatment began, with their proficiency level in the same aspects of language after the treatment ended. If any improvement appears in the subjects' ability of perceiving and producing complex word stress after the treatment ended, it will be concluded that the experiment had the major role in improving the perception and the production of complex word stress. In fact, the items 9 and 11 will help to answer the research question of the present study, and they will help to accept or reject the research hypotheses.

3.4.2. Tests

Looking for answers to the research question, the researcher cannot rely on one data gathering tool. Triangulation of research tools can preserve the reliability of the research. The questionnaires are said to be useful because they are reliable since all the respondents are asked the same questions at the same time. However, not all respondents will be objective in answering the questions. This is why; the responses of the subjects will be compared to their results in the tests for the sake of increasing the reliability of the present study.

3.4.2.1. Pre- and Post-Treatment-Tests

Both the control group and the experimental group were subjected to pre-post-treatment tests. The pre-tests were administered before starting the treatment. The subjects were tested before the treatment started to confirm that the two groups had the same level of proficiency in relation to the production and the perception of complex word stress (Nunan 1992: 27). After the experimental treatment ended, the two groups were retested in order to check the effect of the awareness-raising activities on the improvement in the ability to perceive and produce complex word stress. In fact, another reason for using the pre-test is to compare its scores with the scores of the post-test. Any difference appearing between the two groups at the end of the experiment will be attributed to the awareness-raising activities.

To achieve the purpose of the study, the perception and the production tests were used.

3.4.2.2. The Perception Test (Pre- Post-Treatment)

The perception test includes a list of disconnected words to which production the subjects were asked to listen and to place stress on the appropriate syllable of each word. The words used in the perception test are selected from Hancock's (2003) book. They are divided into morphologically simple words and complex words, which are derived from the simple words. The words used in this test are organized into different groups. Each group consists of a simple word and all the complex words which are possible to be derived from the simple word.

There exist groups of complex words which are formed by the root words adding to them the stress-neutral prefixes and suffixes. Other groups consist of complex words being morphologically built by including the stress-shifting suffixes to simple words. The perception test involves the two different types of stress-shifting suffixes. It was designed with the aim of checking whether the subjects were aware of the patterns of simple word stress, and whether they were aware of the changes that some suffixes might bring to the stem. In fact, the perception test was designed in a way to compare the learners' ability of recognizing the placement of stress in complex words before

the treatment started, and to compare this ability with their ability in the same aspect after making the learners aware of the patterns of complex word stress and after making them conscious of the phonological function of each type of suffixes.

3.4.2.3. The Production Test (Pre- Post-Treatment)

The production test was in a form of a set of isolated words selected with care to fit with the aim of the present research. The production test includes one task (activity) which asked the subjects of both groups to produce all the words involved in the task by placing stress correctly on the appropriate syllables. The production test did not include sentences or other combination of words because the present research is intended to examine the effect of awareness-raising activities on the perception and on the production of stress in complex words in isolation.

Similar to the perception test, the present test includes two morphological types of words; some simple words and many complex words which are derived from the simple words used in the test. The purpose of including simple words in the test is to observe whether the learners were aware of the patterns of stress in simple words, and whether they were aware of how the simple word stress placement patterns sometimes change when the simple words are modified with some suffixes.

The complex words used in the pre- post-treatment production tests show a variety of types of affixes. The production test contains complex words formed by the stress-neutral suffixes. The latter refers to the category of suffixes which do not change the placement of stress in the root word when the suffixes modify it. The purpose of using this type of suffixes was to find out how far, before the treatment, the subjects misplaced the stress on complex words with the focus on the extent to which the students were unconscious that there are some suffixes do not change the placement of stress when they modify the simple word. Learners might place stress correctly on simple words, but when they produce the complex words which are derived from the simple words (knowing that the complex words deriving from the simple words consist of stress-neutral suffixes) they, in many cases, place stress not on the correct

syllable (ie- the original syllable) but on another syllable unaware that the suffixes used in the complex words are stress-neutral suffixes.

Another category of suffixes that the production test involves are the stress-shifting suffixes. The production test uses the two different types of stress-shifting suffixes which are; suffixes carrying primary stress themselves and suffixes which are not stressed but which determine the placement of stress in complex words. The inclusion of types of stress-shifting suffixes aims to identify the level of the subjects' consciousness of the function of each category of suffixes before the treatment, and to test whether this consciousness has been raised after the experimental treatment.

The practical explanation of the present study is presented in the following section.

3.5. Procedure

3.5.1. Starting the Experiment

The true-experimental method requires an experimental group and a control group. As explained, the twenty two students were divided into two groups; each group consisted of eleven students. Before starting the experiment, the pre-treatment-questionnaire was handled to the subjects. In addition, both groups were put under a teacher-made production pre-test and a perception pre-test.

3.5.1.1. The Pre-Treatment-Questionnaire and Sampling the Subjects

Through the pre-treatment-questionnaire we aimed to sample the participants who should be involved in the experiment. The experimental group received the pre-treatment-questionnaire which consists of two parts, while the control group received the pre-treatment questionnaire which has one part. In fact, the pre-treatment-questionnaire of the control group is similar to the first part of the pre-treatment-questionnaire of the experimental group. The purpose of including this part in the pre-treatment-questionnaire was to identify the students who would participate in the experiment, while the second part of the experimental group's questionnaire had the aim of observing the improvement of the experimental group in the perception and in the production of complex word stress after the intervention programme.

The pre-treatment questionnaire was handled to forty students selected randomly from the same class, aiming to choose thirty students who would participate in the investigation. Twenty students were considered as members of the control group. They received the questionnaire with one part. The objective of including this part was to select the students with less exposure to spoken English. The other twenty students received the same part of the questionnaire to get at the same objectives, in addition, they were required to answer the four questions of the second part of their questionnaire in order to allow the researcher get findings on their proficiency level in the perception and in the production of complex word stress before the treatment started and to compare their levels after the treatment by using the same questions in the post-treatment-questionnaire.

As a result, sixteen students from both groups were excluded and twenty four students were chosen to the participation in the research. However, because two students in both groups were not regular, their exclusion from the research was inevitable. As a consequence, the sample ended up with twenty two learners; eleven students in each group.

3.5.2. Pre-Treatment-Tests (Production and Perception)

3.5.2.1. Production Pre-Treatment-Test

After sampling the subjects, the members of both the experimental and the control groups were required to test their production before the experimental treatment started. The subjects were gathered together to be tested. The experimental group was the first to take the test. Each learner entered alone to the classroom to produce the words for the sake of avoiding imitation of the production of the words, which would decrease the validity of the research.

The objective of testing the production of the subjects before the experimental treatment started was to compare their pre-production-test scores with their post-production-test scores.

3.5.2.2. Perception Pre-Treatment-Test

After testing the production of complex word stress of the two groups, their perception of stress in complex words was retested. Unlike the production test, to test the perception of the learners, the two groups were gathered together in a language laboratory. They were asked to listen to the production of a list of words. The listening was done by using a CD player. While the learners were listening to the words, they were using a written answer sheet, which involved the list of words which they were asked to listen. At the same time of listening to the words, the learners were asked to place stress on the right syllables of the words according to what they heard.

The subjects listened to each word individually. There was a short break of time between the words in order to give the learners time to organize their answers. After listening to all the words, the CD was played for the second time to give the learners the opportunity to catch up what they missed.

Similar to the aim of the production pre-test, the objective of testing the subjects' perception of stress in complex words was to be able to compare their perception of complex word stress before the treatment with their perception of complex word stress after the treatment through the objective test scores. The comparison of the learners' performance before the treatment with their performance after the treatment allows finding answers to the effect of the awareness-raising activities and the rule instruction on the perception and on the production of complex word stress.

3.5.3. The Intervention Program

Just after the administration of the pre-treatment research tools, the experimental group was put under treatment, whereas, the control group was not.

The instruction phase came in a form of seven lessons, divided into introducing the syllable, the principles of stress and providing the rules of simple word stress and complex word stress.

3.5.3.1. Introducing the Syllable

The reason for starting the instruction with the syllable was the important role which knowing what the syllable is plays in stress placement. In fact, stress is known to be a feature of the whole syllable not of one vowel sound or of one consonant sound. Another reason for including teaching the syllable in the instruction program was the subjects' unconsciousness of what the syllable is and their unawareness of the possible components of the syllable. As a result, the first lesson involved the definition of the syllable and the possible types of the syllable.

The full explanation of the types of the syllable and the components of the syllable was followed by written and oral tasks. In the written task, the learners were given a list of monosyllabic and polysyllabic words. They were asked to divide each word into syllables (in possible cases) and to find out how many syllables each word includes. After correcting the written task, all the learners were asked to produce the words orally.

3.5.3.2. Definition and Features of Word Stress

After paying full attention to the types and the components of the syllable, and after paying attention to the division of the word into syllables, and after working hard to help learners become aware that stress is put at the beginning of the syllable not at its middle or at its end, the next step was raising the learners' awareness of what stress is, in general, and what word stress is, in particular.

Before introducing the different aspects of word stress, the subjects were asked oral questions on what stress is and on what the different features of stress are. However, their answers showed their limited competence in identifying the different features which allow the stressed syllables to be distinct from the unstressed syllables. This is why, a definition of stress was provided, in addition, a full attention to the different characteristics of stressed syllables which could be noticed from the perception and the production views was paid.

Learners were provided with a list of words, and then they were asked to stress the right syllables of the words. The written placement of stress on the words showed the subjects' proficiency level concerning the placement of stress in English words before they were submitted to the treatment. While, through the placement of stress on the words orally we aimed to observe their ability to produce the stressed syllables using the different characteristics of stress.

3.5.3.3. Simple Word Stress

Following the full attention of word stress, the learners were made aware of the two different types of word stress, starting by simple word stress. The stress in simple words was sub-divided into three lessons relying on the number of syllables which the simple words involve (adapted from Roach 1991).

Starting by monosyllabic words, the subjects were made aware that every monosyllabic word has to be stressed. Oral activities were of great interest to train the subjects on how to produce correctly the stressed syllables.

The following lessons were dealing with stress in bi-syllabic words and stress in three syllable words. Each of the two lessons was sub-divided into three sections dealing with the different grammatical categories of the words. The stress patterns of each grammatical category of two syllable words and of three syllable words were introduced to the subjects. An excessive explanation of the rules took place, followed by written and oral activities, through which the subjects were asked to stress the words on the right syllables; in addition, they were trained on how to produce the stressed syllables orally.

The belief that the misplacement of stress in simple words leads, to an extent, to the misplacement of stress in complex words had the effect on raising the learners' awareness of the patterns of simple word stress. Thus, to raise the learners' awareness of complex word stress we needed first to raise their consciousness of stress in simple words.

3.5.3.4. Complex Word Stress

The awareness-raising activities concerning complex word stress are divided into; the introduction of complex word stress, the stress-neutral suffixes and the stress-shifting suffixes (adapted from Brookes1994, Giegerich 1992, Hancock 2003, Kenworthy 1987). The stress-shifting suffixes are sub-divided into suffixes carrying primary stress themselves and suffixes which determine the placement of stress in the root word.

The participants in the experimental group were made conscious of the different functions of suffixes. All the possible rules of suffixes were introduced to the learners, followed by illustrations to the rules, and then followed by intensive oral and written practices to each rule. Moreover, the subjects were provided with a list of complex words (adapted from Hewings 2004). They listened to the pronunciation of the complex words, then, they were required to pay attention to the placement of stress, to the way the native speakers stress the syllables, and finally they were asked to place stress on the appropriate syllable of each complex word to check their ability to perceive correctly the placement of stress in each word and to observe whether they benefited from the awareness-raising activities.

3.5.4. Post-Treatment-Tests (Production and Perception) and Post-Treatment Questionnaire

Two weeks after the experimental treatment finished, the subjects' perception and production of complex word stress were retested using the same words of the pre-treatment-tests and using the same procedures. The words chosen for the post-tests are similar to the words used in the pre-treatment-tests to enable us observing the learners' improvement in the ability to place stress on the right syllables when producing and when perceiving the same words. By changing the words in the post-treatment-tests (production and perception), for instance, the learners might place stress on the new words correctly by chance, or because they are more familiar with the new words than with the old words. Indeed, since we observed their weakness in placing stress correctly in most complex words in the pre-test, the improvement in placing stress on

the same words after the treatment can be said to be due to the consciousness-raising activities.

After testing the learners' production and perception of complex word stress, the participants in the experimental group were asked to answer the questions of the post-treatment-questionnaire. As it was explained previously, the objective of using the post-treatment-questionnaire was to observe any impacts of the awareness-raising activities on the perception and the production of complex word stress.

3.6. The Period of the Experiment

The present investigation was undertaken during the second semester (April-June) of the academic year 2011. Three months were the total period of the experiment. Three weeks were devoted to the administration of the pre-treatment-questionnaires and to the pre-production test and the pre-perception test. The last three weeks were devoted to the administration of the post-treatment-questionnaires and to the post-production and the post-perception tests.

The instruction period lasted three weeks beginning immediately after the pre-tests were administered. Each class was limited to three hours, twice a week, whereas, in the last week, the subjects were taught for one time only. After the instruction period ended and before administering the post-treatment research tools, two weeks were off because of the academic examinations of the second term.

3.7. Method of Data Analysis

The experimental research is a quantitative research which involves data collection procedures that result primarily in numerical data. The numerical data requires statistical analysis.

The tests designed for the present investigation consist of 40 isolated words for the perception test and 37 disconnected words for the production test. The tests were corrected and the means were calculated. The means of the two groups in the pre-tests were calculated and the means of the two groups in the post-tests were calculated and compared using specific statistical analysis.

3.7.1. T-test

To analyse and compare the test scores of two different groups, and to compare two test scores of the same group it is necessary to use the t-test (D□rnyei 2007: 215).

Two types of the t-test are observed to exist; comparing the results of the same group before and after the treatment and comparing the results of the same test designed for two different groups. The former type of the t-test is called **paired-samples t-test** (D□rnyei 2007: 215), as it is also referred to by Hatche and Lazaraton (1991) **repeated-measures design** (1991: 287), whereas, the latter is named by D□rnyei (2007) **independent-samples t-test** (2007: 215), while Hatche and Lazaraton (1991) name it **between-groups designs** (1991: 287).

The present work has used the second type of the t-test, which is the independent-samples t-test, aiming to compare any significant difference between the experimental group and the control group after the treatment. The independent-samples t-test was used to determine whether the means of the experimental group differed significantly from the means of the control group before and after the treatment. The objective of using the t-test in comparing means of the two groups before the treatment is to confirm that the two groups did not have widely differing means before the treatment, which indicates that the two samples did not come from two different populations (Nunan 1992: 29).

It is necessary to use the t-test because two means can appear numerically different or similar, but to conclude that they are statistically similar or different can only be achieved by using the t-test (Hatche and Lazaraton 1991: 265).

To test the effect of the independent variable **rule instruction and consciousness-raising activities of simple word stress and of complex word stress** on the dependent variable **the perception and the production of complex word stress** and to analyse any significant difference between the experimental group and the control group, the following t-test formula was used:

$$t = \frac{xe - xc}{s(xe - xc)}$$

$$tobs = \frac{difference\ between\ 2\ sample\ means}{\text{standard error of difference between means}}$$

To calculate the standard error of difference between means, the following procedure is needed to be used:

$$s\ (\ Xe - Xc\ ) = \sqrt{\frac{se^2}{ne} + \frac{sc^2}{nc}}$$

To conclude,

$$tobs = \frac{xe - xc}{\sqrt{\frac{sde^{\,2}}{ne} + \frac{sdc^{\,2}}{nc}}}$$

Statistics and Terms

X_e = the mean of the experimental group.

X_c = the mean of the control group.

sd_e = the standard deviation of the experimental group.

sd_c = the standard deviation of the control group.

n_e = number of the subjects of the experimental group.

n_c = number of the subjects of the control group.

The results which will be obtained from the t-test formula of calculation will be used to reject or accept the null hypothesis of the present study. Indeed, the t_{obs} (the observed value of t) will be compared with the t_{crit} (the critical value of t) which is needed to reject the null hypothesis.

The critical value of t (t_{crit}) is achieved by looking for the value which correlates with the appropriate degrees of freedom (df) (see appendix 7 which shows the possible critical values in relation to the different degrees of freedom) (Hatche and Lazaraton 1991: 262).

3.7.2. Alpha Decision Level

There is always the possibility that the difference between the means of the experimental group and of the control group is in error. In many cases, the difference might occur by chance; this is why, it is important to investigate the probability which claims that rejecting the null hypothesis will be an error (Brown 1988: 115). In fact, when the probability of a given study is found to be less than 1 percent (1/100) ($p<.01$), for instance, it will be impossible to reject the null hypothesis (H_o).

The alpha decision level of the present research is set at ($p<.05$), which refers to the statistical test is non-directional (two tailed), which explains that there is no logical or theoretical reason to expect one of the means to be higher than the other (Brown 1988: 159). Establishing the alpha decision level at ($p<.05$) means that if the results are less than 5 percent (5/100) ($p<.05$), the correlation of data is due to chance alone and the rejection of the (Ho) will be an error, but if the correlation of data is greater than 5 percent ($p>.05$), it can be concluded that (95/100) are due to other factors rather than chance, such as the explicit instruction and the awareness-raising activities (Brown 1988: 116).

3.7.3. Strength of Association: eta²

When the null hypothesis is rejected, the strength of association is needed to be used to show that there exists the effect of the independent variable on the dependent variable (Hatche and Lazaraton 1991: 265-266).

The measure of strength of association is called eta squared ( ). Its formula comes as follows:

$$= \frac{t^2}{t^2 + df}$$

(Hatche and Lazaraton 1991: 266).

The advantage of using the strength of association measures is found in the crucial role which it plays in the interpretation of the results. If the association is less than 10%, we must be conservative about the findings and about the effect of one variable on the other and it will be concluded that other factors were intervening in the research. On the other hand, if the association appears to be 50% or more, the results of the study will be said to be accounted to the experimental treatment (Hatche and Lazaraton 1991: 267).

Conclusion

Through this chapter we have presented the practical part of this research. It began by presenting the research question and the research hypotheses. It explained further the reasons which led to conduct the experimental research. The choice of method was followed by exposing the set of procedures and tools which were used to achieve the aim of the present investigation. The last point which this chapter discussed is the method which was chosen in order to analyse the collected data of this research.

Chapter Four

Data Presentation and Discussion

Introduction

This chapter presents the results of the experiment which we have undertaken. The aim was to seek information about the effect of rule instruction and consciousness-raising activities of stress in simple words and in complex words on EFL learners' perception and production of complex word stress.

Our data are presented in the form of tables. An analysis of the subjects' scores on the tests and of the percentages is provided in relation to the literature which deals with the importance of raising the foreign learners' awareness of the patterns of word stress. In addition to the analysis of the subjects' scores on the tests, an analysis of the subjects' answers to the questionnaires will be provided.

4.1. Pre-tests

Before the experimental treatment started, the perception and the production abilities of the experimental group and of the control group were tested to find out whether there will be any difference in the same abilities in the post-tests.

4.1.1. Results of the Perception Pre-test

The following table presents the subjects' scores obtained in the perception test before starting the experiment:

Table 1

Number of students	Experimental group	Control group
1	10.5	11.5
2	9.5	13
3	7	10
4	8	12.5
5	9.5	11
6	6	9
7	10.5	5
8	14	7.5
9	16.5	5.5
10	13	6.5
11	7.5	12
$x_e = 10.18$ $x_c = 9.40$ $sd_e = 3.21$ $sd_c = 2.88$ $n_e = 11$ $n_c = 11$ $df = 20$ significance level = .05 $t_{crit} = 2.08$ $t_{obs} = 0.60$ $p = 0.60 < 2.08$		

Comparison of the control group's and the experimental group's results of the perception pre-test

Symbols and Terms

x_e = the mean of the experimental group.

x_c = the mean of the control group.

sd_e = the standard deviation of the experimental group.

sd_c = the standard deviation of the control group.

n_e = number of the subjects of the experimental group.

n_c = number of the subjects of the control group.

df = degrees of freedom.

t_{crit} = the critical value of t.

t_{obs} = the observed value of t.

To analyse the difference in the perception of complex word stress between the experimental group and the control group before the treatment started the t-test was used. The null hypothesis (H_o) which appears to correlate with the difference between the experimental group and the control group in the perception of complex word stress before the treatment began is: **there is no difference between the experimental group and the control group in the perception of complex word stress before the treatment began**. The critical value of t which is needed to reject the present H_o is set at ($p<.05$) which is fixed in the present work to be 2.08. In fact, this critical value of t is obtained by comparing the degrees of freedom (df) of the present study which is 20 with ($p<.05$) in the t-test table (see appendix 7).

In order to reject the present H_o the observed value of t (t_{obs}) has to be greater than the critical value of (t_{crit}). In the present investigation, the hypothesis which claims the non-difference between the experimental group and the control group before the treatment began cannot be rejected because the (t_{obs}) is less than the (t_{crit}): $p=t_{obs}\ 0.60<t_{crit}\ 2.08$. **p= n.s** which stands for non-significant difference.

The conclusion which is drawn from the present analysis is that the level of both the experimental group and the control group in recognizing the placement of stress when

hearing complex words before the experimental treatment took place did not differ. Both groups were of approximately the same ability of recognizing the placement of stress when hearing complex words.

4.1.2. Results of the Production Pre-test

The following data are obtained from the subjects' scores in the production test which was taken before the treatment began:

Table 2

Number of students	Experimental group	Control group
1	5.5	8
2	4.5	7.5
3	2	6
4	8	7
5	7.5	8.5
6	7	6
7	11	6.5
8	9.5	10
9	9	7
10	7.5	8.5
11	5.5	4

$x_e = 7$

$x_c = 7.18$

$sd_e = 2.51$

$sd_c = 1.6$

$n_e = 11$

$n_c = 11$

$df = 20$

significance level = .05

$t_{crit} = 2.08$

$t_{obs} = 0.20$

$p = 0.20 < 2.08$

Comparison of the control group's and the experimental group's results of the production pre-test

The main objective of analysing the scores of the experimental group and the control group in the production pre-test is to examine the difference between the control group and the experimental group in the ability to produce complex word stress before starting the treatment. The null hypothesis which correlates with the present case is: **there is no difference between the experimental group and the control group in the production of complex word stress before the treatment started**.

The acceptance or the rejection of the H_o depends on the observed value of t. In fact, to reject the H_o, the (t_{obs}) has to be greater than the (t_{crit}) which is fixed in the present study to be 2.08 regarding the (df) of the present work, whereas, the refusal of the H_o demands the (t_{obs}) to be less than the (t_{crit}).

In the production pre-test case, the achieved (t_{obs}) is 0.20 for this reason; the rejection of the H_o is not possible to be realized. In fact, the (t_{crit}) needed for the rejection of the H_o is 2.08 while the present (t_{obs}) is 0.20, which indicates that the (t_{obs}) is less than the (t_{crit}):

P=tobs 0.20<tcrit 2.08. **p= n.s** which stands for non-significant difference.

The conclusion which can be drawn from the preceding analysis is that the ability of the experimental group in producing complex word stress did not differ from the same ability of the control group before the treatment took place. Indeed, it can be concluded that before the treatment began, both groups were of approximately the same ability of producing stress in complex words.

The non-significant difference between the means of the control group and of the experimental group in the perception pre-test and in the production pre-test indicates that both groups were from the same population and they had the same level of proficiency before conducting the experiment. In other words, the analyses of the results of the production and of the perception pre-tests of the two groups reveal that both groups did not have widely differing means, which allows us to conclude that the members of the experimental group and the members of the control group did not come from two different populations (Nunan 1992: 29).

Since the analyses of the scores of the perception pre-test and of the production pre-test proved that the ability of recognizing the placement of stress when hearing and when producing complex words were the same for the experimental group and for the control group, it can be said that any significant difference appearing between the experimental group and the control group in the production and in the perception of complex word stress after the treatment will be attributed to the effect of the awareness-raising activities and the rule instruction of simple word stress and of complex word stress.

4.2. Post-Tests

After the experimental treatment ended, the participants in the experimental group and in the control group were subjected to a perception and a production post-treatment-tests aiming to examine the effect of the awareness-raising activities on the

perception and on the production of stress in complex words. The tests were completed and the means were calculated.

The post-test results are divided between the results of the perception test and the results of the production tests. In the light of the results obtained from our study, we shall attempt to answer the research question and we will either accept or reject the research hypotheses.

4.2.1. Results in Relation to the Research Question

The present work is concerned with one research question which will be answered through the scores of the post-tests and through the answers to the questionnaires.

RQ: Do rule instruction and awareness-raising activities of simple word stress and of complex word stress have an effect on the improvement of the perception and the production of complex word stress?

To answer the above research question, two research hypotheses were adopted, which need to be answered.

4.2.1.1. Results in Relation to H1

H1: Rule instruction and consciousness-raising tasks of simple word stress and of complex word stress lead to a better achievement in the perception of complex word stress.

In order to answer the research question of the present study, the analysis of the difference in the mean scores between the experimental group and the control group in the perception post-test is inevitable to be made, this is what the table below presents.

Table 3

Number of students	Experimental group	Control group
1	16	10.5
2	14	12.5
3	14	11.5
4	14.5	12.5
5	16	13.5
6	12.5	11
7	16	13
8	17	9.5
9	19	16
10	14	8.5
11	12.5	14
$x_e = 15.04$ $x_c = 12.04$ $sd_e = 1.97$ $sd_c = 2.13$ $n_e = 11$ $n_c = 11$ $df = 20$ significance level = .05 $t_{crit} = 2.08$ $t_{obs} = 3.44$ $p = 3.44 > 2.08$ $= 0.37$		

Comparison of the results of the control group and of the experimental group in the perception post-test

In order to accept or reject the first research hypothesis both the mean scores of the perception post-test and the observed value of t were calculated.

To accept or reject the first research hypothesis we need first to compare the observed value of t with the critical value of t. The latter represents the t critical which is used for the rejection of the null hypothesis. The null hypothesis which correlates with the research question comes as follows:

H_0: Rule instruction and awareness-raising tasks of stress in simple words and in complex words result neither in a better perception nor in a better production of complex word stress.

Answering the perception part separately, we can formulate the following H_o:

H_o: Rule instruction and awareness-raising tasks of stress in simple words and in complex words do not result in a better perception of complex word stress.

The t critical needed for the rejection of the H_o is set at $p<.05$ which is 2.08. In order to accept the H_o, the (tobs) must be less than the (tcrit) (ie-(tobs) < (tcrit)), whereas, rejecting the H_o needs the (tobs) to be greater than the (tcrit) (ie-(tobs)> (tcrit)). The (tobs) of the perception post-test is 3.44 which means that the (tobs) is greater than the (tcrit). P= 3.44>2.08. **p= s.d** which stands for the significant difference between the experimental group and the control group in the ability to perceive complex word stress. In fact, due to the awareness-raising activities and the rule instruction the experimental group has shown superiority over the control group in the ability to perceive stress correctly in complex words.

Since the independent-samples t-test indicated the difference in the ability to perceive complex word stress to be significant between the experimental group and the control group, the H_o is rejected and the H_1 is accepted claiming that the rule instruction and the consciousness-raising activities led to a better achievement in the perception of stress in complex words.

Through the results of the perception pre-test the members of the experimental group and of the control group have shown to have approximately the same level in perceiving stress in complex words. The scores and the mean scores of both groups were low; x_e = 10.18, x_c = 9.40. The mean scores indicated that the subjects, before the treatment began, were observed to lack the ability of recognizing the placement of stress in complex words when they heard the words. After listening to the production of the words in the perception pre-test, some participants in both groups placed stress on all the words which they had on the answer sheet, but most of them misplaced the stress on the majority of the words. The subjects were placing stress randomly on the words without being conscious of the patterns which underlie complex word stress, and without being able to recognize the role which some suffixes play in determining the placement of stress in complex words. Other participants, on the other hand, stressed some words and left others unstressed, which shows their inability to perceive the correct placement of stress in morphologically complex words, and which shows that they did not acquire the rules of complex word stress.

When the subjects' perception of stress in complex words was retested, the experimental group appeared to be significantly different from the control group. The mean of the experimental group was higher than the mean of the control group; x_e=15.04, x_c = 12.04. The significant difference between the two groups was a result of the awareness-raising activities and the rule instruction which the experimental group received.

Since the independent samples t-test ended up with the improvement of the experimental group in the perception of complex word stress, it can be concluded that the awareness-raising activities and the rule instruction of stress in simple words and in complex words were the major factors which affected the improvement in the ability to perceive complex word stress, and they were the major factors which affected the superiority of the experimental group over the control group in the ability to perceive complex word stress. However, what can prove that the experimental group's improvement in perceiving complex word stress is a pure result of the awareness-raising activities and the rule instruction?

When rejecting the null hypothesis, it becomes necessary to use the strength of association because it can identify the effect of the independent variable on the dependent variable (Hatche and Lazaraton 1991: 265-266). The strength of association examines the extent of the relation between the variables of the study. Indeed, after rejecting the null hypothesis, the strength of association will be used to find out whether the changes which appeared on the dependent variable, after the treatment, are pure results of the treatment or whether they are due to other factors intervening in the investigation. If the results of the strength of association are more than 10%, the variability will be accounted to the intervention programme, whereas, if the association is less than 10%, we have to be more conservative about the relation between the independent variable and the dependent variable because other factors will be said to be intervening in the research.

The association achieved between the awareness-raising activities and the rule instruction and between the improvement in complex word stress perception is a strong association because =0.37, which refers to the variability of the present dependent variable to be accounted to the explicit instruction and to the consciousness-raising tasks which the learners received during the intervention programme. These findings help to interpret the results concerning the improvement in the perception of complex word stress to be considered as being affected by the classroom intervention. These findings seem to coincide with Kelly's (2000) findings that the rules of word stress are of a great importance and that teachers should not pass by simply because they are helpful for the acquisition of word stress placement (2000: 68).

4.2.1.2. Results in Relation to H2

H2: Rule instruction and awareness-raising activities of stress in simple words and in complex words result in a better production of complex word stress.

The answer to the first part of the research question of this study was provided by answering the first research hypothesis. To complete providing information corresponding the research question, it is necessary to analyse the results obtained from the production post-test in order to answer the second research hypothesis.

To confirm or to refute the H2, an analysis of the difference between the mean scores of the experimental group and of the control group in the production post-test is necessary to be made, this is what the following table provides:

Table 4

Number of students	Experimental group	Control group
1	14.5	5
2	13.5	8.5
3	14	6.5
4	12.5	8.5
5	13.5	8
6	14	6
7	14.5	7
8	14	10.5
9	15.5	12
10	12.5	11.5
11	12	7.5

$x_e = 13.68$
$x_c = 8.27$
$sd_e = 1.02$
$sd_c = 2.24$
$n_e = 11$
$n_c = 11$
$df = 20$
significance level = .05
$t_{crit} = 2.08$
$t_{obs} = 7.41$
$p = 7.41 > 2.08$
$= 0.73$

Comparison of the results of the control group and of the experimental group in the production post-test

The above table provides the analysis of data in relation to the production part of the research question. In order to answer the second part of the research question, a comparison between the observed value of t and the critical value of t was inevitable to be made. Through this comparison, we can either accept or reject the null hypothesis. The null hypothesis of the present study comes as follows:

H_0: Rule instruction and awareness-raising tasks of stress in simple words and in complex words result neither in a better perception nor in a better production of complex word stress.

Since the perception part was positively answered and since the present analysis deals with analysing the results of the production post-test, we reduce the H_0 to deal with the production part as follows:

H_0: Rule instruction and awareness-raising activities of stress in simple words and in complex words do not result in a better production of complex word stress.

The objective of analysing the mean scores of the experimental group and of the control group in the production post-test is to examine the difference between the experimental group and the control group in producing complex word stress after the intervention programme ended. The difference between the experimental group and the control group depends on the superiority of the observed value of t over the critical value of t. After the statistics were done, the tobs was achieved to be 7.41. Since the tobs is much greater than the tcrit (7.41>2.08), the null hypothesis is rejected and the H2 is accepted. This information may be presented in the simple statement as follows: P= 7.41>2.08. **p= s.d** which stands for significant difference between the experimental group and the control group in the ability to produce complex word stress.

The results of the production pre-test allowed us to conclude that both groups had approximately the same ability of producing stress in complex words. The mean scores of both groups were very low; Xe= 7, Xc= 7.18. The two mean scores indicated that both groups lacked the ability of recognizing the placement of stress in complex words, and they indicated that they lacked the ability to produce complex word stress correctly. In fact, when all the participants were asked to produce a list of complex words, before the treatment began, they were not only able to place stress on the right syllable of most of the words, but they were not able, also, to pronounce the words correctly. The subjects, before the treatment, had serious problems of recognizing the correct placement of stress which led to the mistaken production of complex words, in addition, the subjects had problems with the production of vowels and consonants.

When the intervention programme ended, the subjects' production of complex word stress was retested. Through the analysis of the results, the experimental group appeared to be significantly different from the control group. The mean of the experimental group was much higher than the mean of the control group; Xe= 13.68, Xc=8.27, which was a result of the awareness-raising activities and the rule instruction which the experimental group received.

By analysing the results of the production post-test we concluded with the superiority of the experimental group over the control group in producing complex

word stress, which appears to be a result of awareness-raising activities and rule instruction that confirms H2. However, is the superiority of the experimental group over the control group in the production of complex word stress at the end of the experiment a consequence of the rule instruction and the awareness-raising activities?

Since we have accepted H2, it becomes necessary to use the strength of association which can show that there is an effect of the independent variable **the rule instruction and the awareness-raising activities of stress in simple words and in complex words** on the dependent variable **the production of complex word stress** (Hatche and Lazaraton 1991: 265-266). If the results of the association are less than 10%, it will not be possible to claim that the improvement and the superiority of one group over the other are due to the treatment, but it will be claimed that other factors came to play. But if the association is more than10%, we can claim that the association between the variables is strong. In the case of the production post-test, the association is 0.73, which tells us that 73% of the variability of the dependent variable is accounted to the treatment and which tells us that the association between the dependent variable and the independent variable is very strong.

The association findings led to confirm H2 by claiming that the improvement of the experimental group in the production of complex word stress was affected by the rule instruction and the awareness-raising activities of the patterns of simple word stress and of complex word stress, which confirms Kelly's (2000) findings that making learners aware of stress, then asking them to practise tasks in which they are required to find out the stressed syllables will help them to be more able to work towards using stress appropriately when speaking (2000: 67).

4.3. Results of the Pre-Treatment Questionnaire

The pre-treatment questionnaire was initially administered to twenty students from whom the members of the experimental group were selected. The objective of using the questionnaire before the treatment started was to compare the subjects' own assessments of their production and their perception of simple and complex word stress, before the treatment, with their own assessments of the same abilities after the

treatment, and to observe if any improvement in the perception and the production of complex word stress will appear at the end of the experiment.

Item 1: In listening to the production of simple English words, how good is your recognition of stress placement on the right syllable?

The following data are obtained from the experimental group members' answers to the second question of the pre-treatment-questionnaire (see appendix 4):

Table 5

	very bad	bad	not bad	good	very good	total
N		2	6	3		11
P		18.18	54.54	27.27		100%

Learners' own assessment of the perception of simple word stress before the treatment

Symbols and Terms

N= number of answers.

P= percentage.

The present item intended to observe the subjects' ability of recognizing the placement of stress in simple words when they heard the words before the treatment took place. The objective of identifying the learners' level before the treatment was to observe whether there will be an improvement in perceiving simple word stress at the end of the experiment.

The findings show that 6 learners representing the highest percentage of 54.54% believed that their ability of perceiving the correct placement of stress in simple words was neither bad nor good but rather not bad. This indicates that their own assessment of their ability of recognizing the placement of stress in simple words was positive, to an extent. 3 respondents representing the percentage of 27.27% considered their

recognition of stress placement when they heard simple words as good. These learners believed that they were able to recognize the stress placement on the right syllable when they heard simple words at the beginning of the experiment. On the contrary, only 2 respondents, out of 11, believed that their recognition of stress placement when hearing simple words was bad, which indicated that they were not conscious of the patterns of simple word stress, even though they had been learning English for at least six years, and which made it necessary to raise their awareness of the patterns of simple word stress.

Item 2: In listening to the production of complex English words, how good is your recognition of stress placement on the right syllable?

The table below presents the learners' answers concerning their recognition of stress placement when hearing complex words.

Table 6

	very bad	bad	not bad	good	very good	total
N	2	3	5	1		11
P	18.18	27.27	45.45	9.09		100%

Learners' own assessment of the perception of complex word stress before the treatment

This item was included in the pre-treatment-questionnaire in order to have an image on the subjects' level in perceiving stress in complex words before the treatment began. Their level in the present stage will be compared with their ability in perceiving complex word stress when finishing the treatment.

As we can see, 5 respondents out of 11 representing the majority with a percentage of 45.45% assessed their perception of stress in complex words to be not bad. They believed that they could, to an extent, recognize the placement of stress when they heard complex words. Only 1 participant assessed his perception of complex word

stress as good. On the contrary, 45.45% represent the respondents who lacked the confidence to recognize the placement of stress in complex words and who thought that they were not able to perceive stress correctly in complex words. This percentage was divided between the learners who considered their ability to perceive complex word stress as bad (27.27%) and the learners who assessed their perception of complex word stress as very bad (18.18%). This concludes that before the treatment, a significant number of students were not conscious of the placement of stress when they heard complex words.

Answers to items 1 and 2 indicate that the learners were better in perceiving simple word stress than in perceiving complex word stress. In fact, only 2 learners assessed their ability to perceive simple word stress as bad, whereas, 5 learners out of 11 who felt that they lacked the ability to perceive complex word stress .

Item 3: When producing simple English words, how good is your ability to place stress on the right syllable?

The table below presents the learners' ability of producing simple words focusing on correct stress placement.

Table 7

	very bad	bad	not bad	good	very good	total
N		1	9	1		11
P		9.09	81.81	9.09		100%

Learners' own assessment of the production of simple word stress before the treatment

It appears clearly from the above table that the majority of respondents representing the percentage of 81.81% felt that they were not bad in producing simple word stress,

which indicates that before the treatment the learners thought that they were conscious of the placement of stress in simple words. In addition, 1 learner who represents the percentage of 9.09% believed that he was good in placing stress on the right syllable when producing simple words. The same percentage, on the contrary, represents the respondent who considered himself as being bad in producing simple words with correct stress placement.

Item 4: When producing complex English words, how good is your ability to place stress on the right syllable?

The following table shows the data obtained from the subjects' answers on the fifth question of the pre-treatment-questionnaire (see appendix4).

Table 8

	very bad	bad	not bad	good	very good	total
N		6	4	1		11
P		54.54	36.36	9.09		100%

Learners' own assessment of the production of complex word stress before the treatment

The table above shows that the highest number of respondents (6) lacked the ability of producing stress correctly in complex words. This reveals that they were unaware of the patterns of complex word stress, and it indicates their serious need for an intervention program full of awareness-raising activities on complex word stress. The remaining respondents were divided between those who considered their ability as being not bad (36.36%) and the one who believed that he was good in placing stress when producing complex words (9.09%).

The answers to items 3 and 4 reveal that even though the learners were good, to an extent, in the production of simple word stress, most of them were bad in producing complex word stress. 9 learners out of 11 claimed that their ability to produce simple

word stress was no bad, while 6 learners out of 11, which represented the majority, thought that they were bad in producing complex word stress.

It can be concluded from the analysis of the four items of the pre-questionnaire that the learners were superior in perceiving and producing stress in morphologically simple words than in perceiving and producing complex word stress. This concludes, that even though some learners were able to perceive and produce simple word stress, they were not able to perceive and produce complex word stress correctly, this is why, the learners needed to be made aware of the patterns of complex word stress by focusing on the different morphophonological types of affixes.

4.4. Results of the Post-Treatment Questionnaire

Through its name, we understand that the present questionnaire was administered to the members of the experimental group at the end of the experiment. The answers to the present questionnaire show that the majority of learners have become more aware of the importance of pronunciation, as they have become conscious of the patterns which underlie complex word stress.

The post-treatment-questionnaire is divided into four sections; each provides the necessary information which helps to answer the research question and which helps to accept or reject the research hypotheses.

Items 1, 2, and 3 are general questions. They look for answers on the importance of learning pronunciation. Items 4 and 5 seek to find out the impact of the awareness-raising activities on the improvement in the perception and in the production of complex word stress. Items 4 and 5 are useful to answer the research question. Through the third part of the post-questionnaire, which involves items 6 and 7, we try to find answers on the impact of being aware of simple word stress on raising their awareness of complex word stress. Indeed, the third part of the present questionnaire has to do with the effect of raising the learners' awareness of the patterns of simple word stress on the perception and the production of complex word stress. The last part of the questionnaire, which includes items 8, 9, 10 and 11, deals with the subjects' own assessments of their abilities of perceiving and producing simple and complex

word stress. Its role is to compare the learners' proficiency level concerning the perception and the production of stress in complex words before and after the treatment. In addition, it may help to answer the research question as it helps to accept or reject the research hypotheses.

Item 1: How important is learning English pronunciation?

Table 9

	unimportant	not very important	neutral	important	very important	total
N					11	11
P					100	100%

Learners' attitudes towards the importance of learning English pronunciation

The answers corresponding to the first item show that all the respondents have become aware of the importance of learning English pronunciation. It can be noticed that none of them neglected the importance of pronunciation. This indicates that all the members of the experimental group are conscious of the role which pronunciation plays in preserving intelligibility of the target language. The enhanced consciousness of the importance of pronunciation can be considered to be a result of the intervention program which involved an explanation of the impact of the correct pronunciation, among them word stress, on understanding and transmitting the oral message.

Item 2: Is it important to master the placement of stress in complex words?

Table 10

	yes	no	total
N	11		11
P	100		100%

Learners' attitudes towards the importance of mastering complex word stress placement

Through the present question, we seek to know whether the members of the experimental group have become aware of the important role, which mastering the patterns of placing stress in complex words, plays in understanding the spoken discourse. All the members answered positively which proves that none of them neglected the important role that mastering complex word stress rules can play in preserving intelligibility between non-native speakers with native speakers, or between non-native speakers themselves.

_ If yes, for what skill is it more important to master the placement of stress in complex words? (they had more than one possibility to select).

Table 11

	listening	speaking	total
N	6	10	16
P	37.5	62.5	100%

Learners' attitudes towards the important skill for mastering complex word stress

It appears from the table above that 10 answers out of 16 representing the majority of answers with a percentage of 62.5% believe that mastering the placement of stress in complex words is more important for speaking. The respondents consider the

production of stress in complex words as being more important than the perception of complex word stress. When learning the foreign language pronunciation, most learners give more importance to the production aspect. In fact, they give more importance to how the sounds and the words are produced. The most noticed phenomenon which most language departments witness is the fact that foreign learners aim to imitate native speakers' pronunciation when speaking. Learners are more careful on how they produce complex words with correct stress than on noticing the placement of stress when they hear the complex words.

Item 3: Do you think the rule instruction and the consciousness-raising tasks of simple word stress and of complex word stress facilitated acquiring the rules of complex word stress?

Table 12

	yes	no	total
N	11		11
P	100%		100%

Learners' beliefs towards the impact of the treatment on the acquisition of complex word stress rules

The present question is a general question; it looks for answers on the impact of the rule instruction and the awareness-raising activities on making the acquisition of the rules of complex word stress easy. All the respondents believed that the classroom instruction helped them acquire the patterns which underlie stress in complex words. The experimental treatment, in fact, was full of theoretical explanation about the rules of simple word stress and complex word stress (see appendix 6), followed by the practice phase which allowed learners- according to their responses to the present question- acquire the patterns of complex word stress. These findings seem to confirm Jenkins' (2000) hypothesis which claims that since word stress is of a clear cut, generative nature of its rules, it has to be taught to foreign learners to guarantee the

acquisition of its rules (2000: 02). In addition, Ellis (2008) observes that English phonology is a closed system (2008: 103), which means that acquiring the patterns of the closed system can be realized through explicit rule instruction and through consciousness-raising activities (Ellis 1993, cited in Willis and Willis 1996).

Item 4: Do you consider that the rule instruction and the awareness-raising activities of stress in simple words and in complex words were beneficial in improving your perception of complex word stress?

Table 13

	yes	no	total
N	11		11
P	100%		100%

Learners' attitudes towards the impact of the awareness-raising activities on the perception of complex word stress

Item 5: Do you consider the rule instruction and the consciousness-raising activities of stress in simple words and in complex words were beneficial in improving your production of complex word stress?

Table 14

	yes	no	total
N	11		11
P	100%		100%

Learners' attitudes towards the impact of the awareness-raising activities on the production of complex word stress

The respondents' answers to items 4 and 5 show that the perception and the production of all the participants have improved due to the intervention program which was full of explanations about the rules of simple and complex word stress, and which

involved the spoken and the written tasks according to each rule. None of the respondents claimed that the rule instruction and the activities were not beneficial in improving the perception and the production of complex word stress, which is an additional factor to reject the null hypothesis of the present study. The positive answers to the questions 4 and 5 are, in fact, important to answer the research question by claiming that the rule instruction and the awareness-raising activities of simple word stress and of complex word stress had an effect by making the learners more confident in producing and perceiving complex word stress. In addition, the answers to the two present items help to accept the first and the second research hypotheses.

Item 6: How effective were the consciousness-raising tasks and the rule instruction of simple word stress in improving your perception of complex word stress?

Table 15

	not effective	neutral	effective	very effective	total
N		2	7	2	11
P		18.18	63.63	18.18	100%

Learners' attitudes towards the degree of effectiveness of the instruction of simple word stress on the perception of complex word stress

Through the answers to the present item, we aimed to find out whether being able to place stress on simple words has any recognizable effect on the ability to perceive stress on morphologically complex words. 81.81% represent the learners who confirm the hypothesis which claims that the explicit explanation of the rules of stress in simple words followed by the written and the spoken activities of stress in simple words have an effect on improving the perception of complex word stress. Indeed, they believe that including the consciousness-raising tasks concerning stress in simple words was effective for the improvement of complex word stress perception. What can be noticed, also, is that none of the participants answered that there was no effect of simple word stress awareness activities on the perception of complex word stress,

which indicates that including simple word stress in the treatment was of significant use.

Item 7: How effective were the consciousness-raising tasks and the rule instruction of simple word stress in improving your production of complex word stress?

Table 16

	not effective	neutral	effective	very effective	total
N		3	7	1	11
P		27.27	63.63	9.09	100%

Learners' attitudes towards the degree of effectiveness of the instruction of simple word stress on the production of complex word stress

Analysing the answers to the present item provides us with insights on the effect of the rule instruction and the consciousness-raising activities on improving the ability to produce stress in complex words.

The consciousness-raising tasks and the explicit explanation of rules of simple word stress were effective and helpful to improve the ability to produce stress correctly in complex words, because most of the respondents answered positively. 7 learners believed that simple word stress awareness-activities were effective in improving the perception of complex word stress. Besides, one participant in the treatment considered that the consciousness-raising activities are not just effective but very effective in increasing the chances to produce stress in complex words more correctly. None of the learners denied the direct impact of the explicit explanation of the rules of simple word stress and the simple word stress awareness-activities on the production of stress in complex words.

As it was expected, the answers to items 6 and 7 reveal the direct impact of raising the awareness of simple word stress on improving the abilities of perceiving and producing complex word stress. The majority of learners show how effective being able to place stress correctly on simple words can lead to being able to perceive and produce stress in complex words. If the learners were not made aware of the patterns of simple word stress, they would place stress on complex words randomly. For this reason, the learners, during the intervention program, were made conscious of simple word stress patterns and of the three different types of affixes which affect the stress-shift in the simple words (see page 31). On the other hand, being aware of the function of the stress-neutral suffixes, for instance, without being able to place stress correctly on simple words will not give any significant results. The responses to items 6 and 7 do not indicate that the learners have become aware of the patterns of simple word stress only, but they reveal, also, that the experimental group has become more conscious of the rules of complex word stress at the end of the experiment.

Item 8: In listening to the production of simple English words, how good is your recognition of stress placement on the right syllable?

The table below presents the learners' proficiency level in perceiving simple word stress when the treatment ended.

Table 17

	very bad	bad	not bad	good	very good	total
N			8	2	1	11
P			72.72	18.18	9.09	100%

Learners' own assessment of the perception of simple word stress after the treatment

Before the treatment began, the learners involved in the experimental treatment were required to answer the pre-treatment-questionnaire which involved four questions that are similar to items 8, 9, 10 and 11 of the present questionnaire. In the pre-

treatment-questionnaire, the first item, which is similar to the present item, took a middle side. This means, most learners assessed their own ability to perceive simple word stress as being not bad, except for 2 respondents who believed that they were bad and 3 learners who thought that they were good. At the end of the experiment, the learners were asked to re-assess their ability to perceive simple word stress.

Results show that 8 learners representing the majority with a percentage of 72.72% believed that their perception of simple word stress has become not bad. They believed that, when the treatment ended, they could, to an extent, recognize the placement of stress when they hear simple words. 2 learners (18.18%) felt that they have become good in perceiving simple word stress, while 1 learner believed that he has become very good in recognizing the correct placement of stress when he hears the morphological simple words.

It appears clearly from table (17) that the responses were positive. As it was expected, none of the participants ignored the impact of the intervention program on improving their ability to perceive simple word stress, since none of the respondents assessed his ability to be bad or very bad. In fact, when the learners were required to justify their own assessment of their perception of simple word stress, the great majority agreed on the positive impact of the explicit instruction and the activities of simple word stress on improving their ability to perceive simple word stress. A participant judged his recognition of the placement of stress when he hears simple words as being not bad, justifying that by claiming: ‘because I have learnt where to put stress on simple words’. Another learner who assessed his ability to be very good agreed with others on the fact that the rule instruction and the awareness-raising activities of simple word stress helped to improve the perception of simple word stress by pointing out: ‘because we studied a lot and we did many of simple words especially in exercises’. On the other hand, four learners justified their limited ability to perceive simple word stress to be due to the fact that they are not native speakers and they are not used to listen to simple English words every day. On the same issue, Jenkins (2000) pointed out that English word stress is highly rule-governed, for this reason, foreign English learners have problems in acquiring these rules (2000: 40). Jenkins

drew attention to the complexity of the rules of word stress, particularly true for simple word stress (2000: 39).

Item 9: In listening to the production of complex English words, how good is your recognition of stress placement on the right syllable?

The following table shows the learners' own assessment on their ability to perceive complex word stress when the treatment ended.

Table 18

	very bad	bad	not bad	good	very good	total
N			8	3		11
P			72.72	27.27		100%

Learners' own assessment of the perception of complex word stress after the treatment

In the pre-treatment-questionnaire, 45.45% of the total percentage represented the negative responses towards the ability to perceive stress in complex words. This percentage was divided between 18.18% which represented the learners who considered their perception of complex word stress as being very bad, whereas 27.27% was the percentage which represented the learners who felt that they were bad in recognizing the stress placement when they heard complex words before the treatment took place. However, only one respondent assessed his perception of stress in complex words to be good, and the remaining respondents thought that they were not bad in perceiving complex word stress.

In the post-treatment-questionnaire, the same question was asked aiming to induce any recognizable improvement after the treatment took place. An improvement in the ability to recognize the placement of stress when hearing complex words is observed

among the participants, since they reported that their confidence in placing stress in complex words has increased. None of them assessed his ability to perceive complex word stress as bad or very bad. This means that none of the learners neglected the strong effect of the rule instruction and the awareness-raising activities on improving their ability to perceive the stress in complex words. In fact, 8 learners believed that their ability to recognize the stress placement when hearing complex words has become not bad, which is a result of the effort made during the intervention phase, according to the justification of most of them. A respondent, for instance, justified his scaling as not bad to be a result of the classroom intervention by saying: "before, I confused where to put stress, but now with application of the rules I can do so". Another respondent believed that the lessons, which were included in the experimental treatment, were very useful since he can recognize the placement of stress in complex words. 3 respondents considered their ability to perceive complex word stress as good. They believed that the explicit classroom intervention, which they were submitted to, was the main factor that helped them to become good in recognizing the exact placement of stress when hearing the morphological complex words by justifying, for instance "because we practised a lot and studied a lot, we did our effort for it".

Item 10: When producing simple English words, how good is your ability to place stress on the right syllable?

The following table presents the learners' own assessment on their ability to produce simple word stress.

Table 19

	very bad	bad	not bad	good	very good	total
N			1	10		11
P			9.09	90.90		100%

Learners' own assessment of the production of simple word stress after the treatment

It appears clearly from the table above that a very significant improvement in the production of simple word stress took place at the end of the experiment. 10 learners representing the majority with the percentage of 90.90% believe that their ability to produce simple words with correct stress placement has become good, whereas, only one learner considered his production of simple word stress to be not bad.

Comparing their production ability of simple word stress after the treatment with the same ability before the treatment took place, a huge difference can be observed. In fact, before the treatment started, most of the participants in the investigation considered their production of simple word stress as not bad (see page 87), 1 learner felt that he was bad and another believed that he was good.

The great improvement in the production of simple word stress is a result, according to the respondents, of the explicit explanation of all the possible rules of simple word stress and a result of the tasks which were done during the classroom intervention.

Item 11: When producing complex English words, how good is your ability to place stress on the right syllable?

The following data present the learners' own assessment on their ability to produce complex word stress.

Table 20

	very bad	bad	not bad	good	very good	total
N			8	3		11
P			72.72	27.27		100%

Learners' own assessment of the production of complex word stress after the treatment

From the table above, we can notice that the learners' production of complex word stress has improved in comparison to their assessment of their production of complex word stress at the beginning of the experiment. In the pre-treatment-questionnaire, the majority of respondents considered their production of complex word stress as being bad. On the contrary, when the same question was re-asked at the end of the experiment, the confidence of placing stress on the right syllable when producing complex words has increased. 8 respondents believed that they have become able to produce complex word stress, while the 3 remaining respondents felt that they have become good in producing complex word stress.

Most respondents who believe that their production of complex word stress has become not bad reported that their ability has improved, but they still have some difficulties in placing stress correctly on all complex words. They confirm the role which the consciousness-raising activities and the rule instruction played in helping them improve their production ability; however, they did not believe that they have become perfect in producing complex word stress because they are not native speakers, and because English stress patterns are difficult to be acquired by non-native speakers, which confirms Jenkins' (2000) findings that English word stress is tightly linked to rules which are difficult for the foreign learner to acquire. On the other hand, the learners who believe that they have become good in producing stress correctly in complex words agree that their improvement is a pure result of the great effort which was made during the classroom intervention period.

4.5. Summary of the Results

The results of the independent samples t-test in addition to the answers of the post-treatment-questionnaire provide more insights on the impact of the explicit classroom intervention, which the participants in the treatment were submitted to, on the production and the perception of stress in morphologically complex words.

4.5.1. Discussion of the Results in Relation to H1

H1: Rule instruction and consciousness-raising tasks of simple word stress and of complex word stress lead to a better achievement in the perception of complex word stress.

The first hypothesis was concerned with the impact of the explicit explanation of the rules of word stress and the activities on recognizing the placement of stress on the right syllable when hearing complex words. In order to accept or reject the present hypothesis, the necessary data was gathered using two experimental research tools which are; tests and questionnaires.

Both tools were administered to the learners before and after the classroom intervention took place. The results of the tests and the questionnaires were collected and compared. In addition, a comparison of the results of the tests between the experimental group and the control group was made. The comparison indicated a significant difference between the performance of the two groups in the perception post-test and it revealed the superiority of the experimental group over the control group.

Before starting the treatment, the learners participating in the experimental group were required to answer the items of the pre-treatment-questionnaire. Through their responses, we could observe their weakness in perceiving the correct placement of stress in complex words, because there were learners who believed that they were very bad and others who felt that they were bad at recognizing the placement of stress in morphologically complex words. In fact, the highest percentage (45.45%) represented the learners who assessed their ability to perceive complex word stress as bad and very bad. The weakness in the ability to recognize the correct stress placement when hearing complex words before starting the treatment was confirmed by the results of the perception pre-test. The means of the experimental group and of the control group in the perception pre-test were relatively low; $\bar{x}e = 10.18$, $\bar{x}c = 9.40$. The means of both the experimental group and of the control group revealed that the learners lacked the ability to perceive the stress correctly when they heard complex words. In addition,

the results of the perception pre-test made it clear that the two groups had approximately the same proficiency level of perceiving complex word stress. When the intervention program ended, the members of the experimental group proved that they have become conscious of the patterns on which the placement of stress, when hearing complex words, relies.

The improvement of the experimental group in the perception of complex word stress is shown by the results of the perception post-test and by the answers to the post-treatment-questionnaire. When the treatment ended, the perception ability of the experimental group and of the control group was retested. The mean of the experimental group is observed to have improved in comparison to the mean of the control group; $\bar{x}e$ =15.04, $\bar{x}c$ = 12.04. The t-test results concerning the perception ability show the superiority of the experimental group over the control group, and they show that the difference between the means of the two groups was significant. The mean of the post-test of the experimental group has widely improved in comparison with its mean in the pre-test. There was an improvement in the ability to perceive complex word stress in the post-test among the experimental group participants; and the fact which explains the superiority of the experimental group over the control group could not be due to chance, it could be rather ascribed to the explicit explanation of the rules of word stress which was followed by the written and the spoken activities, which confirms H1. In addition, through their answers to the post-treatment-questionnaire, the members of the experimental group made it clear that they have improved in the perception of complex word stress, which is a result of the awareness-raising activities and the rule instruction of stress in morphologically simple and complex words. Items 4, 6 and 9 show how the learners' ability in perceiving complex word stress has improved due to the explicit teaching of the rules of simple word stress and of complex word stress and due to the practice phase which the learners were submitted to, which confirms Kelly's (2000) finding that teaching the rules of complex word stress is very important for the acquisition of the patterns of complex word stress. Acquiring the patterns of complex word stress has helped the learners not only to know the appropriate placement of stress in complex words, but it has allowed them

to understand speakers when they listen to them. The improvement in the ability of perceiving complex word stress will help learners to avoid problems of intelligibility.

4.5.2. Discussion of the Results in Relation to H2

H2: Rule instruction and awareness-raising activities of stress in simple words and in complex words result in a better production of complex word stress.

The second research hypothesis of the present work aimed to find out any recognizable impact of the rule instruction and the consciousness-raising activities on improving the ability to produce stress in complex words. Similar to the first research hypothesis, accepting or rejecting the second research hypothesis depends on the results of the independent samples t-test and on the participants' responses to the questions of the post treatment-questionnaire. The analysis of the post-test results of both the experimental group and the control group has indicated a significant difference between the performances of the two groups in the production of complex word stress.

In the production pre-test, the means of both the experimental group and the control group were very low; $\bar{x}e = 7$, $\bar{x}c = 7.18$. This inability to place stress correctly on complex words and the inability to produce complex word stress correctly was reinforced by the experimental group's answers to the items of the pre-treatment-questionnaire. In fact, through the pre-treatment-questionnaire, the learners involved in the experimental group were required to assess their ability to produce complex word stress. A number of learners representing the majority with a percentage of 54.54% assessed their own production of stress in complex words as bad. This indicated that before the treatment most of the members of the experimental group were unaware of the patterns of complex word stress, which result in their unawareness of the patterns of complex word stress and of the production of stress in morphologically complex words.

At the end of the experimental treatment, the production ability of complex word stress of both groups was retested. Through the results of the post-test we can observe an improvement in the experimental group's ability to produce complex word stress.

Indeed, the mean of the experimental group in the pre-test was 7, but in the post-test it had increased since it became 13.68. On the contrary, the results of the production post-test of the control group did not change widely from the one of the pre-test because its mean in the pre-test was 7.18, while its mean in the post test was 8.27. There was no significant difference between the experimental group and the control group in the production pre-test because the tobs was less than the tcrit. However, the difference between the results of the experimental group and the control group in the production post-test was significant because the tobs was 7.41 which was much greater than the tcrit (2.08). The significant difference is observed to be a result of the intervention programme which the members of the experimental group were submitted to. Greater emphasis on the aspects of word stress and on the patterns which underlie the stress in complex words, during the treatment, led to the improvement in the results of the learners in the post-test.

The impact of the rule instruction and the consciousness-raising tasks on the production of complex word stress is apparent not only in the results of the test, but also in the respondents' answers to the post-treatment-questionnaire. In the post-treatment-questionnaire, the learners were required to answer items which asked about the impact of the explicit instruction of rules of word stress on the production of complex word stress, as they were asked to assess their own ability of producing stress in complex words. Answers to items 5, 7 and 11 show clearly that the rule instruction and the consciousness-raising activities were not only beneficial in improving the learners' recognition of the patterns of complex word stress but they were also effective in helping them produce correctly complex word stress. These findings coincide again with Kelly's (2000) findings that making learners aware of stress followed by the practice on this point will help them to become more able to use it appropriately when speaking (2000: 67). However, in their justifications of their own assessment of their ability to produce complex word stress, some of the learners expressed the difficulty of acquiring all the rules of complex word stress, which is an obvious matter according to Jenkins (2000) who points out that the patterns of English word stress are difficult to be acquired by English as a foreign language learners (2000: 39)

Conclusion

The present chapter was presented in two correlated stages; the presentation of the research data stage and the discussion of the data stage. The first stage provided the results of the data which were collected in this work. The data presentation was supported by using tables. While, the second stage discussed the results obtained from the data in relation to what was found, on the one hand, and in relation to the literature relating to those aspects, on the other hand.

With the help of data analysis, we discovered that the spoken and the written tasks, in addition to the explanation of the rules of word stress could solve, to a significant extent, the difficulties of the perception and the production of stress in complex words. Besides, the practice phase has shown its effectiveness in improving the ability of recognizing the placement of stress in complex words as well as improving the abilities of producing and perceiving complex word stress. As a result, the positive findings are aimed to be applied in teaching pronunciation patterns to Algerian learners, which the following chapter is going to discuss.

Chapter five

Implications for Teaching

Introduction

Through the results obtained from this investigation, important features for teaching pronunciation appeared, which are assumed to be of a crucial role for developing pronunciation acquisition if they are implemented in teaching the features of pronunciation for Algerian learners of English as a foreign language.

This chapter presents the expectations which implicate how the teaching of pronunciation has to be. It, also, provides the essential factors which the teaching of pronunciation has to focus on.

5.1. Teaching Pronunciation for Preserving Intelligibility

The pronunciation aspects are important features on which the transmission of the spoken discourse relies. Word stress is an aspect of pronunciation which has proved to be a crucial factor for preserving intelligibility and understandability between speakers and listeners. Through the correct perception of the placement of stress in simple words and in complex words, listeners can get at the meaning of the word as they can understand the meaning of all the words in the connected speech.

Word stress is a pronunciation feature which has the major role in affecting intelligibility (Kenworthy 1987: 14). It has been mentioned previously, in the present work, that native speakers of English rely very much on the stress patterns of the word in order to become able to recognize its meaning. If a speaker misplaces stress in a complex word, for instance, listeners cannot get at the meaning of the word.

Since the theoretical part of the present work has proved how effective the correct recognition of the placement of stress on perceiving and on producing complex words, and since the present investigation has proved how can the correct perception and the correct production of complex word stress preserve intelligibility, the implication which can be drawn from such findings is changing the way of teaching complex word

stress by focusing on the possible advantages which can be derived from acquiring the patterns of complex word stress.

The traditional teaching of word stress (both simple and complex words), which is still used in this department, is aimless. There is no inclusion of the reasons behind which the acquisition of the patterns of complex word stress is important. By adopting the traditional teaching of pronunciation, learners are not made conscious of the importance of acquiring the prosodic features, among them complex word stress. Learners, in fact, are not made conscious that the correct acquisition and the correct production and the correct perception of complex word stress can preserve intelligibility of the conversation. Learners are not made aware that if one of them produces complex words with incorrect placement of stress, or if one of them does not stress the complex words at all, listeners will not be able to understand him which might lead to the breakup of the communication.

The old teaching of complex word stress used to focus on presenting the rules, followed by submitting the learners to written activities. This method of teaching complex word stress does not motivate the foreign language learners to acquire the rules of complex word stress because it does not provide them with convincing reasons for acquiring the patterns of complex word stress.

5.2. Teaching Pronunciation for Communication Purposes

Learning any foreign language has to focus on the communication purpose. The teaching of the aspects of any language should aim to develop the communicative competence. For this reason, the teaching of pronunciation has to focus more on teaching the aspects which help to achieve a successful communication. It must focus, in fact, more on aspects of phonology without ignoring the segmental features. Complex word stress is a suprasegmental feature. Its correct use is believed to contribute in achieving a successful communication. On the contrary, producing complex words without stress or with misplaced stress may distort the intended meaning of the word (Naiman 1992: 163).

Through the present work, we discovered how important it is to acquire the correct placement of complex word stress for keeping the flow of communication going on and for achieving a successful communication. This is why, it is assumed that pronunciation curriculum designers should focus more on the suprasegmentals, among them complex word stress, rather than on the segmental aspects of pronunciation, as they should involve the theoretical aspect which explains the communicative role which the suprasegmentals play.

The old teaching of pronunciation has focused widely on teaching the segmental aspects of pronunciation more than the suprasegmentals. Even when it deals with the suprasegmentals, the traditional teaching of pronunciation does not explain the main reason for acquiring the suprasegmentals. Complex word stress is an aspect of pronunciation which contributes widely in achieving a successful communication between the participants in the speech because its correct perception and production can preserve intelligibility between speakers and listeners. The preceding section has discussed the influence of the correct recognition of the placement of stress in complex words on avoiding unintelligibility between speakers and listeners. By being intelligible, the oral communication can be described as successful.

The implication, which may be drawn from the findings of the present research, is changing the spirit of the pronunciation class. The pronunciation class has to move from the old class which deals with the explanation of the pronunciation aspect towards a class that should include the theoretical part, which is explained in the instruction of the rules of the language phenomenon, and which should be followed by the practise stage without ignoring the fact of making learners aware of the reasons which lie behind learning this aspect. The reasoning, which accompanies the learning of the language aspect, motivates learners. Learners will become aware that they are learning a language phenomenon with a specific purpose.

In the case of teaching complex word stress, the rules of complex word stress have to be presented to the learners by the teacher, and then the learners have to practice each rule. However, before the instruction phase takes place, the teacher should explain to English foreign language learners the reasons which lie behind the necessity

of acquiring the patterns of complex word stress, as he must explain why it is important to perceive and produce stress correctly in complex words. Learners need to be made conscious of the role which the recognition of the placement of stress in complex words plays in facilitating communication.

5.3. Implications for the Teaching Activities

Through the experiment, we observed that the teaching activities of complex word stress should be applied to each rule of complex word stress individually, in addition, they should be divided into the production activities and the perception activities.

5.3.1. Practising the Rules of Complex Word Stress

As it was pointed out in different sections of the present work, the stress in complex words has different rules. The rules vary between the patterns of stress-shifting suffixes and stress-neutral suffixes. Each type of suffixes has different patterns of stress placement, which the learners have to be made conscious of. The role of the teacher, when teaching such rule fixed aspect of English pronunciation, is to explain the functioning of each rule, following that by providing the necessary examples to illustrate the rules in order to facilitate the learning process.

After the presentation stage, there comes the practice phase which involves activities that are appropriate to each rule. As it has become known, suffixes are the morphemes which can affect the change in the placement of stress in the root word, for this reason, the teaching activities should focus more on the complex words which are morphologically constructed by suffixes. Nevertheless, since the effect of the morphological construction (suffixes) of complex words on the placement of stress varies, the tasks should be designed according to each category of suffixes. In other words, if the rules of stress-neutral suffixes are presented, the tasks have to include complex words which are built by the stress-neutral suffixes. On the contrary, when stress-shifting suffixes are presented, the activities have to deal with the complex words which include the stress-shifting suffixes. When all types of suffixes are dealt with, it becomes necessary to design tasks involving complex words that are constructed by stress-neutral suffixes and complex words which are built by the stress-

shifting suffixes (Hancock 2003, see appendix 6, the last type of exercises) as it becomes easy to observe the learners' ability at distinguishing the difference between the stress-neutral suffixes and the stress-shifting suffixes.

5.3.2. Production and Perception Activities

Through the experiment which we have conducted, we noticed that the written tasks which are concerned with the recognition of stress placement in complex words are useful but they are insufficient.

Through the theoretical teaching, learners are made aware of what complex word stress means, and they become conscious of the features of word stress. However, the theoretical instruction is not sufficient to make learners skilled in how to produce the stress syllables in complex words, as it is not sufficient to make them competent in finding out the placement of the stressed syllable when they hear the complex words. In order to increase the proficiency level of producing the stressed syllables correctly in complex words, and in order to become able to distinguish the stressed syllables from the unstressed syllables, the teaching activities should include the perception and the production activities.

Learners need to be involved in oral tasks where they are given a list of complex words, and they will be asked to produce them by stressing the appropriate syllable in each word. Similar to the production tasks, the perception tasks, in this case, are meant to teach learners how the stressed syllable is produced, how it should sound, the features with which the stressed syllable is produced and how the stressed syllable is perceived by the listener. The perception activities should require learners to listen to a list of complex words, and they should ask them to find out the stressed syllable in each word. The perception activities allow observing the level of learners' consciousness towards the distinction of the features of stress.

The theoretical teaching of the rules of complex word stress placement seems not to be sufficient alone, because learners need to practise what they have learnt. The written tasks which require learners to place stress on the appropriate syllable in complex words play a significant role in allowing EFL learners to understand the rules of complex word stress on one hand, and they contribute in memorizing the rules on the other hand. However, what guarantees the correct perception and the correct production of complex word stress are the tasks which ask learners to perceive and to produce complex words. This is why, pronunciation teaching syllabus should include perception and production activities as essential parts to improve the EFL learners' perception and production of complex word stress. In addition, the impact which can be drawn from this experiment is the importance of the production tasks since they help learners improve their production ability of stress, in general, and they increase the production ability of complex word stress, in particular. Besides, the perception activities showed their effectiveness in helping learners improve their ability of perceiving complex word stress.

5.4. Limitations of the Study

Two issues which the present work aimed to obtain were; the wide number of the participants and the big amount of time.

Through the big number of participants in the experiment, the analysis of data of the research can end up with undoubted results either positive or negative. The wide number of subjects guarantees the variation between high aptitude learners and low aptitude learners, as a consequence, the results of the experiment are more trustful. On the contrary, if the number of the subjects is small, we may not have many high aptitude learners in the research, and there may not be many low aptitude participants in the research, which was the case of the subjects of the present research. The number of the subjects of this research is small, which was a result of the answers to the pre-treatment-questionnaire.

Before the experiment took place, we aimed to select 30 participants in order to conduct the experiment. Hoping to control the intervening variable of the research, we

administered the pre-treatment-questionnaire before the treatment began. Its role was to find out the learners who would participate in the experiment. Through the answers to the questionnaire, we ended up with 12 learners in the experimental group and 12 learners in the control group. We started the treatment with 12 learners, but because 1 participant was not regular, we were obliged to exclude him from the research, thus the number of the participants involved in the experimental group was 11 and the number of the participants involved in the control group was 12. However, since Bell (1999) has noticed that both the experimental group and the control group of any research have to be matched in sex, proficiency level and in number, a learner from the control group was excluded, what made the subjects of the present work to be limited to 22 participants, which is not a very big number.

The second limitation of the present research was the lack of time which was devoted to the treatment. In order to achieve more positive results of the experiment, the members of the experimental group have to be exposed to the targeted language phenomenon for a sufficient amount of time. Before the experiment took place, we planned to expose the members of the experimental group to the different aspects of word stress for more than 25 hours. However, because of some problems which we witnessed in the University of Algiers (2) during the academic year 2011, the investigation stopped for a long period, as a result the hours devoted to the treatment were diminished.

General Conclusion

This research presents mostly an experiment which was undertaken in the English department of University of Algiers 2. The aim of conducting this experiment was to examine the effect of consciousness-raising activities and rule instruction of both simple word stress and complex word stress on the Algerian English as a foreign language learner's perception and production of stress in morphologically complex words. This research was considered to be worth investigating because the problems of complex word stress' acquisition, perception and production are widely spread among EFL learners. In addition, this research was worth investigating because it is believed that the incorrect perception and production of stress in complex words lead to increase unintelligibility between speakers and listeners, which can break up the conversation.

The acceptance of the research hypotheses (1 and 2) and the refusal of the null hypothesis are results of the tools which were used to collect data for the research. In fact, it was mentioned in this work that in order to accomplish the aim of the present research, the experimental method was undertaken which is a quantitative research and which requires quantitative data gathering tools. As a result, the tools which were used to gather the data were the tests and the questionnaires. The tests and the questionnaires completed each other, because the information which could not be grasped by the tests could, on the contrary, be obtained by the questionnaires.

When the experiment ended, the data were collected and analysed. The results achieved indicated that H_0 was rejected and H_1 and H_2 were not rejected. This means that the rule instruction and the consciousness-raising activities of simple word stress and of complex word stress were beneficial in improving EFL learners' perception of complex word stress (H_1), as well as, they were helpful in increasing the confidence in the ability to produce complex word stress (H_2). These satisfactory results return back to the correct choice of the approach to teach the rules of word stress. Teaching the rules of word stress needed presenting the rules to the learners, practising the rules and producing what was learnt. This means that the PPP approach was needed to confirm that the awareness of the rules of complex word stress was presented to the learners,

and to confirm that the learners practised and produced each rule of word stress, which helped the learners to be able, to a significant extent, to perceive and produce complex word stress at the end of the experiment.

We aim to implement the satisfactory findings, which have been achieved in this research, in teaching complex word stress, in particular, and in teaching all other aspects of pronunciation, in general. It is required from pronunciation syllabus designers to give more attention to the importance of learning complex word stress, rather than on teaching the aspects of word stress themselves, because it is assumed that explaining the role of the correct perception and the correct production of complex word stress will motivate learners to acquire the patterns of complex word stress. Besides, we hope from teachers to work hard to raise the learners' consciousness on the rationale behind acquiring complex word stress' patterns, as they are expected to implement the PPP approach which seems to be more suitable for teaching complex word stress.

To end up, this research started by posing a problem of whether the rule instruction and the activities which are used to raise learners' consciousness of simple word stress and complex word stress are useful for improving EFL learners' perception and production of stress in complex words. Several procedures were passed by in order to solve this problem starting by selecting the most appropriate research method, the subjects and the tools, in order to obtain the necessary data to solve the problems which were set up at the beginning of this study.

By the end of the experiment, it became noticed the effectiveness of the classroom intervention in improving the perception and the production of stress in complex words. This effectiveness was reinforced by the results of the tests and by the answers to the questionnaire. As the results appeared, the problem which has been set up at the beginning of this study was solved by claiming that the rule instruction and the consciousness-raising activities could increase the ability to perceive and produce stress in complex words. We aim from the causes which led to achieve these satisfactory findings to be implemented in the teaching of the pronunciation of English as a foreign language. In addition, the findings of this research show the necessity to

focus, when teaching pronunciation, on phonological features of pronunciation more than focusing on phonetics, because the suprasegmental aspects are the only aspects which affect intelligibility of speech.

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Appendix 1 (perception test)

Instruction:

Below there is a list of words which you are going to listen to their pronunciations. Listen to the words carefully, after each listening to each word put stress on the appropriate syllable of the word according to what you have listened.

Educate, education, electric, electrician, decorate, decoration, music, musician, communicate, communication, scientist, scientific, atom, atomic, artist, artistic, child, childhood, childish, childishness, childless, believe, believer, believable, unbelievable, unbelieving, enjoy, enjoyable, unenjoyable, enjoyment, care, careful, carefully, careless, carelessness, carer, caring, uncaring, photograph, photography, photographic, economy, economics, economical, national, nationality, nationalize, nationalization, civil, civility, civilize, civilization.

(adapted from Hancock 2003)

Appendix 2 (production test)

Instruction :

Read the following words silently, and then produce them loudly by putting stress on the right syllables. The loud production of the words has to be in a normal rate

(i-e not very fast and not very slow).

Comfort, roman, diagnose, tattoo, glory, masquerade, revolt, advertise, diagnosis, comfortable, reflex, employ, glorify, proverb, romanesque, employee, invisible, opportune, philosophy, nation, compete, national, reflexive, measure, revolution, advertisement, competition, proverbial, measurable, philosophic, invisibility, nationalize, competitive, philosopher, nationalization, opportunity, philosophical.

Appendix 3(Pre-treatment questionnaire A)

University of Algiers 2

Faculty of letters and languages Number :

Department of English

A questionnaire prepared by Mrs F. Daghi.

Questionnaire to students.

Dear students, you are kindly invited to answer a set of questions. This questionnaire is a data gathering tool for a research conducted to get the degree of magister. Please answer the questions as honestly as possible, and make sure that your contribution is kept anonymous.

The instruction:

Put a cross on the right answers. Please, note that there is only one right answer for each question.

1) Do you listen to spoken English outside the university?

yes ☐ no ☐

If yes, give an approximate amount of your listening:

Less than 2 hours a day ☐ 2 hours a day ☐ 4 hours a day ☐ more ☐

Please say on which of the following means of media you do your listening?

radio ☐ TV ☐

Thank you for your collaboration

Appendix 4 (pre-treatment questionnaire B)

University of Algiers 2

Faculty of letters and languages Number :

Department of English

A questionnaire prepared by Mrs F. Daghi.

Questionnaire to students.

Dear students, you are kindly invited to answer a set of questions. This questionnaire is a data gathering tool for a research conducted to get the degree of magister. Please answer the questions as honestly as possible, and make sure that your contribution is kept anonymous.

The instruction:

Put a cross on the right answers. Please, note that there is only one right answer for each question.

1) Do you listen to spoken English outside the university?

yes ☐ no ☐

If yes, give an approximate amount of your listening:

Less than 2 hours a day ☐ 2 hours a day ☐ 4 hours a day ☐ more ☐

Please say on which of the following means of media you do your listening?

radio ☐ TV ☐

2) In listening to the production of simple English words, how good is your recognition of stress placement in simple words?

Very bad	Bad	Not bad	Good	Very good

3) In listening to the production of complex English words, how good is your recognition of stress placement in complex words?

Very bad	Bad	Not bad	Good	Very good

4) When producing simple English words, how is your ability to place stress on the right syllable?

Very bad	Bad	Not bad	Good	Very good

5) When producing complex English words, how is your ability to place stress on the right syllable?

Very bad	Bad	Not bad	Good	Very good

Thank you for your collaboration.

Appendix 5 (post-treatment questionnaire)

University of Algiers 2

Faculty of letters and languages Number:

Department of English

A questionnaire prepared by Mrs F. Daghi.

Questionnaire to students.

Dear students, you are kindly invited to answer a set of questions. This questionnaire is a data gathering tool for a research conducted to get the degree of magister. Please answer the questions as honestly as possible, and make sure that your contribution is kept anonymous.

The instruction:

Put a cross on the right answers. Please, note that there is only one right answer for each question.

1) How important is learning English pronunciation for you?

unimportant	not very important	neutral	important	very important

2)Is it important for you to master the placement of stress in complex words ?

yes ☐ no ☐

If your answer is '**yes**', for what skill it is more important to master the placement of stress in complex words? If the mastery of it in the two skills is important for you, you can select them both.

speaking ☐ listening ☐

3) Do you think the rule instruction and the consciousness raising tasks of simple word stress and of complex word stress facilitated acquiring the rules of complex word stress ?

yes ☐ no ☐

4)Do you consider that the rule instruction and the awareness raising activities of stress in simple words and in complex words were beneficial in improving your perception of complex word stress ?

yes ☐ no ☐

If your answer is '**no**' justify why.

……

……....

5) Do you consider that the rule instruction and the awareness raising activities of stress in simple words and in complex words were beneficial in improving your production of complex word stress?

yes ☐ no ☐

If your answer is '**no**' justify why.

……

……....

6) How effective were the consciousness raising tasks and the rule instruction of simple word stress in improving your perception of complex word stress?

not effective	neutral	effective	very effective

7) How effective were the consciousness raising tasks and the rule instruction of simple word stress in improving your perception of complex word stress?

not effective	neutral	effective	very effective

8) In listening to the production of simple English words, how good is your recognition of the placement of stress on the right syllable?

Very bad	Bad	Not bad	Good	Very good

Justify why.

……

……..

9) In listening to the production of complex English words, how good is your recognition of the placement of stress on the right syllable?

Very bad	Bad	Not bad	Good	Very good

Justify why.

……

……..

10) When producing simple English words, how good is your ability to place stress on the right syllable?

Very bad	Bad	Not bad	Good	Very good

Justify why.

……

……..

11) When producing complex English words, how good is your ability to place stress on the right syllable?

Very bad	Bad	Not bad	Good	Very good

Justify why.

……

……..

Thank you for your collaboration.

Appendix 6

Lesson one: the Syllable

Introduction

Any word can be divided into one or more syllables. Phonetically speaking, the syllable is described as consisting of a centre, which appears in 4 cases:

1-The centre of a syllable comes in the form of isolated sounds, preceded and followed by silence. It can be a single vowel in isolation like:

Ah /□:/, oh / /, or eh / /. As it can appear in the form of isolated consonant sounds like: / / which refers to an agreement, and / / which is used to ask for silence.

2-Some syllables have more than just silence preceding the centre of the syllable.

Eg : key/ /, go / /, my / /, know/ /, more/ /.

The sounds which precede the centre of the above syllables are called **onset**.

3-Other syllables may have **no onset** but a **coda**. The **coda** is the consonant sound which follows the centre:

Eg : is/ /, if / /, egg / /, ice / /.

4-Some syllables can be composed of **onset** +**peak** (the centre of the syllable)+**coda** :

Eg : ten / /, nose / /, mouth / /.

The division of the word into syllables:

Mum one syllable.

Mother two syllables: mo+ ther.

Grandmother three syllables: grand+mo+ther.

The division of the word into syllables has a relation with the pronunciation of the word, not with the written form of the word.

For example, according to the written form, the word chocolate is divided into 3 syllables: cho+co+late.

However, in the spoken form it is divided into 2 syllables only: / /.

Written: dif+fe+rent.

Example2: the word different

Spoken: / . /.

Written: in+te+re+sting.

Example3: the word interesting

Spoken: / . . /.

Task1:

Divide each of the following words according to the number of its syllables.

Mother, childish, brother, helpful, silent, courage, smooth,
amazing, discourage, tree, general, secretary, nineteen,
change, roses, knows, hated, played, missed, machine,
communication, communicate, geography, history,
communicative, mathematics.

Task2:

Pronounce the above words loudly.

Lesson two: Word Stress

Word stress refers to certain syllables in the word bear stress. If the word contains one syllable, i-e if the word is a monosyllabic word, the stress automatically falls on that syllable.

But if the word contains two syllables and more syllables, one of these syllables bears stress. Stress in English is variable, this means, it can fall on the first syllable, on the second syllable, on the third syllable, or on the fourth syllable …etc. Stress in English is unpredictable; it is not similar to the stress in the French language, for instance, where the last syllable is always stressed. Stress in English does not have a predictable or a definite place.

What are the stressed syllables?

Stressed syllables are the syllables which are produced with more prominence than unstressed syllables. Stressed syllables are more prominent because they are louder, stronger, and longer than unstressed syllables.

Loudness:

Louder syllables are produced with more muscular energy than unstressed syllables.

This is why; the stressed syllables are heard to be slightly louder.

Length:

If one syllable is heard to be longer than an unstressed syllable, it is that syllable which is stressed.

Strength:

Stressed syllables contain longer vowels, diphthongs, or triphthongs (which construct the strength of the peak). Whereas, weak syllables contain weak vowels which are

mainly; / , , and syllabic consonants/ (taking into account that schwa is considered as the weakest vowel). If any syllable contains one of the previously mentioned sounds, it will be considered as a weak syllable, in comparison to other syllables.

Stress in two syllable words:

In bi-syllabic words either the first or the second syllable takes stress.

Stress in longer words:

Longer words tend to have three syllables and more.

Stress in longer words may have two levels (degrees) ; primary stress and secondary stress.

Primary stress:

Primary stress refers to the syllable in the word that is the most stressed.

Primary stress is marked by a small vertical line above the stressed syllable.

Example: □jeopardy .

□Monarchy.

Secondary stress:

Refers to a syllable in a word which is stressed to a certain extent but not as strong as the primary stress. They are stronger than unstressed syllables but weaker than primarily stressed syllables.

Example: □revo□lution.

There must be unstressed syllables between the primary stress and the secondary stress.

Most unstressed syllables are weak syllables. They are weak because most of them

consist of the weakest vowels which are; / ə, □ , □ and the syllabic consonant/.

Neither the primary stress nor the secondary stress has a fixed position in syllables in English words.

Examples:

Primary stress: □answer, be□gin,

Secondary stress: □revo□lution, de□ve□lopmental.

Task1:

Indicate the place of primary stress and of secondary stress in the following words, and then produce them loudly:

Imagination, congratulations, deviation, deviationist, devotee,

dialectic, diagnostic, floriculture, himophilia, occidental,

pencillin.

Task2:

Put stress on the following words, and then produce them loudly:

Photo, shopping, imagine, imaginary, wise, cooking, drive, lazy,

helplessness, congratulate, attitude, promise, promotion, aware,

awareness.

Lesson three: Simple word stress.

Simple word stress refers to the stress that falls on simple words. Simple words are words which are morphologically constructed of one grammatical unit, i-e one free morpheme. The free morpheme is the grammatical unit that can stand alone and that gives meaning by standing alone.

Examples: child, home, sun, morning, kitchen, feel, syllable…etc.

The above words are considered as simple words because they do not include affixes (prefixes and suffixes).

Simple words can be composed of one syllable, two syllables, three syllables or more.

Stress on monosyllabic words:

Monosyllabic words are not considered as having word stress, because each word consists of one syllable, which will automatically bears stress.

Examples: child, home…..etc.

Task:

Transcribe the words below, and then produce them loudly by stressing them.

Hope, smile, speak, think, teach, eye, thought, nose, ear,

phoned, be, am, has, have, out, yes, no, sun, rise, fall, cloud,

snow, rain, Hi, can, do, move, drive, eat, killed, plays, car,

dropped, sky, train, flat, door, eyes, kind, mouth, bridge, bus,

blood, flood, fruit, cloud, rose, fun.

In addition to the listening activity N 46 (Hewings 2004).

Lesson four: Stress on bi-syllabic words.

Bi-syllabic words are the words which consist of two syllables. Bi-syllabic words can be verbs, nouns, or adjectives.

2 syllable verbs:

In bi-syllabic verbs either the first syllable or the second syllable is stressed.

- If the second syllable of the verb consists of a long vowel, a diphthong or if it ends with more than one consonant, that syllable will be stressed.
  Examples: a□rrive, as□sist , at□tend.
- If the final syllable contains a short vowel, or one (or no) consonant, the first syllable will be stressed.
  Examples: □enter, □answer, □open.
- If the final syllable consists of the diphthong / ə□ /, that syllable will be unstressed.
  Examples: □follow, □borrow.

Some exceptions to the above rules are due to the complex morphological construction of the verbs.

Examples: □permit → per+mit.

2 syllable nouns:

- If the second syllable has a short vowel, the first syllable will be stressed, and if the first syllable has a short vowel the second syllable will be stressed.
  Examples: □money, □product.
  es□tate, de□sign.

2 syllable adjectives:

The same rule of 2 syllable verbs can be applied on 2 syllable adjectives.

Examples: □lovely, di□vine, □ hollow.

Exceptions: □honest.

□perfect.

Some word forms be nouns or verbs, the placement of stress in each pair of noun-verb allows to make a distinction in the class of the word.

- If the word is a noun, the first syllable is stressed.
  Example: □record.
- If the word is a verb, the second syllable takes the stress.
  Example: re□cord.

Other examples of the words of the same category are; contrast, desert, export, object, present, produce, protest, rebel, report.

However, in the following words the stress is at the same place whether the words are nouns or verbs; □answer, □picture, p□romise, re□ply, □travel, □visit.

N B: adverbs and prepositions behave the same as verbs and adjectives.

Task1:

Distinguish the nouns, the verbs and the adjectives among the words below.

Pretty, handsome, holly, enter, attack, promise, baby, perfect, begin,

machine, arrest, attend, contain, supply, forbid, support, survey, suspect

valley, valid, holy, value, photo, horror, happy, forget, happy, concept,

camel, devil, combine, wonder, record, answer, present, produce, drama,

habit, phoneme.

Task2:

Stress the above words according to the rules that you have learned.

Task3:

Produce the above words loudly by placing stress on the right syllable.

Lesson five: Stress on three syllable words.

1)Verbs:

- If the last syllable consists of a short vowel or only one consonant, stress will fall on the penultimate syllable(the one before the last).
  Examples: en□counter, de□termine.
- If the last syllable consists of a long vowel or a diphthong or more than one consonant, that syllable will take stress.
  Examples: enter'tain, ascer'tain.

2)Nouns:

- If the last syllable contains a short vowel or the diphthong / ə□ /, and if the penultimate syllable contains a long vowel or a diphthong or more than one consonant, the stress will not fall on the last syllable but it will fall on the penultimate syllable.
  Examples: mi□mosa, po□tato, di□saster.
- If the second and the third syllables consist of short vowels, no diphthongs and if they consist of no more than one consonant the stress will fall on the first syllable.
  Examples: 'quantity, 'cinema.

On the whole, most of the above rules show that if a syllable has more than one consonant, a long vowel or a diphthong, it is stressed. However, three syllable simple nouns have different rules:

- If the final syllable has a long vowel, two consonants or more or a diphthong stress will fall on the first syllable because the last syllable will be quite prominent.
  Examples: □intellect, □stalactite.

3)Adjectives: they have the same rule (the above rule).

Examples: □oppurtune, □derelict.

Task1:

Among the words below, distinguish the nouns from the verbs and from the adjectives.

Quality, introspect, calorie, energy, skeleton, medicine, tomorrow,

tomato, tragedy, understand, criterion, adventure, adjective, penetrate, exercise, continue, category, calendar, calculate, canopy, furniture, analyze, appendix, mathematics, singular, consonant, entertain,

institute, appreciate, opportune, cinema, determine, speculate, energy, poetry, contemplate, immigrate, penetrate, infiltrate.

Task 2:

Put stress on the appropriate syllable in each word among the above words according to the rules .

Task3:

Produce the above words loudly by stressing the right syllables.

In addition to the listening activity N 47 (Hewings 2004).

Lesson six: Stress in complex words.

Stress in complex words refers to the complex words which bear stress. As opposed to simple words, complex words are composed of more than one morphological unit, this means, the complex words are composed of one free morpheme and one or more bound morphemes.

Bound morphemes are the morphemes which cannot stand alone. Bound morphemes in English are represented by affixes: prefixes and suffixes.

Bound morphemes are divided into two types which are; inflectional bound morphemes and derivational bound morphemes.

The inflectional bound morphemes: when linked to the stem, they indicate the grammatical function of the stem.

Examples:

The ‘s’ of the plural and of the third personal singular pronoun in the present tense, the ‘ed’ of the past tense, and the ‘ing’ of the present participle, and the possessive case (‘s).

All the three affixes do not have any effect on the placement of stress when added to the word. For example; □work→ □works, □worked , □working.

The girl’s bag.

The derivational bound morphemes: these morphemes, when linked to the word, change the grammatical category of the word.

Prefixes like ‘un’, ‘dis’, refer to the opposition in the word’s meaning.

Derivational morphemes derive adjectives from verbs.

Example: help→ helpful.

They derive, also, adverbs from adjectives by adding a set of suffixes.

When the derivational morphemes (affixes) modify the root word, they will have a great effect on the pronunciation (stress) of the word. These affixes which affect the shift in aspects of the pronunciation of the root word are suffixes, whereas the prefixes do not bring any change to the placement of stress of the stem when they modify it. Prefixes are known as never taking stress except for some prefixes like: □dislocate, □bicycle.

Some suffixes bring changes in the placement of stress within the original word when the modify it. These suffixes are called ‘ stress-shifting suffixes’.

Other suffixes do not have any kind of effect on the placement of stress in the original word when they modify it, and they are labeled ‘stress-neutral suffixes’.

Stress-neutral suffixes:

This kind of suffixes do not carry primary stress themselves, and they do not bring any change in the placement of stress within the word.

Examples:

able: □measure → □measurable.

ably: □probable → □probably.

age: □anchor → □anchorage.

er: dr□eam → d□reamer.

ment: □punish → □ punishment.

less: □help → □helpless.

ness: □kind → □kindness.

y: □fun → □funny.

al: □refuse → □refusal.

en: □wide → □widen.

ful: □wonder → □wonderful.

ish: □devil → □devilish.

ly: □hurried → □hurriedly.

ous: □courage → □courageous.

fy: g□lory → g□lorify.

wise: □like → □likewise.

Task1:

Read silently the pair of words mentioned in the above examples, and then produce them loudly by putting stress on the right syllables.

Task2:

Stress the right syllables in the pair of words below and then produce them loudly.

Aware→ awareness.

History → historical.

Tender → tenderness.

Simple → simplify.

Entertain → entertainment.

Ill → illness.

Speak → speaker.

Engage → engagement.

Power → powerful → powerless.

Hide → hidden.

Arrange → arrangement

Harm → harmful→ harmless

Conscious → consciousness

Child →childless →childlessness

Horror → horrible

Respect → respectful→ respectfully

Quick → quickly

Danger→ dangerous

Poison → poisonous.

In addition to the listening task N 27 (Hewings 2004).

Stress shifting suffixes:

Suffixes carrying stress themselves:

These suffixes represent strong endings and they will carry stress themselves. In this case if the root word contains more than one syllable, there would be a secondary stress in most cases. With suffixes carrying primary stress, the complex word will have its primary stress on the last syllable, while the secondary stress will not be placed on the last syllable of the root word, i-e not on the syllable which precedes the suffix, but rather on earlier syllables.

Examples:

ese: Ja□pan → Japa□nese.

□China → Chi□nese.

Journa□lese.

ain: enter□tain, ascer□tain, re□main.

ee: obsten□tee, emplo□yee, refe□ree, refu□gee.

ette: ciga□rette, servi□ette.

esque: gro□tesque, pictu□resque.

eer: auctio□neer, volun□teer.

ade: lemo□nade, masque□rade.

oo: bam□boo, ta□ttoo, water□loo.

oon: ba□lloon.

'fy', 'ise' and 'ate' are from this category if they are linked to one syllable word:

de□fy, bap□tise, inf□late.

escence: remi□niscence.

osis: tubercu□losis.

itis: conjuncti□vitis.

Task1:

Read the above complex words loudly and stress the right syllables.

Task2:

Put stress on the following words, and then produce them loudly.

Portugal, Portuguese, evacuate, evacuee, cartoon, shampoo, usher, usherette, maintain, romanesque.

Lesson seven: Suffixes influence stress shift in the root word.

Although some suffixes do not carry primary stress themselves, they can determine the place of stress within the original word. They affect stress to change its place from a specific syllable in the simple word to move to another syllable when the word becomes complex.

Primary stress occurs immediately before the suffix:

ion: re□volt → revo□lution.

Insti□tute → insti□tution.

□Perfect → per□fection.

If the second (weak) suffix is added to the new complex word, the primary stress will remain in its place.

io: □ratio, □patio.

ia: pado□philia.

ial: □proverb → pro□verbial.

ian: □library → lib□rarian.

Pho□netics → phone□tician.

ious: □suspect → sus□picious.

ior: □super → su□perior.

ic: □drama → dra□matic.

□Linguist → lin□guistic.

Pho□tograph → photog□raphic.

ish: as□tonish, de□molish, di□minish.

it: e□xhibit, imp□licit.

ity: am□biguity, invisi□bility.

□Civil → ci□vility.

itive: com□petetive, □sensitive.

ive: □reflex → ref□lexive.

Imp□ressive.

itude: □attitude, ing□ratitude.

itant: □participant, con□comitant.

iable: ne□gotiable.

ify: i□dentify.

iar: fa□miliar.

ible: im□possible.

graph: □photo → pho□tograph.

logy: pho□nology.

logist: phi□lology → phi□lologist.

ual: □habit → ha□bitual.

uous: □ super → su□perfluous.

al: monu□mental.

Primary stress occurs two syllables before the suffix: in this category the root word should contain two syllables.

ous: una□nimity → u□nanimous.

ism: □communism.

ize: a□pology → a□pologize.

□Civil → □civilize.

ate: □appreciate.

Task 1:

Read the words mentioned in the examples, and then produce them loudly trying to stress the right syllable in each word.

In addition to the listening task N 28 (Hewings 2004).

Task 2:

Put stress on the following words and then produce them loudly.

Imagine, imagination, congratulate, congratulation, irony, ironic, ironical, radio, politics, politician, injure, injurious, tranquil, tranquillize, horror, horrify, horrible, glamour, glamorous, median, infectious, supercilious, geography, geographic, magnet, magnetic.

Task 3:

Put stress on the following pair of words and then produce them loudly.

Electric, electrician. Educate, education. Decorate, decoration. Music, musician. Communicate, communication. Scientist, scientific. Artist, artistic. Public, publicity. Climate, climatology. Astro-, astronomy. Chemist, chemistry.

Task 4:

Consider and explain the change of stress placement in each group of words below.

Civil, civility, civilize, civilization. Photo, photograph, photography, photographic. Human, humanity, humanitarian. Economy, economics, economical.

Appendix 7 (t - test)

Critical Values for *t*

p	.10	.05	.02	.01	.001
df 1	6.314	12.706	31.821	63.657	636.619
2	2.920	4.303	6.965	9.925	31.598
3	2.353	3.182	4.541	5.841	12.941
4	2.132	2.776	3.747	4.604	8.610
5	2.015	2.571	3.365	4.032	6.859
6	1.943	2.447	3.143	3.707	5.959
7	1.895	2.365	2.998	3.499	5.405
8	1.860	2.306	2.896	3.355	5.041
9	1.833	2.262	2.821	3.250	4.781
10	1.812	2.228	2.764	3.169	4.587
11	1.796	2.201	2.718	3.106	4.437
12	1.782	2.179	2.681	3.055	4.318
13	1.771	2.160	2.650	3.012	4.221
14	1.761	2.145	2.624	2.977	4.140
15	1.753	2.131	2.602	2.947	4.073
16	1.746	2.120	2.583	2.921	4.015
17	1.740	2.110	2.567	2.898	3.965
18	1.734	2.101	2.552	2.878	3.922
19	1.729	2.093	2.539	2.861	3.883
20	1.725	2.086	2.528	2.845	3.850
21	1.721	2.080	2.518	2.831	3.819
22	1.717	2.074	2.508	2.819	3.792
23	1.714	2.069	2.500	2.807	3.767
24	1.711	2.064	2.492	2.797	3.745
25	1.708	2.060	2.485	2.787	3.725
26	1.706	2.056	2.479	2.779	3.707
27	1.703	2.052	2.473	2.771	3.690
28	1.701	2.048	2.467	2.763	3.674
29	1.699	2.045	2.462	2.756	3.659
30	1.697	2.042	2.457	2.750	3.646
40	1.684	2.021	2.423	2.704	3.551
60	1.671	2.000	2.390	2.660	3.460
120	1.658	1.980	2.358	2.617	3.373

(Hatche and Lazaraton 1991).

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Appendix 8:Learners' performance in the production test

Production pre-test

Experimental group

1 - (e) pre-

/kɒmˈfɔːrt/ . /ˈrɒmən/ . /daɪəgnəʊz/ . /tæˈtʊ/ .

/gˈlɒrɪ/ . /ˈmæskəreɪd/ . /rɪˈvɒlt/ . /ædvərˈtaɪz/

/ˈdaɪægnɒsɪs/ . /kɒmˈfɔːrtəbl/ . /rɪˈflekt/ . /ɪmˈplɔːr/

/glɒrɪˈfaɪ/ . /prɒverb/ . /rɒmænsk/ . /ɪmplɒwæɪ/ .

/ɪnˈvɪzəbl/ . /æpɒrˈtjuːn/ . /fɪˈlɔːzɒfɪ/ . /ˈneɪʃn/

/kɒmpɪt/ . /ˈnæʃnl/ . /rɪflektɪv/ . /mɪʒə/ . /rɪvɒˈluːʃn/ .

/ædvərˈtaɪsmənt/ . /ˈkɒmpətiːʃn/ . /prɒvɜːrbɪəl/ . /mɪʒuːrəbl/

/fɪlɒzɒfɪk/ . /ɪnvɪzɪˈbɪlɪtɪ/ . /næʃnəˈlaɪz/ . /kɒmpətɪtɪv/

/fɪɔːzɒfər/ . /næʃnəˈlaɪzeɪʃn/ . /æpɒrˈtjuːnɪtɪ/ .

/fɪlɒzɪkəl/ .

-l-(e) pre

/kɔm'fɔ:rt/ . /'rɔmən/ . /'dɪɣgnɔs/ . /tert ə/ .
/glɔ:rɪ/ . /'mɣskəreɪd/ . /rɪ'vɔlt/ . /ɣdvər'tɑɪz/
/dɪɣgnɔ'sɪz/ . /kɔmfɔ:r'teɪbl/ . /rəflɛks/ .
/ɪmplɔɪ/ . /glɔrɪ'fɑɪ/ . /prɔvɜ:rb/ . /rɔmənəsk/ .
/ɪmplɔɪ/ /ɪn'vi:zɪbl/ . /ɔpɔrtju:n/ . /fɪlɔ:zɔfɪ/ .
/'neɪʃn/ . /kɔmplɪt/ . /'na:ʃnl/ . /rɪfekɪv/ .
/'mi:ʒər/ . /rɪvɔ'lu:ʃn/ . /ɣdvər'tɑɪsmənt/ .
/kɔmp'etɪʃn/ . /prɔ've:rbɪəl/ . /mɪ'zɜ:rɪ/ .
/fɪlɔzɔfɪk/ . /'ɪnvɪzɪbɪlɪtɪ/ . /nɣʃnə'lɑɪz/
/kɔm'pɪtɪtɪv/ . /fɪlɔ:zɔfər/ . /nɣʃnə'lɑɪzeɪʃn/
/ə'pɔ:rtjunɪtɪ/ . /fɪlɔ:zɔfɪkəl/ .

3.(e) pre-

/kəmfɔːrt/. /rɒmən/. /daɪəgnəʊs/. /tetʊl/. /glɒrɪ/.

/mæskəreɪd/. /rɪvɒlt/. /ædvɜːrtɪz/. /daɪəgnəʊsɪs/.

/kɒmfɔːr'teɪbl/. /rɪfleks/. /ɪmplɔɪ/. /glɒrɪfaɪ/.

/prɒvɜːrb/. /rəʊmænsɪk/. /ɪmplɔɪ/. /ɪnvɪzɪbl/.

/ɒpɔːrtjuːn/. /fɪlɒzəfɪ/. /'neɪʃn/. /kɒmpɪt/.

/'næʃənl/. /rɪflɪksɪv/. /'meɪʒər/. /rɪvɒluːʃn/.

/ædvɜːrtɪsmənt/. /kɒmpətɪʃn/. /prəvɜːrbɪəl/.

/'meʒərəbl/. /fɪlɒzɒfɪk/. /ɪnvɪzɪbɪlɪtɪ/. /næʃənə'laɪz/

/kɒmpetɪtɪv/. /fɪlɔːzɒfər/. /næʃənəlaɪzeɪʃn/.

/ɒpərtjuːnɪtɪ/. /fɪlɒzɒfɪkl/.

4-(e) pre-

/kəmˈfɔːr/ - /ˈrɒmən/ - /dɪægˈnɔːzə/ - /tæˈtuː/ - /ˈglɔːrɪ/
/ˈmæskɪraɪd/ - /rɪˈvɒlt/ - /ædvərˈtaɪz/ - /daɪgnɒˈsɪs/ -
/kɒmˈfɔːrtɪbl/ - /rɪˈflɛks/ - /ɪmˈplaɪ/ - /ˈglɒrɪfaɪ/ - /prɒˈvɜrb/
/rɒmænˈtɪk/ - /ɪmplaɪˈiː/ - /ɪnˈvɪzɪbl/ - /æˈpɒrtjuːn/ - /fɪlɒzɒˈfɪ/
/ˈneɪʃn/ - /kɒmˈpɛt/ - /ˈnæʃɪɒnl/ - /rɪflɛkˈsɪv/ - /ˈmɪʒər/ -
/rɪvɒˈluːʃn/ - /ædvərtɪsmənt/ - /kɒmpɪˈtiːʃn/ - /prɒvərbɪəl/
/ˈmɪʒərbl/ - /fɪˈlɔːzɒfɪk/ - /ænvɪzɪbɪlɪtɪ/ - /ˈnæʃɪɒnæliːz/ -
/kɒmpɪtɪtɪv/ - /fɪˈlɔːzɒfər/ - /ˈnæʃɪɒnælɪzeɪʃn/
/æpɒrtjuːnɪtə/ - /fɪˈlɔːzɒfɪkəl/ -

5. (e) pre.

/kəmˈfɜːrt/ . /ˈrɒmən/ . /ˈdaɪəgnəʊsɪs/ . /ˈtæʃn/ . /ˈglɔːrɪ/ .
/ˈmæskəreɪd/ . /rəˈvɔːlt/ . /ædvərˈtaɪz/ . /ˈdaɪagnɒsɪs/
/kɒmˈfɔːrtbl/ . /rɪˈflekʃ/ . /ɪmˈplaɪ/ . /glɒrɪfaɪ/
/prɒverb/ . /rɒˈmænɪsk/ . /ɪmplaɪˈiː/ . /ɪnˈvɪzɪbl/ .
/æˈpɒrtjuːn/ . /fɪˈlɒːzəfɪ/ . /ˈneɪʃn/ . /ˈkɒmpet/ . /ˈnæʃnl/ .
/rɪˈflekʃɪv/ . /ˈmɪʒər/ . /rɪvəˈluːʃn/ . /ædvərˈtaɪsmənt/ .
/kɒmpətɪʃn/ . /prɒvɜːrbɪəl/ . /miːʒərəbl/ . /fɪlɒːzɒfɪk/ .
/ænˈviːəbɪlɪtɪ/ . /naɪʃnəˈlaɪz/ . /kɒmpɪtɪtɪv/ .
/fɪlɒːzəfər/ . /nɑːʃənælɪˈzeɪʃn/ . /ɒpɔːrtjuːnɪtɪ/
/fɪlɒːzɒfɪkl/ .

6. (e) pre-

/kɜm'fɜ:rt/ . /'rɜrmən/ . /'dɪʁnɜrə/ . /'tɑ:tɜr/ . /glɜ:rɪ/ .

/'mʁskɜreɪd/ . /rɪ'vɜ:lt/ . /ʁdvɜr'tɑɪz/ . /dɪʁgnɜrzɪ/ .

/kɜm'fɜ:rtbl/ . /rɪflɜkʁ/ . /ɪmp'lɜɪ/ . /g'lɔrɪfɑɪ/ .

/prɜvɜrb/ . /rɜmɛnɪsk/ . /ɪmp'lɜɪ/ . /'ɪnvɪzɪbl/ .

/ʁpɜrtjʊn/ . /fɪ'lɔzəfɪ/ . /'nɛrʃn/ . /kɜmpɛt/ . /nʁʃn/ .

/rɪflɛksɪv/ . /'nɛʒɜn/ . /rɪvɜ'lu:ʃn/ . /ʁdvɜr'tɑɪzmənt/ .

/kɜm'pɛti:ʃn/ . /prə'vɜrbɪl/ . /'mɛʒɜrəbl/ . /fɪ'lɔzəfɪkl/ .

/ɪn'vɪzɪbɪlɪti/ . /'nɑ:ʃnʁlɪz/ . /kɜmpɛtɪtɪv/ . /fɪ'lɔ:zəfɜr/ .

/'nɑ:ʃnʁlɪzeɪʃn/ . /ʁpɜrtjʊnɪti/ . /fɪ'lɔ:zəfɪkɜl/ .

7. (e) pre-

/kɔm'fɔ:rt/ · /'rɔmɔn/ · /'dʒɪægnɔʊz/ - /tɛ'tʊ/ · /g'lɔrɪ/ ·
/mɛs kɔ'reɪd/ · /rɪ'vɔlt/ · /ɛdvɔr'taɪz/ · /daɪɛg'nɔʊsɪs/ ·
/kɔm'fɔrtbl/ · /'rɪflɛks/ · /ɪmp'lɔɪ/ · /g'lɔrɪfaɪ/ ·
/prɔ'vɜ:rb/ · /'rɔmɛnɪsk/ - /ɪmp'lɔɪi:/ · /ɪn'vɪɛɪbl/ ·
/ɒ'pɔrtjʊ:n/ · /fɪ'lɔ:zɔfɪ/ · /'neɪʃn/ · /'kɔmpɛt/ · /'naɪʃn/ ·
/rɪf'lɛktɪv/ · /'mi:ʒɜr/ · /rɪvɔ'lu:ʃn/ - /ɛdvɜr'taɪsmɜnt/ ·
/kɔmpɛ'ti:ʃn/ · /prɔ'vɜ:rbz/ · /'mi:ʒʊ:rbl/ · /fɪ'lɔ:zɔfɪk/ ·
/ɪn'vɪɛɪbɪlɪtɪ/ · /naɪʃnə'lɪɛɪz/ · /kɔm'pɛtɪtɪv/ · /fɪ'lɔ:sɔfɜr/ ·
/'naɪʃnəlɪzeɪʃn/ · /ɒ'pɔrtjʊnɪtɪ/ · /fɪ'lɔ:sɔfɪk/ ·

8.-(e) pre-

/kɒmˈfɔːrt/ . /ˈrɒmən/ . /ˈdaɪəgnoʊz/ . /tæt ʊ/ . /gˈlɒrɪ/ .
/ˈmæskreɪd/ . /rɪˈvɒlt/ . /ædvəˈtaɪz/ . /dɪægənɪs/ .
/kɒmˈfɔrteɪbl/ . /ˈrɪfɪæks/ . /ɒmpˈlwaɪ/ . /gˈlɒrɪfaɪ/ .
/prəˈvɜrb/ . /rɒmænɪɪk/ . /ɒm pˈlwaɪ/ . /ænˈvɪzɪbl/ . /ɒˈpɔrtjuːn/ .
/fɪˈlɒːzɒfɪ/ . /ˈneɪʃn/ . /kæmpiːt/ . /ˈnaːʃɪɒnl/ . /rɪfleksɪv/ .
/ˈməʒər/ . /rɪvəˈluːʃn/ . /ædvəˈtaɪzmənt/ . /kɒmpəˈtiːʃn/ .
/prəˈvɜːrbɪəl/ . /mɪʒjʊˈreɪbl/ . /fɪˈlɔːzɒfɪk/ .
/ɪnvɪzɪˈbɪlɪtɪ/ . /næʃɪɒnəˈlaɪz/ . /ˈkɒmpɪtɪtɪv/ .
/fɪˈlɔːzɒfaɪ/ . /naɪʃɪɒnəlaɪˈzeɪʃn/ . /æˈpɔrtjʊnɪtɪ/
/fɪlɔːzɒfɪkl/ .

9- (e) pre-

|kɒmˈfɔːrt| . |ˈrɒmən| . |ˈdaɪəgnəʊz| . |testɪ| . |gˈlɒrɪ| .

|mæːkreɪd| . |rɪvɒlt| . |ædvɜːrtɪs| . |ˈdaɪəgnɒsɪz| .

|kɒmˈfɔːrtəbl| . |rɪflekt| . |ɪmpˈlɒɪ| . |gˈlɔːrɪfɪ| .

|ˈprɒvɜːrb| . |rɒmænɪsk| . |ɪmpˈlæɪ| . |ænˈviːzɪbl| .

|ɒˈpɔːrtjʊn| . |fɪˈlɔːzɒfɪ| . |ˈneɪʃn| . |kɒmpet| . |ˈnæʃɪənl| .

|rɪfleksɪv| . |ˈmiːʒər| . |rɪvəˈluːʃn| . |ædvɜːrˈtiːsmənt| .

|kɒmpəˈtiʃn| . |prɒˈvɜːrbɪəl| . |mɪˈʒɜːrəbl| . |fɪˈlɒzɒfɪk| .

|ænvɪzɪbɪlɪtɪ| . |næʃɪɔːnælɪz| . |kɒmˈpɪtɪtɪv| .

|fɪˈlɔːzɒfər| . |næʃɪɒnælɪˈzeɪʃn| . |ɔˈpɔːrtjʊnɪtɪ| .

|fɪlɒzɒfɪk| .

10 - (e) pre -

/kəmfɔːrt/ - /ˈrɒmən/ - /daɪægnəʊs/ - /test v/ - /ɡˈlɔːrɪ/ .

/mæsˈkreɪd/ - /rɪˈvɔːlt/ - /ædvərˈtaɪz/ - /daɪæˈɡnəʊsɪs/ .

/kɒmfərˈtəbl/ - /ˈrɪfleks/ - /ɒmpˈlɔɪ/ - /ɡlɔrɪˈfaɪ/ .

/prɒvɜːb/ - /rɒmænsɪk/ - /ɒmplɔɪˈiː/ - /ˈænvɪəbl/ - /ɒˈpɔːrtjuːn/ .

/fɪˈlɒzəfɪ/ - /ˈneɪʃn/ - /kɒmˈpjuːt/ - /ˈneɪʃl/ - /ˈrɪflɪksɪv/ .

/məˈʒuːr/ - /rɪvɒˈljuːʃn/ - /ædvərtaɪsmənt/ - /kɒmpeˈtiːʃn/ .

/prɒˈvɜːnbɪəl/ - /mɪʒˈvrəbl/ - /fɪˈlɒzəfɪk/ - /ænˈvɪəbɪlɪtɪ/

/næʃnəˈlaɪz/ - /ˈkɒmpətətɪv/ - /fɪˈlɒzəfər/ - /næʃɪənəˈlaɪzeɪʃn/

/ɒˈpɔːrtjunɪtɪ/ - /fɪˈlɒzəfɪk/ .

M- (e) pre-

/kəmˈfɔːrt/ . /rəˈmeɪn/ . /ˈdeɪndʒərəs/ . /ˈtekst/ . /ˈglɔːrɪ/ .
/mæskəˈreɪd/ . /rɪˈvəʊlt/ . /ˈædvərtaɪz/ . /ˈdeɪndʒərəs/ .
/ˈkʌmftəbl/ . /ˈriːfleks/ . /ɪmˈplɔɪ/ . /ˈglɔːrɪfaɪ/ .
/ˈprɒvɜːb/ . /hɑːrˈmɒnɪk/ . /ɪmˈpəʊz/ . /ɪnˈvɪzəbl/ .
/ɒpərˈtjuːnɪtɪ/ . /fɪˈlɒsəfɪ/ . /ˈneɪʃən/ . /kaʊnt/ . /ˈnæʃənl/ .
/rɪˈfleksɪv/ . /ˈmeʒər/ . /revəˈluːʃn/ . /ədˈvɜːrtɪsmənt/ .
/kɒmpəˈtɪʃn/ . /prəˈvɪnʃl/ . /ˈmɪzərəbl/ . /fɪˈlɒsəfɪ/ .
/ɪnvɪzəˈbɪlɪtɪ/ . /ˈnæʃənəlaɪz/ . /kəmˈpetɪtɪv/ .
/fɪˈlɒsəfɪ/ . /næʃənəlaɪˈzeɪʃn/ . /ɒpərˈtjuːnɪtɪ/ .
/fɪləˈsɒfɪk/ .

Production pre-test

Control group

1- (c) pre-

/kʌmˈfɔːr/ . /rəʊmən/ . /daɪægˈnəʊz/ . /ˈæktɪv/ . /gˈlɒrɪ/ .

/mæksˈred/ . /rɪvəlt/ . /ædvəˈtaɪz/ . /daɪægnəʊsɪs/ .

/ˈprɒverb/ . /rəʊməˈnæsk/ . /ɪmˈplaɪ/ . /gˈlɒrɪfaɪ/ .

/kʌmˈfɔːrtɪbl/ . /rɪˈfleks/ . /ɪmplaɪˈɪ/ . /ˈænvɪəbl/ .

/ɒpɒrtjuːn/ . /ˈfɪlɒzɒfɪ/ . /ˈneɪʃn/ . /kɒmpəˈtɪ/ .

/ˈnæʃɪɒnl/ . /rɪflekˈsɪv/ . /mɪˈʃjuːr/ . /rɪvəluːʃn/ .

/ædvəˈtaɪzmənt/ . /kɒmpəˈtiːʃn/ . /prəˈvɜːrbɪəl/ .

/mɪˈʃjuːrɪbl/ . /fɪlɔːzɒfɪk/ . /ænvɪzɪˈbɪlɪtɪ/ .

/næʃɪɒnəˈlaɪz/ . /ˈkɒmpɪtɪtɪv/ . /fɪˈlɔːzɒfər/ .

/næʃɪɒnælɪˈzeɪʃn/ . /ɒˈpɒrtjuːnɪtɪ/ . /fɪˈlɔːzɒfɪkl/ .

2- (c) pre-

/kɒmˈfɔːrt/ . /ˈrɒmən/ - /ˈdaɪægnɒz/ . /ˈtætu/ - /gˈlɔrɪ/ .
/ˈmæskərəɪd/ . /rɪˈvɒlt/ . /ædˈvɜːrtɪz/ - /ˈdaɪægnɒstɪz/ .
/kɒmfɔːrˈteɪbl/ . /ˈrɪflekt/ - /ˈæmplwæɪ/ . /glɒrɪˈfaɪ/ .
/prɒˈverb/ . /rɒˈmænɪk/ . /æmplˈwæɪ/ . /ɪnˈvɪzɪbl/ .
/ɒˈportuːn/ . /fɪˈlɔːzɒfɪ/ . /ˈheɪʃn/ . /ˈkɒmpɪt/ . /ˈnæʃɪɒn/ .
/ˈrɪflekʃɪv/ . /ˈmiːʒʊr/ - /rɪvɒˈluːʃn/ . /ædˈvɜːrtɪsmənt/ .
/kæmpeˈtiːʃn/ - /prɒˈvɜːrbɪəl/ . /ˈmɪʒʊrɪbl/ . /fɪˈlɔːzɒfɪk/ .
/ɪnˈvɪzɪbɪlɪtɪ/ . /næʃɪɒnəˈlaɪz/ - /ˈkæmpɪtɪtɪv/ .
/fɪˈlɔːzɒfər/ - /ˈnæʃɪɒnælɪzeɪʃn/ . /æˈportjuːnɪtɪ/ .
/fɪˈlɔːzɒfɪkl/ .

3-(c) pre-

/kɒm'fɔ:rt/ · /rɒ'mɛn/ · /dɪg'nɔɪz/ · /tɛ'tu:/ · /g'lɒrɪ/ ·

/'mɑ:skɒrɑ:d/ · /rɪ'vɔ:lt/ · /ɛdvɑr'tɑɪz/ · /dɪgnɔɪz/ ·

/kɒm'fɔ:rtɪbl/ · /rɪf'leks/ · /ɪmp'lɔɪ/ · /glɒrɪ'fɑɪ/ ·

/prɒ've:rb/ · /rɒmɛnɪk/ · /ɪmp'lɔɪ/ · /ɪn'vɪzɪbl/ ·

/'spɔrtju:n/ · /fɪ'lɔ:zɒfɪ/ · /'neɪʃn/ · /'kaʊnt/ ·

/nɛ'ʃɪən/ · /rɪf'leksɪv/ · /'ɪmɪʒu/ · /rɪvɒ'lu:ʃn/ ·

/ɛdvɑr'tɑɪzmənt/ · /kɒmpe'ti:ʃn/ · /prɒ've:rbɪəl/ ·

/'nɪʒrɪɛbl/ · /fɪ'lɔ:zɒfɪk/ · /ɪnvɪzɪblɪtɪ/ · /nɛʃɪənɪ'lɑɪz/ ·

/kɒmpɪtɛtɪv/ · /fɪlɔ:zɒfer/ · /nɛʃɪənɛ lɪzeɪʃn/ ·

/'spɔ:rtjʊnɪtɪ/ · /fɪ lɔ:zɒ fɪk/

4-(c) pre-

/kɒmˈfɔːrt/ . /ˈrɒmən/ . /ˈdɪægnəʊz/ . /ˈtɛtʊ/ . /ˈglɒrɪ/ .
/mæsˈkɑːrɪd/ . /rɪˈvɒlt/ . /ædvɜːˈtaɪz/ . /daɪægnəʊsɪs/ .
/kɒmfɔːrˈtəbl/ . /rɪflɛks/ . /ɪmˈplɔɪ/ . /glɒrɪˈfaɪ/ .
/prəˈvɜːb/ . /rɒmænsɪk/ . /ɪmplɔɪiː/ . /ɪnvɪzɪbl/ .
/ɒˈpɔːrtʃuːn/ . /fɪˈlɒzɒfɪ/ . /neɪʃn/ . /kɒmpiːt/ . /ˈnæʃnl/ .
/rɪflɛksɪv/ . /ˈmɛʒər/ . /rɪvəˈluːʃn/ . /ædvɜːˈtaɪzmənt/ .
/kɒmpəˈtiːʃn/ . /prəˈvɜːrbɪəl/ . /ˈmɛʒʊrəbl/ . /fɪˈlɒzɒfɪk/ .
/ænvɪzɪˈbɪlɪtɪ/ . /næʃnˈlaɪz/ . /kɒmpətɪtɪv/ . /fɪˈlɔːzɒfər/ .
/næʃənælɪˈzeɪʃn/ . /ɒpɔːrtuːnɪtɪ/ . /fɪˈlɒzɒfɪkl/ .

5 - (c) pre-

|kɒmˈfɔːrt| · |ˈrɒmən| · |ˈdaɪənəvɪ/ · /teɪtɪv| · /glɔːrɪ/.

/ˈmæsɪkəvɪd| · |rɪˈvɔːlt/ · /ædvərˈtaɪz /. /ˈdaɪənɪs/.

|kɒmˈfɔːrtəbl| · |rɪfleks| · |ɪmˈplɔːs/ · |glɔːrɪˈfaɪ|.

|prɒveːrb/ · |rɒmænɪk| · |ɪmplɔːˈiː| · |ɪnˈvɪzəbl/.

|əˈpɔːrtjʊn| · |fɪˈlɔːsəfɪ| · /ˈheɪʃn| · |kɒmpəˈtiː|.

|ˈheɪʃnl| · |rɪflektɪv| · /ˈmiːzər/ · |rɪvəˈluːʃn|.

/ædvərˈtaɪzmənt/ · |kɒmpəˈtiːʃn/ · |prɒˈvɜːrbɪəl|.

|mɪzɪˈreɪbl| · |fɪlɔːzɒfɪk| · |ænˈvɪzɪbɪlɪtɪ/.

|næʃɪɒˈnaɪz/ · |kɒmˈpɪtɪtɪv/ · |fɪˈlɔːsɒfər|.

|næʃɪɒnælɪzeɪʃn| · |ɒˈpɔːrtʊnɪtɪ/ · |fɪlɔːzɒfɪkl|.

6-(c) pre-

/kəmˈfɔːrt/ . /ˈrɒmən/ . /daɪəgnəʊs/ . /tekst/ . /glɒsəri/ .
/mæskɑːrd/ . /rɪˈvəʊlt/ . /ədvərˈtaɪz/ . /daɪəgnəʊsɪs/ .
/kəmˈfɔːrtəbl/ . /rɪfleks/ . /ɪmplɔɪ/ . /glɒrɪˈfaɪ/ .
/prɒvɜːrb/ . /rəʊməˈnesk/ . /ɪmplɔɪˈiː/ . /ʌnvaɪzəbl/ .
/əˈpɔːrtjuːn/ . /fɪˈlɒsəfi/ . /ˈneɪʃn/ . /kəmˈpiːt/ . /ˈnæʃnl/ .
/rɪˈfleksɪv/ . /ˈmiːʒə/ . /rɪvəˈluːʃn/ . /ædvərˈtaɪzmənt/ .
/kɒmpəˈtɪʃn/ . /prəvɜːrbɪəl/ . /ˈmeʒərəbl/ . /fɪlɒsɒfɪk/ .
/ʌnvaɪzəbɪlɪti/ . /næʃnəˈlaɪz/ . /kɒmpətɪˈtiːv/ .
/fɪlɒsəfər/ . /ˈnæʃnəlɪˈzeɪʃn/ . /əpɔːrtjuːnɪti/ .
/fɪlɒsəfɪkl/ .

7. (c) pre-

/ˈkɒmfɔːt/ . /rɒmənt/ . /daɪægnəʊs/ . /tætul/ . /ˈglɔːrɪ/ .
/mæskəreɪd/ . /rɪˈvɒlt/ . /ædvəˈtaɪz/ . /daɪægnəʊsɪs/ .
/kɒmˈfɔːtəbl/ . /rɪfleks/ . /ɪmplɔɪ/ . /glɒrɪˈfaɪ/ .
/prəˈvɜːk/ . /rɒmænɪk/ . /ɪmˈplɔɪ/ . /ɪnˈviːzəbl/ .
/əˈpɔːtjuːn/ . /fɪlɔːsɒfɪ/ . /ˈneɪʃn/ . /ˈkɒmpətɪ/ . /ˈnɑːʃnl/ .
/rɪflektɪv/ . /ˈmeʒər/ . /rɛvəˈluːʃn/ . /ædvɜːtɪsmənt/ .
/kɒmpəˈtiːʃn/ . /prəˈvɜːrbɪəl/ . /mɪˈzɜːrəbl/ . /fɪlɔːsɒfɪkl/ .
/ɪnvɪzɪˈbɪlɪtɪ/ . /næʃnəˈlaɪz/ . /kɒmptɪˈtiːv/ . /fɪˈlɔːsɒfər/ .
/nɑːʃnəlaɪˈzeɪʃn/ . /əˈpɔːtjuːnɪtɪ/ . /fɪlɔːsɒfɪkl/ .

8. (c) pic.

/kʌmˈfɔːnt/ . /ˈhjuːmən/ . /ˈdaɪəgnəʊz/ . /tæˈtuː/ . /ˈglɔːrɪ/ .
/ˌmæskəˈreɪd/ . /riːˈvɪzɪt/ . /ˈædvətaɪz/ . /ˌdaɪəgˈnəʊsɪs/ .
/ˈkʌmftəbl/ . /ˈriːfleks/ . /ɪmˈplɔɪ/ . /ˈglɔːrɪfaɪ/ .
/ˈprɒvɜːb/ . /rɪˈmɑːk/ . /ɪmplɔɪˈiː/ . /ɪnˈvɪzəbl/
/ˈɒpətjuːn/ . /fɪˈlɒsəfɪ/ . /ˈneɪʃn/ . /kəmˈpliːt/ .
/ˈnæʃənl/ . /rɪˈfleksɪv/ . /ˈmeʒər/ . /ˌrevəˈluːʃn/ .
/ədˈvɜːtɪsmənt/ . /ˌkɒmpəˈtɪʃn/ . /prəˈvɜːbɪəl/ .
/ˈmeʒərəbl/ . /ˌfɪləˈsɒfɪk/ . /ɪnˌvɪzəˈbɪlətɪ/ .
/ˈnæʃnəlaɪz/ . /kəmˈpetətɪv/ . /fɪˈlɒsəfər/ .
/ˌnæʃnəlaɪˈzeɪʃn/ . /ˌɒpəˈtjuːnətɪ/ . /ˌfɪləˈsɒfɪkl/ .

9. (c) pre-

/kɒmˈfɔːrt/ . /ˈrɒmən/ . /ˈdaɪæɡnəʊz/ . /ˈtæktɪv/ . /ɡˈlɒrɪ/

/ˈmæskreɪd/ . /rɪˈvɔːlt/ . /ædvərˈtaɪz/ . /daɪɡnɒzɪs/.

/kɒmˈfɔːrtbl/ . /rɪˈflekt/ . /ɪmˈplɔɪ/ . /ɡˈlɒrɪ/ . /prɒvərb/.

/rɒmæntɪk/ . /ɪmplɔɪˈiː/ . /ɪnˈvɪzɪbl/ . /ɔpɒrˈtjuːn/ .

/fɪlɔːzɒˈfɪ/ . /neɪʃn/ . /kɒmˈpiːt/ . /ˈnæʃnl/ . /rɪflektɪv/ .

/ˈmeʒər/ . /rɪvɒˈluːʃn/ . /ædvərˈtaɪzmənt/ . /kɒmpəˈtiːʃn/ .

/prɒˈvɜːrbɪəl/ . /ˈmeʒərbl/ . /fɪlɔːzɒfɪk/ . /næʃnəˈlaɪz/ .

/kɒmˈpiːtɪv/ . /ˈfɪlɔːzɒfər/ . /næʃnəˈlaɪzeɪʃn/ .

/ɔˈpɔːrtjuːnɪtɪ/ . /fɪlɒzɒfɪkl/ .

10. (c) pre-

/ˈkɔːmfət/ - /ˈrəʊmən/ - /ˈdɪnjuːz/ - /ˈtestɪ/ - /ˈglɔːrɪ/ -

/ˈmæɪkərəɪd/ - /rɪˈvɔːlt/ - /ædvərˈtaɪz/ - /dɪgnwæzɪs/ -

/kʌmfərˈteɪbl/ - /rɪˈflekt/ - /ɪmˈplɔɪ/ - /glɔrɪˈfaɪ/ -

/prəvɜːrb/ - /rəʊmænɪsk/ - /ɪmplɔɪˈiː/ - /ɪnˈvɜːzɪbl/ -

/ɒpəˈtjuːn/ - /fɪˈlɔːzəfɪ/ - /ˈneɪʃn/ - /kəmˈpiːt/

/ˈnæʃnl/ - /rɪfleksɪv/ - /ˈmɪʒər/ - /rɪvəˈluːʃn/ -

/ædvərˈtɜːmənt/ - /ˈkɒmpəˈtɪʃn/ - /prəvɜːrbl/ -

/ˈmɪzərbl/ - /fɪlɔːzəfɪk/ - /ɪnvɜːzɪˈbɪlətɪ/ -

/næʃnəˈlaɪz/ - /kəmˈpiːtɪv/ - /ˈfɪlɔːzəfər/ -

/næʃnəˈlaɪzeɪˈlaɪzeɪʃn/ - /ɒˈpɔːrtjuːnɪtɪ/ - /fɪlˈɔːsɪfɪkl/ -

M-(c) prac.

/kɒmˈfɔːrt/ . /rɒˈmɑːn/ . /ˈdaɪægnəʊz/ . /tæˈtʊ/ . /ɡˈlɒrɪ/.

/mæskəˈreɪd/ . /rɪˈvɒlt/ . /ædvəˈrtaɪz/ . /daɪægnəʊsɪs/.

/kɒmˈfɔːrtbl/ . /rɪˈfleks/ . /ɪmˈplɔɪ/ . /ɡlɒrɪˈfaɪ/

/ˈprɒvərb/ . /rɒmænˈesk/ . /ɪmˈplɔɪiː/ . /ɪnˈvɪzɪbl/.

/ɒpəˈtjuːn/ . /ˈfɪlɒsəfɪ/ . /neɪʃn/ . /ˈkɒmpiːt/.

/neɪʃnl/ . /rɪˈfleksɪv/ . /ˈmeʒʊər/ . /revəˈluːʃn/.

/ædvərˈtaɪzmənt/ . /kɒmpəˈtɪʃn/ . /prəˈvɜːrbɪəl/.

/ˈmɪzərəbl/ . /fɪlɒˈsɒfɪk/ . /ɪnvɪzɪˈbɪlɪtɪ/.

/næʃənəlaɪz/ . /kɒmˈpetɪtɪv/ . /ˈfɪlɒsəfər/.

/næʃnəlaɪˈzeɪʃn/ . /ɒpəˈtjuːnɪtɪz/ . /fɪlɒˈsɒfɪkl/.

Production post-test

Experimental group

1- (e) post-

/ˈkɑːnfɔːrt/ - /ˈrɒmæns/ - /ˈdaɪægnəʊz/ - /tæˈtuː/ - /ˈglɔːrɪ/ -
/mæskəˈreɪd/ - /rɪˈvɔːlt/ - /ædvɜːˈtaɪz/ - /ˌdaɪægˈnəʊsɪs/ -
/ˈkɒmfɔːrtəbl/ - /rɪˈfleks/ - /ɪmˈplɔɪ/ - /ˈglɔːrɪfaɪ/ - /ˈprɒvɜːrb/
/rɒməˈnesk/ - /ɪmplɔɪˈiː/ - /ɪnˈvɪzɪbl/ - /ˈɒpərtjuːn/ -
/fɪˈlɔːzɒfɪ/ - /ˈneɪʃn/ - /kɒmpəˈtɪʃn/ - /prəˈvɜːrbɪəl/ -
/ˈmeʒərəbl/ - /fɪlɒˈzɔːfɪk/ - /ɪnvɪzɪˈbɪlɪtɪ/ - /ˈnæʃnəlaɪz/ -
/kɒmˈpɜːtɪtɪv/ - /fɪˈlɔːzɒfər/ - /ˌnæʃnəlaɪˈzeɪʃn/ -
/ɒpərˈtjuːnɪtɪ/ - /fɪlɒˈzɔːfɪkl/ -

2. (e) post-

/ˈkɔːmfərt/ . /ˈrɒmən/ . /ˈdaɪægnəʊz/ . /tæˈtuː/ . /ˈglɔːrɪ/ .

/ˌmæskəˈreɪd/ . /rɪˈvəʊlt/ . /ædvərˈtaɪz/ . /daɪægˈnəʊsɪs/ .

/ˈkʌmftəbl/ . /rɪˈfleks/ . /ɪmˈplɔːɪ/ . /ˈglɔːrɪfaɪ/ . /ˈprɒvərb/ .

/rɒməˈnesk/ . /ɪmˈplɔːʒn/ . /ɪnˈviːzɪbl/ . /ɒpərˈtjuːn/ .

/fɪˈlɒsəfɪ/ . /ˈneɪʃn/ . /kəmˈpɪːtɪ/ . /ˈneɪʃnl/ . /rɪˈfleksɪv/ .

/ˈmeʒər/ . /revəˈluːʃn/ . /ædvərˈtaɪzmənt/ . /kɒmpəˈtɪʃn/ .

/prəˈvɜːrbɪəl/ . /ˈmeʒərbl/ . /fɪˈlɒsəfɪk/ . /ɪnˌvɪzɪˈbɪlɪtɪ/

/næʃnəˈlaɪz/ . /kəmˈpetɪtɪv/ . /fɪˈlɒsəfər/ .

/næʃnəlaɪˈzeɪʃn/ . /ɒpərˈtjuːnɪtɪ/ . /fɪləˈzɒfɪkl/ .

3. (e) posl -

|ˈkaːŋfərt/ . |ˈromən| . |ˈdaɪəgnɒs| . |tæˈtuː| . |ˈglɒrɪ| .

|ˈmænɪkəreɪd/ . |rɪˈvɒlt| . |ædvərˈtaɪz| . |ˈdaɪəgnɒsɪs| .

/ˈkʌmftəbl/ . |rɪˈflekt/ . |ɪmˈplɔɪ| . |ˈglɒrɪfaɪ/ . |ˈprɒvərb/ .

|rɒmæˈnɪsk| . |ɪmplɔɪˈiː/ . |ɪnˈvɪərɪəbl/ . |ɒˈpɒrtjuːn/ .

|fɪˈlɒːzəfɪ| . |ˈneɪʃn/ . |ˈkɒmpɪt/ . |ˈnæʃɪɒnl/ . |rɪˈflektɪv/

|ˈmeʒər| . |rɪvəˈluːʃn| . |ədvərˈtiːsmənt/ . |kɒmpəˈtɪʃn|

|prəˈvɜːrbɪəl| . |ˈmeʒərəbl/ . |fɪˈlɒːzəfɪ| . |ɪnvɪərɪəˈbɪlɪtɪ/

|næʃnəˈlaɪz| . |kɒmˈpɪtɪtɪv/ . |fɪˈlɒːzəfər/ .

|næʃənəlɪˈzeɪʃn/ . |ɒpərˈtjuːnɪtɪ/ . |fɪlɒːˈzɒfɪkl/ .

4. (e) post-

/ˈkaɪgfɜt/ . /ˈrɒmən/ . /ˈdɪʒgnɒs/ . /tʃˈtuː/ . /gˈlɒrɪ/ .
/ˈmʒskərɛɪd/ . /rɪˈvɔːlt/ . /ʒdvɜrˈtaɪz/ . /ˈdɪʒgnɒsɪz/
/ˈkʒmftbl/ . /rɪfˈlɛkʃ/ . /ɪmpˈlɔɪ/ . /glɒrɪˈfaɪ/ .
/ˈprɒvɛrb/ . /rɒˈmʒnsk/ . /ɪmplɔɪˈiː/ . /ɪnˈviːzɪbl/ .
/ʒpˈɒrtjuːn/ . /fɪˈlɔːzɒfɪ/ . /ˈneɪʃn/ . /ˈkʒmpt/ .
/ˈnʒʃɪɒnl/ . /rɪfˈlɛkʃɪv/ . /ˈmɪʒɜr/ . /rɪvɜˈluːʃn/ .
/ʒdvɜrˈtɪsmənt/ . /kɒmptɪˈtiːʃn/ . /prɒvɜːbɪəl/ . /ˈmɪʒənbl/
/fɪˈlɔːzɒfɜk/ . /ʒnvɪˈzɪbɪlɪtɪ/ . /nʒʃɪɒnʒˈliːz/ .
/kʒmptɪˈtɪv/ . /fɪˈlɔːzɒfɜr/ . /nʒʃɪɒnʒlɪˈzeɪʃn/ .
/ʒˈpɒrtjunɪtɪ/ . /fɪlɒˈzɔːfɪkl/ .

5 - (e) post-

/ˈkaːŋfət/ · /ˈrɒmən/ · /ˈdaɪɡnəʊz/ · /tæˈtuː/ · /ˈɡlɒrɪ/ ·
/mæskəˈreɪd/ · /rɪˈvɔːlt/ · /ædvərˈtaɪz/ · /ˈdaɪæɡnəʊsɪs/
/ˈkaːmfətbl/ · /rɪˈfleks/ · /ɪmˈplɔɪ/ · /ɡlɒrɪˈfaɪ/
/ˈprɔːvərb/ · /rɒməˈnesk/ · /ɪmplɔɪˈiː/ · /ɪnˈviːzəbl/ ·
/əˈpɒrtjuːn/ · /fɪˈlɔːzəfɪ/ · /ˈneɪʃn/ · /kɒmˈpiːt/ ·
/ˈnaːʃnl/ · /rɪˈfleksɪv/ · /ˈmeəʒər/ · /rɪvəˈluːʃn/ ·
/ædˈvɜːtaɪzmənt/ · /kɒmpəˈtiːʃn/ · /prəˈvɜːrbɪəl/ ·
/ˈmeəʒbl/ · /fɪˈlɔːzəfɪk/ · /ænvɪzɪˈbɪlɪtɪ/ ·
/næʃnˈlaɪz/ · /kɒmˈpetɪtɪv/ · /fɪˈlɔːzəfər/ · /fɪˈlɒzɒfɪk/ ·
/naːʃnælɪˈzeɪʃn/ · /əpɒrˈtjuːnɪtɪ/ ·

6- (e) pair -

/ˈkʌmfət/ . /ˈrɒmən/ . /ˈdaːɪəgnɒs/ . /tӕˈtuː/ . /ˈglɒrɪ/ .
/mӕskəˈreɪd/ . /rɪˈvɒlt/ . /ӕdvəˈtaɪz/ - /ˈdaːɪӕgnɒsɪz/ .
/ˈkӕmfətbl/ . /rɪˈfleks/ . /ɪmˈplɔɪ/ - /glɒrɪˈfaɪ/ . /ˈprɔːvɜːb/
/rɒməˈnesk/ . /ɪmplɔɪˈiː/ - /ɪnˈvɪzɪbl/ . /ӕpəˈtjuːn/ .
/fɪˈlɔːzəfɪ/ . /ˈneɪʃn/ . /kəmˈpiːt/ - /ˈnӕʃnl/ . /rɪˈfleksɪv/ .
/ˈmeʒər/ . /rɪvəˈluːʃn/ . /ӕdvəˈtiːs/ . /kɒmpəˈtɪʃn/ .
/ˈprɔːvərbəl/ - /ˈmeʒərəbl/ . /fɪˈlɔːzɒfɪk/ . /ɪnvɪˈzɪbɪlɪtɪ/ .
/ˈnaːʃnəlɪz/ . /kəmˈpetətɪv/ . /fɪˈlɔːzəfər/ .
/naːʃnəlaɪˈzeɪʃn/ . /ӕpərˈtjuːnɪtɪ/ . /fɪˈlɔːzəfɪkl/ .

7 -(e) post-

/ˈkʌŋfət/ . /ˈrəʊmən/ . /ˈdaɪægnəʊz/ . /tæˈtuː/ .
/gˈlɒrɪ/ . /mæskəˈreɪd/ . /rɪˈvɒlt/ . /ˈædvətaɪz/ .
/daɪəgˈnəʊzɪs/ . /ˈkʌŋfətbl/ . /rɪˈfleks/ . /ɪmˈplɔɪ/ .
/gˈlɒrɪfaɪ/ . /prəˈverb/ . /rəʊməˈnesk/ . /ɪmplɔɪˈiː/ .
/ɪnˈviːzɪbl/ . /ˈɒpətjuːn/ . /fɪˈlɔːzofɪ/ . /ˈneɪʃn/ .
/ˈkɒmpɪtɪ/ . /ˈnaːʃnl/ . /rɪˈfleksɪv/ . /ˈmeʒər/ .
/rɪvəˈluːʃn/ . /ədˈvɜːtaɪzmənt/ . /kɒmpəˈtɪʃn/ .
/prəˈvɜːrbɪəl/ . /ˈmeʒrbl/ . /fɪˈlɔːsofɪk/ .
/ɪnvɪzɪˈbɪlɪtɪ/ . /ˈnaːʃəlaɪz/ . /kɒmˈpɜːtɪtɪv/ .
/fɪˈlɔːzofər/ . /naːʃnəlɪˈzeɪʃn/ . /ɒˈportjuːnɪtɪ/ .
/fɪˈlɒzɒfɪkl/ .

8- (e) post -

/ˈkaɪnfət/ . /ˈrəʊmən/ . /daɪəgˈnəʊs/ - /tæˈtuː/ . /ˈglɒrɪ/ .

/mæsˈkəˈreɪd/ . /rɪˈvɔːlt/ . /ædvəˈtaɪz/ . /daɪəgˈnəʊzɪs/ .

/ˈkaɪŋfətbl/ . /rɪˈfleks/ . /æmˈplɔɪ/ . /ˈglɒrɪfaɪ/ .

/ˈprɒːverb/ - /rəʊməˈnesk/ . /æmplɔɪˈiː/ . /ænˈviːzɪbl/ .

/əpərˈtjuːn/ . /fɪˈlɔːzəfɪ/ . /ˈneɪʃn/ . /kæmpɪˈt/ - /ˈnæʃnl/

/rɪˈfleksɪv/ . /ˈmesɪdʒər/ . /rɪvəˈluːʃn/ . /ædvərˈtaɪzmənt/ .

/kɒmpɪˈtɪʃn/ . /prəˈvɜːrbɪəl/ . /ˈmesɪdʒərəbl/ . /fɪˈlɔːzəfɪk/ .

/ænvɪzɪˈbɪlɪtɪ/ . /næʃnəˈlaɪz/ . /kəmˈpetɪtɪv/ . /fɪˈlɔːzəfər/

/næʃnəˈlaɪzeɪʃn/ . /ɒpərˈtjuːnɪtɪ/ . /fɪˈlɔːzəfɪkl/ .

9.- (e) pos -

/ˈkʌmfət/ . /ˈrɒmæns/ . /ˌdaɪəgˈnəʊsɪs/ . /təˈtuː/ . /ˈglɔːrɪ/ .

/ˈmæsəkəd/ . /rɪˈvəʊlt/ . /ˈædvətaɪz/ . /ˌdaɪəgˈnəʊsiːz/ .

/ˈkʌmftəbl/ . /ˈriːfleks/ . /ɪmˈplɔː/ . /ˈglɔːrɪfaɪ/ . /ˈprɒvɜːb/ .

/rəʊˈmæntɪk/ . /ɪmˈpləʊsɪv/ . /ɪnˈevɪtəbl/ . /ˌɒpəˈtjuːn/ . /fɪˈlɒsəfɪ/ .

/ˈneɪʃn/ . /kəmˈpiːt/ . /ˈfæʃn/ . /rɪˈfleksɪv/ . /ˈmeʒə/ .

/ˌrevəˈluːʃn/ . /ədˈvɜːtɪsmənt/ . /ˌkɒmpəˈtɪʃn/ . /prəˈvɜːbɪəl/ .

/ˈmeʒərəbl/ . /ˌfɪləˈsɒfɪk/ . /əˌgriːəˈbɪlɪtɪ/ . /ˈfæʃnəbl/ .

/kəmˈpetɪtɪv/ . /fɪˈlɒsəfə/ . /ˌnæʃənəlaɪˈzeɪʃn/ .

/ˌɒpəˈtjuːnɪtɪ/ . /ˌfɪləˈsɒfɪkl/ .

10. (e) post-

/ˈkɒŋfɜt/ . /ˈrɒmən/ . /ˈdɑɪkgnɒs/ . /tɤˈtuː/ . /gˈlɒrɪ/ .
/mɤsˈkɜɪrɛɪd/ . /rɪˈvɔːlt/ . /ɤdvɜˈtɑɪz/ . /ˈdɑɪkgnɒsɪs/ .
/kɒmfɜˈtɛɪbl/ . /rɪˈflɛksɪ/ . /ɪmˈplɔɪ/ . /glɒrɪˈfɑɪ/ . /ˈprɔːvɛrb/ .
/rɒˈmɤɛnsk/ . /ɪmplɔɪˈiː/ . /ɪnˈvɪzɪbl/ . /ɒpɑrtˈjuːn/ .
/fɪˈlɔːzɒfɪ/ . /ˈnɛɪʃn/ . /ˈkɒmpɪt/ . /ˈnɛɪʃn/ . /rɪfˈlɛksɪv/ .
/ˈmɛsʒɜr/ . /rɪvɒˈluːʃn/ . /ɤdvɜˈtɑɪzmɑnt/ . /kɒmpɜˈtiːʃn/ .
/prɒvˈɜːrbɪəl/ . /mɪʒɜˈrɛɪbl/ . /fɪˈlɔːzɒfɪk/ . /bɛgˈvɪzɪˈbrɪtɪ/
/nɤʃnɜˈlɑɪz/ . /kɒmˈpɪtɪtɪv/ . /fɪˈlɔːzɒfər/ . /nɤʃnɜlɑɪˈzeɪʃn/ .
/ɒpɑrtˈjunɪtɪ/ . /fɪˈlɔːzɒfɪk/ .

M- (e) post -

/kənˈfɜːrt/ . /ˈrəʊmən/ . /ˈdaɪəgnəʊ/ . /ˈtɛtɪn/ . /gˈlɔːrɪ/ .

/mæskəˈrɑːd/ . /rɪˈvɔːlt/ . /ædvərˈtaɪz/ . /ˈdaɪəgnəʊs/ .

/ˈkɒŋftbl/ . /rɪˈfleks/ . /ɪmˈplɔɪ/ . /glɒrɪˈfaɪ/ . /prəˈverb/ .

/rəʊməˈnæsk/ . /ɪmplɔɪˈiː/ . /ɪgˈvɪzɪbl/ . /əpɔːrˈtjuːn/ .

/fɪlɒzɒfɪ/ . /ˈneɪʃn/ . /ˈkæmpt/ . /ˈneɪʃnl/ . /rɪˈfleksɪv/ . /ˈmeʒər/ .

/rɪvəˈluːʃn/ . /ædvɜːrˈtaɪzmənt/ . /kɒmpəˈtiːʃn/ . /prəˈvɜːrbɪəl/ .

/ˈmeʒərbl/ . /fɪlɒzɒfɪk/ . /ɪŋˈvɪzɪbɪlɪtɪ/ . /ˈnæʃɪənəlɪz/ .

/kæmˈpɪtɪtɪv/ . /fɪlɔːzɒfər/ . /nɑʃɪɒnælɪˈzeɪʃn/ . /əpɔːrˈtjuːnɪtɪ/ .

/fɪlɒzɒfɪk/ .

Production post-test

Control group

1-(c) part-

/kæm'fɔːrt/ . /rəman/ . /dɪagnəvz/ . /tɪtɪv/ . /glɒrɪ/ .

/mæskəˈreɪd/ . /rɪˈvɒlt/ . /ædvərˈtaɪz/ . /dɪægnəʊzɪs/ .

/kəmˈfɔːrtɪbl/ . /rɪflekt/ . /ɪmplɔɪ/ . /glɒrɪfaɪ/ .

/prəˈvɜrb/ . /rəʊməˈnesk/ . /ɪmˈplɔɪɪ/ . /ˈɪŋvɪzɪbl/ .

/ɒpərˈtjuːn/ . /fɪlɒːzɒfɪ/ . /neɪʃn/ . /ˈkɒmpɪtɪ/ .

/ˈnæʃɪɒnl/ . /rɪflektɪv/ . /mɪˈʃjuːr/ . /rɪvɒluːʃn/ .

/ædvərˈtaɪzmənt/ . /kɒmpəˈtiːʃn/ . /prəˈvɜːrbɪəl/ .

/mɪˈʃjuːrɪbl/ . /fɪˈlɒːzɒfər/ . /næʃɒnæˈliːzeɪʃn/ .

/ɒpɒrˈtjuːnɪtɪ/ . /fɪlɒːzɒfɪkl/ .

2. (c) post-

/ˈkɔːŋfət/ . /ˈrəʊmən/ . /daɪəgnəʊs/ . /ˈtæktɪl/ . /glɔːrɪ/ .

/ˈmæskərəd/ . /rɪˈvəʊlt/ . /ædˈvɜːrtɪz/ . /daɪægˈnəʊsɪs/ .

/kʌmˈfərtəbl/ . /ˈrɪfleks/ . /ˈɪmplɔɪ/ . /ˈglɔːrɪfaɪ/ . /ˈprɒvɜːb/ .

/rəʊˈmænɪsk/ . /ɪmˈplɔɪɪ/ . /ˈaːgjuːzəbl/ . /əˈpɔːrtʃun/ .

/fɪˈlɔːzəfɪ/ . /ˈneɪʃn/ . /ˈkæmpɪtɪ/ . /ˈnæʃənəl/ . /rɪˈflektɪv/ .

/ˈmɪʒər/ . /rɪvəˈluːʃn/ . /ædˈvɜːrtɪsmənt/ . /kæmpəˈtɪʃn/ .

/prəˈvɜːbɪəl/ . /mɪʒəˈrəbl/ . /fɪlɒzɒfɪk/ . /aːgjuːzəbɪlɪtɪ/ .

/næʃnəˈlaɪz/ . /kæmˈpɪtɪtɪv/ . /fɪˈlɔːzəfər/ . /næʃənəlaɪˈzeɪʃn/ .

/æpɔːrˈtʃuːnɪtɪ/ . /fɪlɒˈzɒfɪkl/ .

3.- (c) port.-

/kɒmˈfɜːrt/ . /ˈrɔːmən/ . /dɪɡˈnɪtɪ/ . /tɪˈtʊn/ . /ɡˈlɒrɪ/ .

/mɑːrˈkɑːrd/ . /rɪˈvɔːlt/ . /ædvərˈtaɪz/ . /dɪɡˈnɒsɪs/ .

/kɒmˈfɜːrtəbl/ . /rɪˈfleks/ . /ɪmˈplɔɪ/ . /ɡlɒrɪˈfaɪ/ . /ˈprɒverb/ .

/rɒmændʒɪk/ . /ɪmˈplɔɪ/ . /ɪˈʒuːzəbl/ . /əˈpɔːrtjʊn/ . /fɪˈlɒːzɒfɪ/ .

/ˈneɪʃn/ . /kævənt/ . /ˈnæʃɪɒn/ . /rɪfleksɪv/ . /meʒər/ .

/rɪvɒˈluːʃn/ . /ædvərtaɪzmənt/ . /kɒmpətɪˈʃn/ . /prəvɜːrbəl/ .

/mɪˈʒuːrbl/ . /fɪlɒːzɒfɪk/ . /aɪɡvɪzɪbɪlɪtɪ/ . /næʃɪɒnəˈlaɪz/ .

/kɒmˈpɪtɪtɪv/ . /fɪˈlɒːzɒfər/ . /næʃɪɒnəlaɪˈzeɪʃn/ .

/əˈpɔːrtjʊnɪtɪ/ . /fɪlɒˈzɒfɪkl/ .

4.(c) pon-

/ˈkɒnfərt/ . /ˈrəʊmən/ . /daɪægnəʊs/ . /tæˈtuː/ . /gəˈlɔːrɪ/.

/mæˈskɑːˈkreɪd/ . /rɪˈvəʊlt/ . /ædvəˈtaɪz/ . /daɪægnəʊsɪːz/.

/kɒmfərˈteɪbl/ . /rɪˈfleks/ . /ɪmˈplɔɪ/ . /gˈlɔːrɪfaɪ/.

/prəˈvɜːbl/ . /rəʊmæntɪk/ . /ɪmplɔɪˈiː / . /ɪkwiːvəlnt/.

/ɑːpɔːtjuːn/ . /fɪlɒːzəfɪ/ . /ˈneɪʃn/ . /kəmpiːt/ . /ˈneɪʃnl/.

/rɪflektɪv/ . /ˈmeʒər/ . /rɪvəˈluːʃn/ . /ædvɜːˈtaɪzmənt/.

/kɒmpəˈtɪːʃn/ . /prəˈvɜːrbɪəl/ . /ˈmædʒnəbl/ . /fɪˈlɒːzəfɪk/.

/ægvɪˈziːbɪlɪtɪ/ . /næʃnəˈlaɪz/ . /kɒmpəˈtiːtɪv/ .

/fɪˈlɒːzəfər/ . /næʃɪɒnəˈlaɪzeɪʃn/ . /əˈpɔːtjʊnɪtɪz/.

/fɪˈlɒzəfɪkl/.

5- (c) pon-

/kɒmˈfɔːrt/ - /ˈrɒmən/ - /ˈdaɪægnəʊ/ - /ˈɪktɪv/ - /gˈlɒrɪ/.

/mæsˈkreɪd/ - /rɪˈvɒlt/ - /ædvərtaɪz/ - /ˈdaɪəgnəʊsɪs/ -

/kɒmfɔrˈteɪbl/ - /rɪflekʃ/ - /ɪmplɔːɪ/ - /glɒrɪˈfaɪ/.

/prɒˈvɜrb/ - /rəˈmaɪŋsk/ - /ɪmˈplɔːɪ/ - /ɪŋˈvɪzɪbl/.

/əˈpɔrtjuːn/ - /fɪˈlɔːzɒfɪ/ - /ˈneɪʃn/ - /ˈkɒmpɪt/ - /ˈmæʃn/.

/rɪˈflɛkʃv/ - /ˈmɪzɪvr/ - /rɛvəˈluːʃn/ /ædvərˈtaɪzmənt/.

/kɒmpəˈtɪːʃn/ - /prɒˈvɜːrbɪəl/ - /mɪˈʒvreɪbl/ - /fɪlɔːsɒfɪk/ -

/ɪŋvɪzɪbɪlɪtɪ/ - /næʃɪənəlaɪz/ - /kɒmpəˈtɪtɪv/.

/fɪlɔːsɒfər/ - /næʃɪɒnəˈlaɪzeɪʃn/ - /əˈpɔrtjuːnɪtɪ/.

/fɪlɔːzɒfɪkl/.

6 - (c) post -

|kəmˈfɔːrt| . |ˈrəʊmən| . |dɪsˈgaɪz| . |ˈtɔːtʃə| . |ˈglɔːrɪ| .

|mæsˈkəreɪd| . /rɪˈvəʊlt/ . |dɪsˈgreɪs| . |kʌmˈfɔːrtəbl| .

|ˈriːfleks| . /ɪmˈplɔː| . |glɔːrɪˈfaɪ| . |ˈprɒvɜːrb| . |rəʊməˈnesk| .

|ɪmˈplɔːr| . /ʌnbɪˈliːvəbl| . |ˈspɔːrtsmən| . |fɪˈlɒsəfɪ| .

|ˈneɪʃn| . |kəmˈpliːt| . |ˈnæʃənəl| . |rɪˈfleksɪv| . |ˈmeʒər| .

|revəˈluːʃn| . |ədˈvɜːrtɪsmənt| . |kɒmpəˈtɪʃn| .

|prəˈvɜːrbɪəl| . |ˈmeʒərəbl| . |fɪləˈsɒfɪk| .

|ʌnbɪliːvəˈbɪlɪtɪ| . |ˈnæʃənəlaɪz| . |kəmˈpetɪtɪv| .

|fɪˈlɒsəfər| . |næʃənəlaɪˈzeɪʃn| . |ˈspɔːrtɪnəs| .

|fɪləˈsɒfɪkl| .

7- (c) part-

/ˈkæŋfət/ . /rɒmən/ . /ˈdʒaɪənəs/ . /tæbu/ . /gˈlɔːrɪ/ .

/mæskəreɪd/ . /rɪˈvɔːlt/ . /ædvəˈtaɪz/ . /ˈdʒaɪænəsɪs/ .

/kɔːŋkətbl/ . /rɪfleks/ . /ɪmˈplɔɪ/ . /gˈlɔːrɪfaɪ/ .

/prɒvɜːb/ . /rəmænɪsk/ . /ɪmplɔɪˈiː/ .

/ɪŋˈviːzəbl/ . /ɔːpətˈjuːn/ . /fɪlɒsəfɪ/ . /ˈneɪʃn/ .

/ˈkʌmpɪt/ . /ˈnaɪʃn/ . /rɪfleksɪv/ . /ˈmeʒər/ . /rɪvəˈluːʃn/ .

/ædvəˈtiːsmənt/ . /kɒmpəˈtiːʃn/ . /prəˈvɜːrbɪəl/ .

/ˈmeʒərəbl/ . /fɪlɒsəfɪk/ . /ɪŋˈvɪzɪbɪlɪtɪ/ . /næʃənəˈlaɪz/ .

/kɒmpɪtɪtɪv/ . /fɪlɒsəfər/ . /næʃnəˈlaɪzeɪʃn/ . /ɒpɔːtjuːnətɪ/ .

/fɪlɒsəfɪk/ .

8 - (c) pen-

|kɒŋˈfɔːrt/ . /ˈrəʊmən/ . /ˈdaɪægnəʊz/ . /tæˈtuː/ . /ˈglɔːrɪ/ .
/ˌmæskəˈreɪd/ . /rɪˈvəʊlt/ . /ˈædvətaɪz/ . daɪægˈnəʊsɪs/ .
|kʌmfətəbl/ . /ˈriːfleks/ . /ɪmˈplɔɪ/ . /ˈglɔːrɪfaɪ/ .
/ˈprɒvɜːb/ . /rəʊməˈnesk/ . /ɪmplɔɪˈiː/ . /ɪnˈvɪzəbl/ .
/ɒpərˈtjuːn/ . /fɪˈlɒsəfɪ/ . /ˈneɪʃn/ . /kəmˈpliːt/ . /ˈneɪʃn/ .
/rɪˈfleksɪv/ . /ˈmeʒər/ . /revəˈluːʃn/ . /ədˈvɜːtɪsmənt/ .
/kɒmpəˈtɪʃn/ . /prəˈvɜːbɪəl/ . /ˈmeʒərəbl/ . /fɪləˈsɒfɪk/ .
/ɪnvɪzɪˈbɪlɪtɪ/ . /ˈnæʃnəlaɪz/ . /kəmˈpetɪtɪv/ .
/fɪˈlɒsəfər/ . /næʃnəlaɪˈzeɪʃn/ . /ɒpəˈtjuːnɪtɪ/ .
/fɪləˈsɒfɪkl/ .

9- (c) pmr -

/ˈkaɪŋfɔːt/ . /ˈrɒmən/ . /dɪsəˈɡriːvəl/ . /tæˈtuː/ . /ˈɡlɔːrɪ/ .

/ˈmæskəreɪd/ . /ɪmˈplɔɪ/ . /ˈɡlɔːrɪfaɪ/ . /ˈprɒvɜːb/ . /rəʊməˈnesk/ .

/ɪmplɔɪˈiː/ . /ɪŋˈviːzɪbl/ . /ɒpɔːrˈtjuːn/ . /fɪˈlɒːsəfɪ/ .

/ˈneɪʃən/ . /kəmˈpiːt/ . /ˈnæːʃənl/ . /rɪˈflektɪv/ . /ˈmeʒər/ .

/revəˈluːʃn/ . /ədˈvɜːtɪzmənt/ . /kɒmpəˈtɪʃn/ .

/prəˈvɜːbɪəl/ . /ˈmeʒərəbl/ . /fɪˈlɒːsəfɪk/ . /ɪŋvɪzɪˈbiːlɪtɪ/ .

/næʃənəˈlaɪz/ . /kəmˈpetɪtɪv/ . /fɪˈlɒːsəfər/ .

/næʃnəlaɪˈzeɪʃn/ . /ɒpɔrˈtjuːnɪtɪ/ . /fɪˈlɒːsəfɪkl/ .

10. (c) port.

|kʌŋˈfɜːt| · |ˈrəʊmən| · |ˈdaɪəgnəʊzɪ| · |tæˈtuː| · |gˈlɔːrɪ| ·

|ˈmʌskrɛɪd| · |rɪˈvɒlt| · |ædvəˈtaɪz| · |ˈdaɪənəʊzɪs| ·

|kəmˈfɪtəbl| · |rɪˈfleks| · |ɪmˈplɔɪ| · |glɔːrɪˈfaɪ| ·

|ˈprɒvɜːb| · |rəʊməˈnesk| · |ɪmplɔɪˈiː| · |ɪŋˈvɪzɪbl| ·

|ɒpəˈtjuːn| · |fɪˈlɒsəfɪ| · |ˈneɪʃn| · |kəmˈpjuːt| ·

|ˈnæʃənl| · |rɪˈfleksɪv| · |ˈmeʒər| · |rɪvəˈluːʃn| ·

|ædvəˈtaɪzmənt| · |kɒmpəˈtɪʃn| · |prəˈvɜːbl| ·

|ˈmeʒərəbl| · |fɪˈlɒsəfɪk| · |ɪnˈvɪzɪbɪlɪtɪ| ·

|næʃnəˈlaɪz| · |kəmˈpjuːtə| · |fɪˈlɒsəfər| ·

|næʃnəlaɪˈzeɪʃn| · |ɒˈpɔːtjuːnɪtɪ| · |fɪləˈsɒfɪkl| ·

11(c) port-

/kʌmˈfət/ . /rəˈmaːn/ . /ˈdaɪægnəʊz/ . /tæˈtuː/ .
/ˈglɔːrɪ/ . /ˈmæskəraːd/ . /rɪˈvɔːlt/ . /ædvəˈtaɪz/ . /ˈdaɪægnəʊz/
/ˈkɔːftəbl/ . /rɪˈfleks/ . /ɪmpˈlwaɪ/ . /ˈglɔːrɪfaɪ/ .
/ˈprɒvɜːb/ . /rəʊmænsɪk/ . /ɪmplɔwˈiː/ . /ɪnˈviːzɪbl/ .
/ˈɒpɔːtjuːn/ . /fɪlɔːzɒfɪ/ . /ˈneɪʃn/ . /kəmˈpiːt/ .
/ˈnæʃnl/ . /rɪˈfleksɪv/ . /miːʒər/ . /rɪvəˈluːʃn/ .
/ædvəˈtaɪsmənt/ . /kɒmpəˈtɪʃn/ . /prəˈvɜːrbɪəl/ .
/mɪˈzɜːrbl/ . /fɪlɔːzɒfɪk/ . /ɪnˈvɪzɪbɪlɪtɪ/ .
/neɪʃnəˈlaɪz/ . /ˈkɒmpətɪtɪv/ . /fɪlɔːzɒfər/ .
/neɪʃnæˈliːzeɪʃn/ . /ɒpəˈtuːnɪtɪ/ . /fɪˈlɔːzɒfɪkl/ .

Abstract in Arabic

هده الدراسة المتضمنة لخمسة فصول تحتوي على برنامج تجريبي والتي أريد من خلالها تسليط الضوء على دور التوضيحات المخصصة و التمارين التوعوية في تطوير قدرات الطلبة الجزائريين للغة الانجليزية كلغة أجنبية فيما يخص سماع ونطق النبرة في الكلمات المشتقة و المركبة صرفيا.

من خلال قيامنا بالتجربة على تلاميذ السنة الثانية في قسم اللغة الانجليزية جامعة الجزائر أردنا أن نتحقق من فاعلية النظام التوجيهي والتعليمي المبني على التمارين التوعوية على تطوير وتحسين قدرات إصغاء ونطق النبرة الصوتية في الكلمات المركبة صرفيا. اثنا وعشرون طالبا وطالبة شاركوا في التجربة.قسم الطلبة بالتساوي إلى فوجين مجموعة تجريبية و مجموعة التحكم.

بهدف استنتاج فاعلية التعليمات الخاصة والتمارين التوعية على قدرات الطلبة في إصغاء ونطق النبرة في الكلمات المركبة صرفيا. قمنا بجمع الأدلة اللازمة باستخدام استبيان قبلي بعدي واختبار قبلي وبعدي.النتائج المتحصل عليها دلت على تطور قدرات أعضاء المجموعة التجريبية فيما يخص إصغاء ونطق النبرة في الكلمات المركبة.

فيهدف من خلال النتائج الايجابية المتحصل عليها في هده التجربة بتطبيقها في تعليم النبرة في جميع الكلمات عموما والكلمات المركبة خصوصا .