

University of Bahrain



College of Arts

**Department of English
Language**

**Do Bahraini EFL Learners Adhere to the
Rhythmic Structure English When Speaking**

by

MUSTAFA MOHAMMED ABDUL AZIZ SULIMAN

**A Thesis submitted in partial fulfilment of the
requirements for the degree of**

**MASTER OF ARTS IN APPLIED ENGLISH LANGUAGE
STUDIES**

Department of English Language and Literature

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Declaration

I hereby declare that this work is the result of my independent investigation, and other sources are acknowledged by explicit references. Further, this study has not been submitted in substance for any other degree, nor is it being concurrently submitted for any degree.

Signed: _____

Date: March 20, 2012

The thesis defense committee considers this thesis entitled:

**“DO BAHRAINI EFL LEARNERS ADHERE TO THE RHYTHMIC STRUCTURE
OF ENGLISH WHEN SPEAKING?”**

submitted by Mr. Mustafa Mohammed Abdul Aziz Sulaiman to the Department of English language and literature satisfactory and acceptable for the degree of Master in Applied English Language Studies.

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Dedication

This study is dedicated to my parents, wife and children who share with me my ups and downs. In fact, they share me my life.

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Abstract

This study explores to what extent Bahraini EFL students at UoB adhere to the rhythmic structure of the English language while speaking. If not, what are the causes behind such a problem? Ten native Arabic speakers learning English at UoB were asked to perform three different tasks. The first task was a read aloud text to check the rhythm in the subjects' speaking. The second task was a free speech text to confirm and emphasize the results obtained from first task. The last task was a follow-up questionnaire to role out whether other factors such as age, sex, year of study, educational sector (private or government school) might affect the production of the English rhythm. It was found that the majority of UOB English major students do not adhere to the rhythm of the English language due to more than one reason. In fact, more than one reason was found in each student in the results; stress misplacement, lack of using of weak forms and improper pausings were the most important causes for not adhering to the rhythm of the language. It was also found that the students read the words in their lexical representation which leads to the high usage of the linking sounds, and the low usage of assimilation and elision. The results showed that age, sex, year of study and educational sectors do not lead to a significant difference in producing the rhythm of the English language.

CHAPTER 1: INTRODUCTION

1.1 Background of the study

Pronunciation in the target language (L2) is a complex process, and effective communication can be affected by pronunciation. According to Florez (1998) and Coniam (2002), it can be one of the most difficult aspects of language learning and teaching. In their learning process, students of English as a Foreign Language (EFL) sometimes fall back on pronouncing certain sounds that belong to their first language (L1), and this can lead to problems with their communication in L2 as it affects both the production and perception of sounds. Studies conducted on pronunciation problems show that L1 interference causes some difficulties in pronunciation (Hodge, 2006; Ho, 2003; Flege and Davidian, 1980; Ling and Grabe (1999); Maniruzzaman, n. d.). These difficulties can greatly influence communication in the target language. Wong (1987), for example, holds that despite the non-native speaker's good vocabulary and grammar, if their pronunciation falls below a certain level, they cannot communicate effectively. Wong also maintains that like intelligibility, communicability should be given attention. Derwing and Munro (2005 cited in Hodges, 2006, p. 4) argue that the chances of miscommunication and discrimination increase as English has become an international language and many people lack effective communication in it. For this reason, pronunciation is very important for the communication process. For example, Ling and Grabe (1999) observed that Singapore English speakers tend to stress the final syllable of the word whether it is stressed or not. This might change the meaning of some words and make the process of communication difficult.

In addition, not only does pronunciation affect oral communication, but it also affects other language skills such as reading and writing (Wong, 1987). For example, when learners face words such as “*know*”, “*Wednesday*”, “*facial*”, and the like, it may be very confusing for them to read these words correctly in the absence of a proper pronunciation model because the letters “k” and “d” in the words “*know*”, “*Wednesday*” are silent (not pronounced), and the letters “ci” in the word *facial* are pronounced as /ʃ/. Similarly, the same words may cause a problem to the learners if they are asked to write them from a verbal prompt.

There are two aspects involved in English pronunciation; segmental and suprasegmental. The segmentals are the basic sounds or phonemes and how they are combined to form the words. The suprasegmentals go beyond the basic sounds and they include: stress, rhythm, assimilation, elision, linking and intonation.

There is no doubt that suprasegmental features of the English language are very important for intelligibility. Despite the fact that most English learners wish to sound like native speakers, they do not need to sound like native speakers to be understood. All they need is to have a certain degree of, as described by Abercrombie (1956, p.37 cited in Benrabah, 1997) “comfortable intelligibility”, i.e. the listener can understand the speaker with no or little conscious effort. Rhythm is considered as the key element to understanding or being understood by others.

The field of pronunciation is vast; therefore, in this study, the focus will be restricted to the rhythmic characteristics of spoken English, particularly to learners' use of correct word stress, assimilation, elision, pausing, vowel reduction, and so-called weak forms.

1.2 Problem statement

As an English teacher, I have noticed that Bahraini EFL learners do not reflect the characteristics of English rhythm when speaking despite the fact that both Arabic and English are considered stress-timed languages (Abercrombie, 1967; Benrabah, 1997; Chentir et al, 2008). Therefore, this study will investigate the problems causing inaccurate rhythm among Bahraini EFL learners when speaking English, and what factors are responsible for such problems. These problems could be caused by a number of factors; some of them could be related to the differences between the first and second languages. For example, Hodges (2006) points out that French is a syllable-timed language, and English is a stress-timed language, so when French people speak English, they may lack the reduction of the vowels that is necessary for English rhythm. Other factors could be related to insufficient training in speaking (teflbootcamp, n. d.). Therefore, when EFL teachers become aware of these factors, they can help their students develop their pronunciation.

1.3 Research questions

This study will investigate the following questions:

1. Do Bahraini EFL learners adhere to the rhythmic structure of English when speaking?

2. If the answer is no, what are the causes of such problems?

1.4 Aim and purpose of the study

The aim of this study is to investigate to what extent Bahraini EFL learners apply rhythmic structure of English when they speak English and, if they do not, what causes can be attributed to such problems. The purpose of the study is to offer some practical recommendations that might assist English teachers in helping their students overcome rhythm related problems in pronunciation.

1.5 Significance of the study

It is of great importance that EFL learners be aware of rhythm and apply it accurately as they speak English. This process requires the students to be acquainted with the suprasegmental features of English such stress, intonation, assimilation, elision, weak forms and linking and intrusive sounds. It is also necessary for the students to know where to pause in order to send clear messages to the listeners while communicating in English.

It is also hoped that the findings of this study will be useful for EFL teachers to be aware of the importance of using rhythm and help their students to improve their communication skills. Further, the findings will help students to be aware of producing and perceiving this feature in the target language and thus lead to a better understanding and intelligibility with other people, especially native and other proficient speakers.

1.6 Limitations of the study

This study has the following limitations:

Firstly, it is limited to the students of the UOB as well as to a very small number of students, so the findings of this study cannot be generalized to the other students of the UOB or beyond. Secondly, it neglects other aspects of connected speech such as intonation and syllable length which contribute to the rhythm of the English language.

1.7 Key words:

The following definitions are based on different phonologists (Abercrombie, 1967; Ladefoged, 1975; Gimson, 1976; O'Connor, 1980; Halliday, 1985; Katamba, 1989; Sabater, 1991; Durand, 1992; Roach, 2000; Crystal, 2003; Marotta, 2003; Roca & Johnson, 2008)

Rhythm: This is a universal property of languages. It is a perception that there are prominent units occurring at regular intervals as we speak.

Syllable-timed languages: In this type of languages all the syllables tend to occur at regular intervals whether these syllables are stressed or stressless.

Stress-timed languages: In this type of languages the stressed syllables tend to occur at regular intervals of time

The foot: the foot is used as the unit of rhythm. It starts with the stressed syllable and includes everything after the stressed syllable but not including the following stressed syllable.

Stress: one syllable in the word is more prominent than the others.

Extrametricity: This is a process that involves excluding the element it acts upon from the computation in the metrical grid.

1.8 List of phonetic symbols used

Consonants

p pen /pen/	s see /si:/
b bad /bæd/	z zoo /zu:/
t tea /ti:/	ʃ shoe /ʃu:/
d did /dɪd/	ʒ vision /'vɪʒn/
k cat /kæt/	h hat /hæt/
g get /get/	m man /mæn/
tʃ chain /tʃeɪn/	n now /naʊ/
dʒ jam /dʒæm/	ŋ sing /sɪŋ/
f fall /fɔ:l/	l leg /leg/
v van /væn/	r red /red/
θ thin /θɪn/	j yes /jes/
ð this /ðɪs/	w wet /wet/

Vowels and diphthongs

i: see /si:/	ə about /ə'baʊt/
ɪ happy /'hæpi/	eɪ say /seɪ/
ɪ sit /sɪt/	əʊ go /gəʊ/ (British English)
e ten /ten/	oʊ go /goʊ/ (American English)
æ cat /kæt/	aɪ my /maɪ/
ɑ: father /fɑ:ðə(r)/	ɔɪ boy /bɔɪ/
ɒ got /gɒt/ (British English)	aʊ now /naʊ/
ɔ: saw /sɔ:/	ɪə near /nɪə(r)/ (British English)
ʊ put /pʊt/	eə hair /heə(r)/ (British English)
u actual /æktʃuəl/	ʊə pure /pjʊə(r)/ (British English)
u: too /tu:/	
ʌ cup /cʌp/	
ɜ: fur /fɜ:(r)/	

CHAPTER 2: LITERATURE REVIEW

2.1 What is rhythm?

One can feel the rhythm any time anywhere in his/her life: the beating of the heart, the sound of water dripping, the tick-tock of a clock... and of course in music and poetry (Wong, 1987, p. 30). The contrast of the stressed and unstressed syllables creates a rhythm in the English language and the stressed syllables lead to the rhythmic beat (Brown, 1990, cited in Tuan and An, 2010). He also notices that when English speakers speak, they make all the big muscle movements such as waving their arms, raising their eyebrows, nodding their heads and the like in step with the stressed syllables.

2.1.2 Definitions of rhythm

Rhythm can be defined as the occurrence of a noticeable event which happens at regular intervals of time (Roach, 2000, p. 134). So, there is a tendency of stressed syllables in English to occur at more or less equal temporal intervals (Jones, 1956, cited in Bull, 1994). That is, all feet (see page 12) tend to be of equal duration. Similarly, Crystal (2003) states the case in simpler, more succinct terms: "Our sense of rhythm is a perception that there are prominent units occurring at regular intervals as we speak" (p. 249).

Rhythm is a universal property of languages (Abercrombie, 1967; Pike, 1971; Halliday, 1985; Imrie, 2008; Chentir et al, 2008; Surányi et al, 2009). Halliday (1985) states that "natural speech in all languages is highly rhythmic" (p. 271). Therefore, "rhythm plays a central role in language

acquisition and competent language use” Gong (2002, p. 26). Wong (1987) supports this view, saying that “rhythm and intonation are the key elements of intelligibility in speech” (p. 9).

A more detailed explanation is given by Sabater (1991), who maintains that stress and rhythm are more important for intelligibility than the correct pronunciation of isolated segments in polysyllabic words. She adds that “the inappropriate pronunciation of a single word... is not vital for intelligibility” (Sabater, 1991, p. 146).

2.2 Languages and rhythm

Rhythmically, languages can be divided into two categories; (Abercrombie, 1967; Halliday, 1985; Crystal, 2003; Roach, 2000; Ladefoged, 1975; Coniam, 2002)

1. Syllable-timed languages
2. Stress-timed languages

2.2.1 Syllable-timed languages:

In this type of languages, all the syllables tend to occur at regular intervals whether these syllables are stressed or stressless. In other words, all the syllables tend to have the same length of time. French, Spanish, Polish and Chinese are some examples of this type of languages.

2.2.2 Stress-timed languages:

In this type of languages, the stressed syllables tend to occur at regular intervals of time. That is, the number of unstressed syllables will be changed and shortened to get the same duration

between the stressed syllables. Arabic, Dutch, English and German are some examples of this type of languages.

There are some differences between these two types: Sabater (1991) pointed out the basic differences between the syllable-timed and stress-timed languages as follows;

1. In syllable-timed languages, each syllable takes the same amount of time to be produced whether it is stressed or unstressed, so vowel reduction in these languages is weak. On the other hand, in stress-timed languages, the unstressed syllables have a short time to be produced in order to keep the rhythm. Thus, there is strong vowel reduction.
2. The reduction and subsequent elisions of unstressed vowels have resulted in a large number of consonants clusters and a complex syllable structure in English, whereas, in syllable-timed languages there is no vowel reduction. For this reason, the structure of the syllable is simple.
3. The speaking rate in stress-timed languages (fast vs. slow speech) does not affect the duration of the stressed and unstressed syllables proportionally. In syllable-timed languages such as Spanish, the speed of speaking rate effects on both the stressed and unstressed vowels is roughly the same.
4. In stress-timed languages there exists the phenomenon of secondary stress to avoid long sequences of unstressed syllables, and to keep the rhythm. Since in syllable-timed languages both of the stressed and unstressed syllables receive the same duration of time, there is no secondary stress in these languages.

5. In syllable-timed languages, the syllables (stressed or unstressed) occur at regular intervals and the rhythmical unit in verse is octosyllable, decasyllable, etc. In stress-timed languages the metric system is based on the foot and the rhythmic verse is referred to as iambic, trochee, anapest, etc. These refer to the different stress patterns of the foot (Sabater, 1991, pp. 153-4).

Table1. Difference between stress-timed and syllable-timed languages

Syllable-timed languages	Stress-timed languages
1. Weak vowel reduction	Strong vowel reduction
2. Simple syllable structure	Complex syllable structure
3. Proportional effect of tempo	Non-proportional effect on tempo
4. Absence of secondary stress	Presence of secondary stress
5. Metrical system of a syllable type	Metrical system of an accentual type

(This table is taken from (Sabater, 1991, p. 154)

However, not all linguists agree on the above categorization of the languages. Here are some opinions about languages and their categorizations:

Marks (1999) opposes the notion of stress-timed languages. He states:

“Although the notion of ‘stress-timing’ is often referred to in pedagogic models of English pronunciation, and forms the basis for some classroom materials for pronunciation development, there appears to be no hard evidence that really exists” (p. 191).

Bull (1994) maintains that stressed syllables do not occur at regular intervals, “but undoubtedly it now seems incorrect to assume anything more than a general tendency to produce stressed syllables at similar intervals. This considerable weakening of the theory has been caused by a

phalanx of data from acoustic analysis, which clearly shows that stressed syllables in English are not spaced at regular intervals” (Bull, 1994, p. 5).

Roach (1982) fails to find any consistent distinction while measuring variation in the syllable duration of English and Russian (stress-timed languages) and French and Yoruba (syllable-timed languages). When speech rhythm is subjected to instrumental measurements, it fails to show isochronous units. He concludes that the difference between syllable-timed languages and stress-timed languages depends on the speaker’s intuition.

Similarly, Bull (1994) finds in his study that isochrony does not exist in the acoustic signal. Deterding (1994, p. 316) supports this view, saying that “it would be naïve to expect anything approximating perfect isochrony.” He described the person who produces the rhythm with perfect regularity as a “robot”. The process of producing rhythm with perfect regularity, as Roach (2000) describes, is “mechanical speech” (p. 134).

Nevertheless, many linguists agree that rhythm is a perceptual phenomenon (Roach, 1982; Deterding, 1994; Bull 1994; Cummins and Port, 1998; Bunta and Ingram, 2007; Suranyi et al, 2009).

Some other linguists state that all languages display properties of both syllable-timed and stress-timed languages. For example, Miller (1984, cited in Deterding, 1994, p. 316) described languages as being more or less stress-timed or syllable-timed, rather than falling into one of the categories. So English comes between German (more stress-timed) and French (more syllable-

timed). (Dauer, 1983, cited in Deterding, 1994, p. 316) failed to find any difference between Spanish, a syllable-timed language, and English. He suggested that the difference lies in the syllabic structure of the two languages rather than in their timing. He pointed out that the structure of the Spanish language is more syllabic than the structure of the English language, as it consists of a single consonant (C) followed by a single vowel (V) $\longrightarrow$ (CV).

In conclusion, since this study is based on the English language, a stress-timed language, the syllable-timed languages will not be dealt with.

2.3 The foot

As a metre is used as the measurement unit of distance, and a kilogram for weight, the foot is used as the unit of rhythm. Marotta (2003) considered the foot as the core unit of the stress-timed language. The term foot has also been used by Abercrombie (1967), Halliday (1985) and Roach (2000). According to Roach (2000), the foot starts with the stressed syllable and includes everything after the stressed syllable (stressless syllables) but not including the following stressed syllable.

Halliday (1985) holds that the foot consists of one or more syllables and the first syllable is always stressed. He also compares the foot to the bar in music (Halliday, 1970, cited in Tuan and An, 2010). He concludes that the time required for each section of rhythmic unit (foot) or in the musical bar is almost the same.

Marotta (2003, p. 334) states that the foot in phonology has two basic sources; poetry and phonetics. In poetry, the term foot goes back to the classical poetry in Ancient Greek and Latin where there is contrast between the long (heavy) and short (light) syllables. The foot in verse is formed by an ordered alternation of one more salient syllable with one or more less salient syllables. It is called the metrical foot. In phonetics, the foot is the core of the stress-timed languages. Marotta also referred to the foot in phonetics as the rhythmical structure which is a stressed syllable followed by unstressed ones. It is known as the rhythmical foot. The metrical foot is narrow, i.e. only one weak syllable can follow the strong one. The rhythmical foot, however, is wide, i.e. there is no limit to the number of unstressed syllables that can follow the strong one. The regular occurrence of stressed syllables in language is called isochrony.

The following example is taken from Durand (1992, p. 220).

Example (1)

| ' This is the | 'house that | 'Jack | 'built |

The vertical lines indicate the foot borders, and the diacritic (') indicates the location of the stress. The above sentence contains 4 feet. As we can see, the number of syllables differs from one foot to another. Two of the feet in example (1) have one syllable each “*jack*” and “*built*”, another foot has two “*house that*”, and another has three syllables “*this is the*”. According to this model, all the four feet would have to be spoken with equal duration.

2.4 Components of rhythm

Rhythm operates not only at the segmental level, but also at the suprasegmental level.

Many linguists agree that the rhythm of the English language has many components. They put these components into the following categories:

According to Lado (1964, cited in Tuan and An 2010) rhythm includes stress, time and juncture. Wong (1987, pp. 29-30) suggests that the rhythm of the English language depends on the syllable length at the utterance level which is the key to the rhythmic system of the English language. She also adds that the rhythm of the English language is affected by five factors: stress, accent*, vowel type, structure and pauses. Avery and Enrich (1992, cited in Tuan and An, 2010) note that the difference between the stressed and unstressed syllables, reduction of function words and linking of words and pauses, all combine to make the characteristic rhythm of English. Dauer (1987) points out “the particular rhythm of a language is the result of the interaction of a number of components including phonetic components such as relative length, pitch and segmental quality of accented and unaccented syllables, and the phonological components such as; syllable structure and the function of accent.

In the following sections, the components of rhythm will be discussed in some detail:

-
- *Stress: The relative force of sound or emphasis given a syllable or word in accordance with a metrical pattern.
 - *Accent: relative prominence of a particular syllable of a word by greater intensity or by variation or modulation of pitch or tone (Mariam Webster dictionary and The Free Dictionary).

2.4.1 Stress

According to Katamba (1989), stress is “a relational concept; one syllable is more prominent than the others” (p. 222). English stress is crucial to the meaning of the word. If we change the position of stress in some words, the meaning will change as a consequence. Katamba (1989, p. 224) points out that in many two-syllable words, “stress falls on the first syllable when the word is used as a noun and on the second syllable when it is used as a verb”. For example, if we put stress on the first syllable of the word “*export*” (‘export), it will be a noun, but if we put it on the second syllable (ex ‘port), the word will be a verb.

2.4.1.1 The relationship between stress and rhythm

No one can deny the close relationship between stress and rhythm. No one can produce an utterance without stress, which is present at the word level and at the sentence level. Every word has a stress if it is said in isolation. It has been mentioned earlier that English is a stress-timed language, that is, the stressed syllables tend to occur at regular intervals. Some linguists argue that the stressed words are the content words (lexical words) which are; adjectives, main verbs, nouns and adverbs. On the other hand, the function words are the unstressed words (although all function words have a citation in which they have a strong form. This will be explained in detail below). These function words are articles, prepositions, pronouns, auxiliary verbs and conjunctions.

Roach (2000, pp. 94-5) states that all the stressed syllables have one common characteristic, which is prominence. Stressed syllables are recognized as stressed because they are more

prominent than unstressed syllables. What makes a syllable prominent are loudness, length, pitch and quality (Gimson, 1976; Katamba, 1989; Roach, 2000):

1. Length: the prominent syllable has to be longer than the other syllables.
2. Loudness: it has to be louder than the unstressed syllables.
3. Pitch: it has a relatively high pitch.
4. Quality: it contains a vowel that is different in quality from the neighbouring vowels.

There are some general rules that we can apply to word stress; (englishclub, n. d.)

- One word can only carry one primary (main) stress. However, it may have a secondary or even a tertiary stress. Katamba (1989) states that “In longer words, there is often not just one stressed syllable and a host of unstressed ones. Besides the syllable that receives the *main* or *primary* stress, there are other syllables which receive *secondary* stress”. (p. 222)
- Vowels only can carry the stress in the words not consonants.

Roach (2000, p. 98) adds another point

- Weak syllables are always unstressed, only strong syllables are stressed. The vowels in the strong forms, as defined by Roach (2000), are louder, have higher intensity and different in quality.

It is not easy for foreign learners to pronounce the words with their correct pronunciation and which syllable to stress in multisyllabic words. Roach (2000, p. 97) mentions that “Many writers have said that English word stress is so difficult to predict that it is best to treat stress placement as a property of individual words, to be learned when the word itself is learned”. The same idea

is expressed by O'Connor (1980, p. 91) "there is no simple way of knowing which syllable or syllables in an English word must be stressed, but every time you learn another word you must be sure to learn how it is stressed". Sabater (1991, p. 151) adds that as the learners advance in learning English, they will be able to abstract the general rules and place the stress correctly in new words.

Despite all the difficulties to locate which syllable in multisyllabic words is stressed and the complexity of setting the rules of word stress Roach (2000, p. 97) attempts to put some rules in the simplest form. He also mentions that there are exceptions to these rules:

1. The morphological nature of the words (simple or complex).
2. The grammatical category of the word (nouns, verbs, adjectives or adverbs).
3. The number of the syllables in the word.
4. The phonological structure of the word (strong and weak syllables).

2.4.1.2 Stress placement

Stress location varies among English words at the levels of words and sentences. Roca & Johnson (2008, p. 302) maintain that "in words with more than one syllable one of the syllables has more stress than the others, and that in phrases or compounds one of the words exhibits more prominence. ... the location of prominence is not dependent on meaning, but, rather, on the category of the word (noun vs. verb) or the word collocation (phrase vs. compound)." In the following sections, stress will be discussed in some detail:

2.4.1.2.1 Stress in simple words.

Simple words are divided into one-syllable, two-syllable and three-syllable words. In the one syllable words, there are no problems of stress placements as they have one syllable and the stress falls on that syllable. The following sections discuss stress location in two and three-syllable words:

The following categories with the phonetic transcription are based on Roach (2000, pp. 98-100):

2.4.1.2.1.1 Stress in two- syllable words

In verbs, usually the stress falls on the second syllable unless it is a weak syllable.

Example (2)

- a) attract / ə 'trækt / the stress is on the second syllable
- b) open / 'əʊpən / the stress is on the first syllable

In nouns and adjectives, the stress usually falls on the first syllable unless it is a weak one.

Example (3)

- a) money / 'mʌni /
- b) Balloon / bə 'lu:n /
- c) lovely / 'lʌvli /
- d) alive / ə 'laɪv /

Adverbs and prepositions usually behave like verbs.

- a) However / haʊ 'evə /
- b) Between / bi 'twi:n /

2.4.1.2.1.2 Stress in three-syllable words

In verbs, if there is only one strong syllable, the stress falls on this syllable.

Example (4)

- a) entertain / entə'teɪn / on the final syllable
- b) determine / de'tɜ:mɪn / on the penultimate syllable
- c) parody / 'pærədi / on the first syllable

In nouns, if the final syllable is weak or ends with /əʊ /, it is unstressed.

Example (5)

- a) potato / pə'tetəʊ /
- b) disaster / dɪ'zɑ:stə /

As an exception to the rules, Roach (2000, p. 99) asserts that in some three –syllable nouns, the stress falls on the first syllable even though the last syllable is strong. In example (6) the last syllables of the words carry the secondary stress.

Example (6)

- a) intellect / 'ɪntələkt /
- b) alkali / 'ælkəlaɪ /

2.4.1.2.2 Stress in complex words

According to Roach (2000) complex words are the words composed of more than one grammatical unit (p. 104). For example, the word “*nerve*” is a simple word. But the words “*nervous*” and “*nervously*” are considered complex words because they are composed of two and

three grammatical units respectively. Roach (2000, pp. 104-110) divides the complex words into two major types:

1) A basic word + an affix

2) Compound words which are made of two independent words 'blackboard'

Basic words + affixes

Suffixes

Suffixes have one of three possible effects on word stress.

i. The suffix receives the word stress

Suffixes that carry the primary stress

Example (7)

a)	-ee	Absent	/ 'æbsənt /	absentee	/ æbsən 'ti: /
b)	-eer	Profit	/ 'prɒfɪt /	profiteer	/ prɒfɪ 'tiə /
c)	-ese	China	/ 'ʃaɪnə /	Chinese	/ ʃaɪ 'ni:z /
d)	-ette	Novel	/ 'nɒvəl /	novelette	/ nɒvəl 'et /
e)	-esque	Statue	/ 'stæʃu /	statuesque	/ stæʃu 'esk /

ii. The suffix does not affect the position of the stress

Example (8)

a.	-able	return	/ rɪ 'tɜ:n /	returnable	/ rɪ 'tɜ:nəbl /
b.	-age	shrink	/ 'frɪŋk /	shrinkage	/ 'frɪŋkɪdʒ /

Do Bahraini EFL Learners Adhere to the Rhythmic Structure of English when Speaking?

c.	-al	remove	/rɪ'mu:v/	removal	/rɪ'mu:vəl/
d.	-ful	forget	/fə'get/	forgetful	/fə'getfəl/
e.	-ing	charm	/'ʃɑ:m/	charming	/'ʃɑ:mɪŋ/
f.	-like	cat	/'kæt/	catlike	/'kætlaɪk/
g.	-less	hope	/'həʊp/	hopeless	/'həʊpləs/
h.	-ly	slow	/'sləʊ/	slowly	/'sləʊli/
i.	-ous	danger	/'deɪndʒə/	dangerous	/'deɪndʒərəs/
j.	-ment	enjoy	/ɪn'dʒɔɪ/	enjoyment	/ɪn'dʒɔɪmənt/
k.	-ness	quiet	/'kwaɪət/	quietness	/'kwaɪətnəs/
l.	-fy	intense	/ɪn'tens/	intensify	/ɪn'tensfaɪ/
m.	-wise	weather	/'weðə/	weather-wise	/'weðəwaɪz/
n.	-y	flower	/'flaʊə/	flowery	/'flaʊəri/
o.	-ish	amateur	/'æməʃə/	amateurish	/'æməʃəriʃ/

iii. The position of the stress shifts to another syllable of the stem.

Example (9)

a. -eous	monotone	/'mɒnətəʊn /	monotonous	/mə'nɒtənəs /
b. -graph	photo	/'fəʊtəʊ /	photography	/fə'tɒgrəfi/
c. -ial	adverb	/'ædvɜ:b /	adverbial	/əd'vɜ:biəl /
d. -ic	syllable	/'sɪləbəl /	syllabic	/sɪ'læbɪk /
e. -ion	confirm	/kən'fɜ:m /	confirmation	/'kɒnfər'meɪʃən /
f. -ious	injure	/'ɪndʒə /	injurious	/ɪn'dʒʊəriəs /
g. -ty	tranquil	/'træŋkwɪl /	tranquility	/træŋ'kwɪləti/
h. -ive	reflex	/'rɪfleks /	reflexive	/rɪ'fleksɪv /

Prefixes

Prefixes usually do not carry the primary stress, so stress in words with prefixes is governed by the same rules of words without prefixes. It does not affect the position of stress in the words,

2.4.1.2.3 Stress in compound words

As has been mentioned above, compound words consist of two independent words which can exist independently as English words.

Example (10)

- a. blackbird
- b. green-house

If both of the words are nouns, the stress falls on the first one.

- a) 'Sunrise

For compound adjectives and verbs, the stress usually falls on the second word.

a) old 'fashioned

b) unders'tand

2.4.1.3 How to present stress?

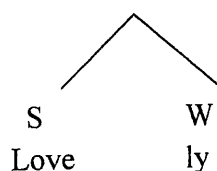
Stress can be presented by

2.4.1.3.1 Metrical Phonology (metrical tree)

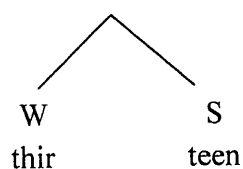
Metrical phonology (metrical tree) is an approach to handle the stress phenomenon. The stressed syllable has to be more prominent than the others. This prominence is expressed by using binary branching trees; strong (S) and weak (W). This binary relation was advocated by (Lieberman and Prince, 1977, cited in Durand, 1992, p. 225). The strong syllable is called the head. It might be right or left. "Strong and weak syllables are paired together by a procedure called foot formation" (Katamba, 1989, p. 225). The most prominent element is dominated by an "S" label.

Example (11)

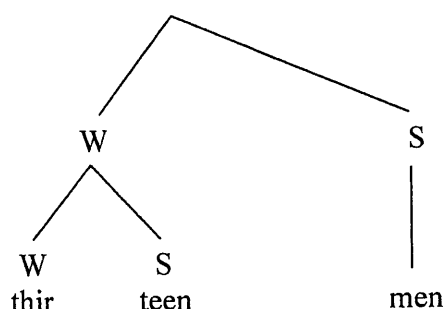
a)



b)



Example (12)



In the phrase “thirteen men”, the word “men” is the most prominent element so it is dominated by the “S” label.

2.4.1.3.2 The metrical grid

The metrical grid was first introduced by Liberman (1975, cited in Durand, 1992, p. 231). It is an alternative to the use of metrical trees. “A metrical grid consists of rows and columns of marks represented by asterisks or (x’s) which indicate the relative strength of successive stressable units”. (Durand, 1992, p. 231)

For example, the phrase thirteen men can be represented as follows;

Example (13)

		*	L2 (level 2)
	*	*	L1 (level 1)
*	*	*	L0 (base level)
thir	teen	Men	

The first line is called L0 or the base level. The line above the base level is called level 1 or L1, and so on. As the word “*men*” is stronger than “*thirteen*” in the previous example, it receives another asterisk which is placed on L2. “The number of lines in the grids of word collocation is

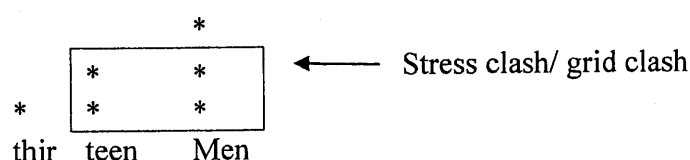
in principle open-ended- it is simply a function of the number of words in the construction: the more the words, the more the lines". Roca & Johnson (2008, p. 303)

2.4.1.4 Stress clash (grid clash)

If two grid elements are adjacent on two levels on the grid, it is known as "stress clash" by Roca & Johnson (2008, p. 304) or "grid clash" by Durand (1992, p. 232). Roca & Johnson (2008) added that there should not be any asterisks in the line immediately below (p. 304). This can be seen in example (14).

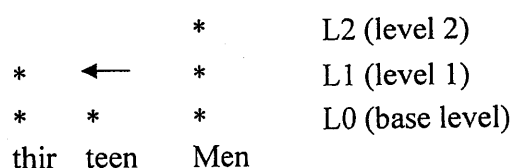
Example (14)

a)



One element should be moved to avoid this clash. The asterisk should be always moved leftwards not rightwards. As shown in example (14b)

b)

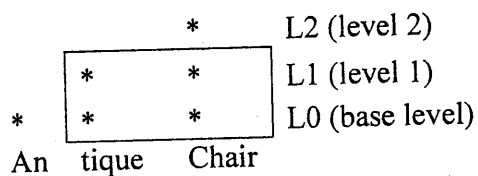


This movement, which is called Iambic Reversal by Durand (1992), is done to avoid such a clash and to ensure the isochrony of the language. According to Roca & Johnson (2008) this stress movement is very frequent in English and it is due to the rhythm rule.

Stress retraction can happen within the same word as in example (15) below which is taken from Roca & Johnson (2008). The phrase "*antique chair*" can be represented as follows

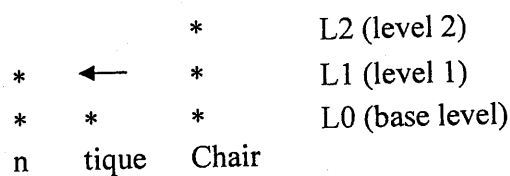
Example (15)

a)



The stress clash in the box can be avoided by moving the stress leftward, here within the same word “*antique*”.

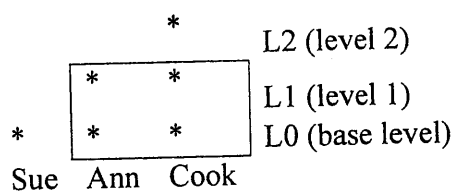
b)



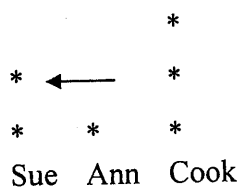
Or it might happen in different words. The following example is taken from Roca & Johnson (2008, pp. 304-5)

Example (16)

a)



b)

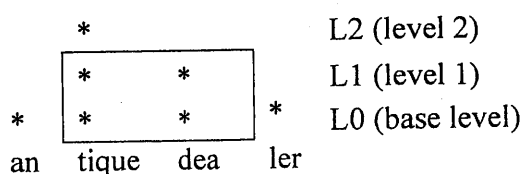


In (16a) there is stress clash between the words “*Ann*” and “*Cook*”. To avoid this clash, we move the asterisk on the word “*Ann*” leftward to the word “*Sue*” as shown in (16b).

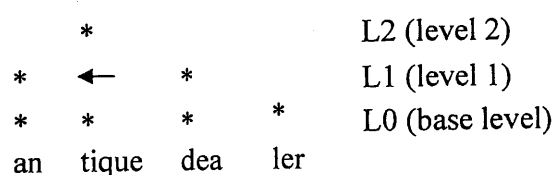
However, stress retraction may fail if the clash breaks the continuous column constraint. That is, the asterisks have to be continuous without skipping lines. So in the phrase “*antique dealer*” there is a stress clash (17a). But if we move the asterisk leftwards, we break the rule of continuous column constraint by skipping a line in the metrical grid. This is represented in Example (17b).

Example (17)

a)



b)



In example (17b), if we move the asterisk on the syllable “*tique*”, we break the rule of continuous column constraint. And it cannot be moved rightwards because the asterisk can be moved only leftwards. In this case, stress retraction fails.

On the other hand, stress clash retraction may also fail semantically. In the phrase “*antique dealer*”, if the stress is moved to the first syllable “*an*”, it would imply that the dealer is old as the condition in antique chair.

2.4.1.5 Extrametricality

Roca & Johnson (2008) define extrametricality as a process that “involve excluding the element it acts upon from the computation in the metrical grid” (p. 233). They also added that “extrametricality is only relevant to compound structures, since we know that phrases and sentences do not require it (indeed, do not allow it), at least in English” (p. 324).

In extrametricality, only one element is allowed to be extrametrical and this element has to be peripheral, “peripherality condition”, as described by Roca & Johnson (2008); that is, to make the right-most or left-most asterisk extrametrical (invisible). The following example is taken from Roca & Johnson (2008). The extrametrical element is put between a pair of angled brackets (< >).

Example (18)

*		Stress line 1
*	< * >	base line
Time-flies		

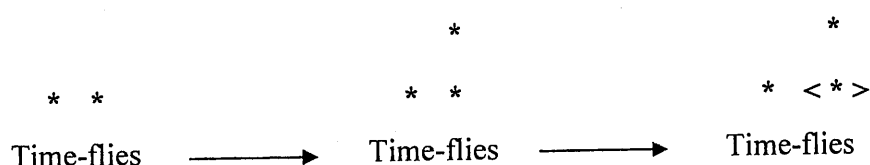
2.4.1.6 The Elsewhere Condition

The elsewhere condition is referred to by Panini* who noticed that when two rules produce incompatible results and the environment of one is included in the environment of the other, the more specific rule applies first. The more general rule with fewer qualifications can be applied in all contexts where the more restricted cannot. If we apply one rule, the other is skipped. Roca & Johnson (2008, p. 327).

* Panini: an Indian grammarian who gave a comprehensive and scientific theory of phonetics, phonology, and morphology. He was born about 520 BC in Shalatula.

In compounds, the base line asterisk is a potential target for both end stress (right) and extrametricality (right). In this case, we can not apply the end stress before extrametricality because it leads to violate the continuous column constraint. This can be clearly seen in the following example which is taken from Johnson and Roca (2008).

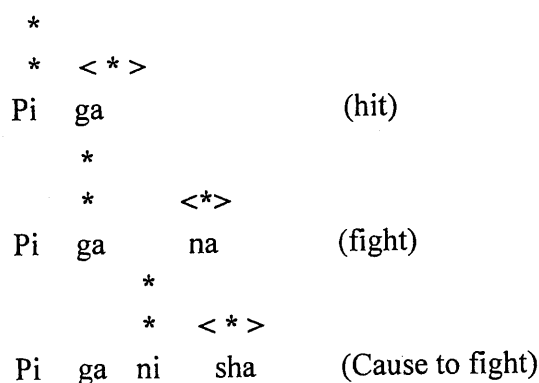
Example (19)



Extrametricality can be applied in the languages that have a fixed stress pattern. For example, Swahili language, a lingua franca which is spoken in Mozambique, Kenya and some other countries, has the main stress on the penultimate syllable. Here Extrametricality can always be applied without causing any problems. That is, the last syllable in all the words is extrametrical.

The following example is taken from Katamba (1989, p. 231).

Example (20)



What is more, Dakota and Northern Paiute languages have the main stress on the second syllable of the word, so the first syllable is said to be extrametrical.

In the English language, one needs to know the position of the stress in the word in order to decide when to use end stress rule or extrametricality whether right or left. For instance, you have to know the grammatical structure of the phrase before placing the stress. Example (21) illustrates that;

Example (21)

a) green 'house (the colour of the house is green)

b) 'green house (in which plants are grown)

The phrase and the compound above have identical phonetic representation, however, they are pronounced differently. In the noun phrase (adjective + noun), the stress falls on the second word (house), but in the compound (noun + noun), the stress falls on the first word (green). In consequence, applying extrametricality (right or left) needs a previous knowledge about the stress position in the words. So in example (21a), the right word is made extrametrical, and in (b) the left word is made extrametrical.

To make the previous assumption clearer, consider following words;

a) (an) export /'ɪkspɒt /

b) (to) export /eks'pɒt /

c) Hippopotamus /hɪpə'pɒtəməs /

d) cigarette /sɪgə'rɪt /

e) Agenda /ə'dʒendə /

In (a), the stress falls on the first syllable of the word (end stress left is applied). In (b), the second syllable carries the main stress so end stress right is applied. In both (a) and (b), Extrametricality cannot be applied. The word in (c), the antepenultimate syllable bears the main stress. In (c), the last syllable is made extrametrical, and then a left-headed foot is built at the right edge as illustrated in example (22)

Example (22)

	*				Stress line 1
	(*	*)	<*>		Base line
hi	ppo	po	ta	mus	

In (d), the last syllable attracts the main stress in the word because the affix “ette” holds the main stress. For this reason, extrametricality cannot be applied here. In (e), the stress falls on the second syllable. In this word, the last syllable is made extrametrical, and then a right-headed foot is built as shown in example (23).

Example (23)

	*				Stress line 1
<*>	(*	*)			Base line
a	gen	da			

Based on the above discussion, it is obvious that there are no specific rules we can follow in order to apply extrametricality. In fact, the rule that is used in each case was a result of a previous knowledge about the stress position in the words. In other words, we do not know when to apply the extrametricality right or left unless we know the position of the stress previously.

2.4.2 Weak forms

According to Graham-Marr (1997) pronunciation in the English language depends on whether the words uttered are carriers of information, or just they help in producing grammatical sentences. Some words, which have meaning in themselves, are stressed, and the other words, which help in producing grammatical sentences, are unstressed or pronounced in their weak forms. Leáñez and Waasaf (2008) add “Weak forms are an essential feature of English pronunciation in every day speech” (p. 169).

Words in English are divided into two types. Words that hold the meaning are called content words and include such word-classes as nouns, verbs, adjectives and adverbs. The other type of words is function words. These are included in the sentence to express grammatical relationship and do not hold meaning in their own. The content words usually have strong forms, while the majority of function words usually have weak forms.

These weak forms are;

- a. Articles (a, an, the)
- b. Determiners (some, many...)
- c. Auxiliary verbs (to do, to have and to be)
- d. Prepositions (from, to, at, for...)
- e. Conjunctions (and, but ...)
- f. Pronouns (they, us, your ...)

Using weak forms when speaking is considered as an important feature of English pronunciation, and it plays an essential role in maintaining the rhythm of the English language. According to (Underhill, 1994, p. 64 cited in Leánez and Waasaf, 2008, p. 170) the appropriate use of weak forms is essential to rhythmical speaking. It leads to distinguishing the prominent syllables from the non-prominent ones. As a result, the meaning will be clearer to the listener. However, the function words are not always pronounced in their weak forms. This statement was made clear by Roach, (2000, p. 113) who confirmed that "These function words...are in certain circumstances pronounced in their strong forms. It is important to remember that there are certain contexts where only the strong form is acceptable and others where the weak form is the normal pronunciation."

O'Connor (1980, p. 95) and Roach (2000, p. 113) identified some rules in which the strong form is used. These rules are;

1. When the function word comes at the end of the sentence:

What are you looking at?

2. When a function word is stressed, cited or quoted:

How is the word "for" spelt?

You must go to see him.

3. When the weak form is being contrasted with another one.

I bought the sandwich for him not from him

4. Graham-Marr added that in formal situation people usually use the strong form of the words and he called them “polite weak forms.”

2.4.3 Assimilation

Assimilation is defined as the influence of one sound as a result of being adjacent to another sound (Katamba, 1989; Roach, 2000; Crystal, 2003; Roca & Johnson, 2008). According to Katamba (1989), assimilation facilitates the task of speaking because people usually try to conserve energy and use the least effort while producing an utterance.

Assimilation has two directions (Ladefoged, 1975; Katamba, 1989; Roach, 2000; Crystal, 2003; Roca & Johnson, 2008):

- 1) Regressive: when the sound is affected by, or becomes as, the sound that follows it.

Example (24)

meat pie / mit paɪ / $\longrightarrow$ / mip paɪ /

- 2) Progressive: when the sound is affected by, or becomes as, the sound that precedes it.

Example (25)

cars / kɑr $\mathbf{z}$ / (the sound /s/ becomes /z/ as it is after a voiced sound /r/).

There are three types of assimilation:

Voice assimilation: In this type of assimilation, the form of a voiced sound becomes voiceless as a consequence of being adjacent to a voiceless sound; alternatively, a voiceless sound may become voiced. The most common example of voice assimilation in English is the agreement of suffixes in voicing with last segment of the word.

Example (26)

a) dogs / dɒgz /

b) cats / kæts /

c) five tons / faɪv tʌnz / → / faɪf tʌnz /

The plural suffix in (26a) becomes voiced as it is adjacent to the voiced sound /g/, whereas, it becomes voiceless when it follows the voiceless one /t/ in (26b) and (26c).

1) Place assimilation: In this type of assimilation, some sounds change to resemble the place of articulation of other specific sounds when they are followed by them. The following examples are based on the works of Katamba (1989), Roach (2000), and Gimson (1976):

i. The sound /t/ changes to /p/ before /m/, /b/ or /p/.

Example (27)

basket maker / baskɪt meɪkə / → / baskɪp meɪkə /

that boy / ðæt bɔɪ / → / ðæp bɔɪ /

that pencil / ðæt pensɪl / → / ðæp pensɪl /

ii. The sound /d/ changes to /b/ before /m/, /b/ or /p/.

Example (28)

good pen / gʊd pen / → / gʊb pen /

good boy / gʊd bɔɪ / → / gʊb bɔɪ /

good person / gʊd pɜːsən / → / gʊb pɜːsən /

iii. The sound /n/ changes to /m/ before /m/, /b/ or /p/.

Example (29)

ten men	/ten men /	→	/tem men /
ten boys	/ ten bɔɪz /	→	/ tem bɔɪz /
ten players	/ ten pleɪəz /	→	/ tem pleɪəz /

iv. The sound / t / changes to / k / before / k / or / g /.

Example (30)

that cup	/ðæt kʌp /	→	/ ðæk kʌp /
that girl	/ ðæt gɜ:l /	→	/ ðæk gɜ:l /

v. The sound / d / changes to / g / before / k / or / g /.

Example (31)

good cup	/ gʊd kʌp /	→	/ gʊg kʌp /
good girl	/ gʊd gɜ:l /	→	/ gʊg gɜ:l /

vi. The sound / n / changes to / ŋ / before / k / or / g /.

Example (32)

ten cup	/ ten kʌp /	→	/ teŋ kʌp /
ten girls	/ ten gɜ:lz /	→	/ teŋ gɜ:lz /

vii. The sound / s / changes to / ʃ / before / ʃ / or / j /.

Example (33)

this show	/ ðɪs ʃəʊ /	→	/ ðɪʃ ʃəʊ /
this year	/ ðɪs jɪə /	→	/ ðɪʃ jɪə /

viii. The sound / z / changes to / ʒ / before / ʃ / or / j /.

Example (34)

has she	/ hæz ʃi /	→	/ hæʒ ʃi /
those years	/ ðəʊz jɪəz /	→	/ ðəʊʒ jɪəz /

- 3) Manner assimilation: In this type of assimilation, a sound changes the manner of its articulation to become similar in manner to the adjacent sound.

Example (35)

good night	/ gʊd naɪt /	→	/ gʊn naɪt /
that side	/ ðæt saɪd /	→	/ ðæs saɪd /

2.4.4 Elision

According to Crystal (2003, p. 247), elision is a phenomenon when some sounds are left out or elided. Roach (2000,) maintains that “in certain circumstances a phoneme may be realized as zero or have a zero realization or be deleted” (p. 142). The following points of applying elision are based on Gimson (1976) and Roach (2000):

1. Loss of weak vowels after / p /, / t / and / k /.

Example (36)

potato / p'etɪtəʊ /
canary / kneəri /

2. Weak syllables + / n /, / l / or / r / become syllabic.

Example (37)

tonight / tʌɪt /

3. Avoidance of complex structures

Example (38)

George the sixth's throne / dʒɔdʒ ðə sɪksθs θrəʊn / → / dʒɔdʒ ðə sɪksθrəʊn /

next day /neks deɪ /

4. Loss of final /v/ in "of" before consonants

Example (39)

cup of tea /kʌp ə ti:/

2.4.5 Linking and pausing

Proper linking and pausing are very important for good rhythm. According to Chen et al (1996, p. 10) one of the common problems with sentence rhythm is that students fail to do appropriate pausing and linking. They tend to produce words separately, and they pause wherever they want especially when they read long sentences aloud.

The students need to know where to pause when they read or talk. If they did not do so, the listener would have difficulty in understanding the meaning of the sentence, even though the speaker pronounces the individual words correctly. Dauer (1993, cited in Chen et al, 1996) offers some helpful guidance to students regarding knowing where to pause:

- Before punctuation marks (, . : ; ! ?)
- Before conjunctions (and, or, but, which, that, since ...)
- Between grammatical units such as phrases, clauses, and sentences.

2.5 The importance of rhythm

Rhythm is considered as the key element to understanding or being understood by others. According to Avery and Ehrlich (1992, cited in Tuan and An, 2010, p. 18), when a speaker does not produce an utterance with the proper rhythm, the result may lead to communication breakdown and unintelligibility, or it may cause, at least, annoyance to the listener.

Teachers usually concentrate on teaching the segmental aspects, and they ignore the suprasegmentals, or they may teach isolated words without paying any attention to stress, rhythm, the weak forms and intonation. For this reason, when students hear native speakers, they might have difficulty understanding them. They say that native speakers speak too fast, or swallow some words. The students expect to hear all the words in their lexical representations in order to understand.

2.6 The rhythm of the Arabic language

As our subjects are Arabic-speaking EFL students, it is very important to know the rhythm of the Arabic language. Standard Arabic is the formal language of the Arabs. It is the language taught at schools and is used in official contexts in the Arabic countries. However, Standard Arabic is not the language that is normally used as a medium of communication between Arabic people. Each region of the Arabic countries has its own dialect, the colloquial language. For example, the Eastern Dialects are spoken in the Middle East, and the Western Dialects are used in North Africa. Still within the Eastern and Western Dialects there are different Arabian dialects; the Gulf dialect, the Levantine dialect, the Egyptian dialect are examples of the Eastern Dialects. On the other hand, the Moroccan, Algerian and Tunisian dialects represent the Western Dialects.

As has been mentioned earlier, the Arabic language is classified as a stress-timed language. “Miller had English and French phoneticians and non phoneticians listen to selections of seven different languages and evaluate them as stress-timed or syllable-timed. Only Arabic was unequivocally categorized as stress-timed by all groups” Dauer (1987, p. 447). This view has been verified by many linguists (Jong and Zawaydeh, 1999; Gazaliet al, 2002; Biadsy and Hirschberg, 2009). In their work, Biadsy and Hirschberg point out that there are rhythmic differences between Western and Eastern Arabic dialects. They compare the prosodic features of the Arabic dialects by using rhythmic features, and they conclude that some dialects such as Gulf and Iraqi have more complex syllabic structure. Egyptian and Levantine dialects have more variation in their vocalic intervals due to the existence of vowel reduction. So the dialects can be classified as less or more stress- timed.

Arabic is like English, in that both are considered as stress-timed languages. But still they differ in the importance of stress to these languages. Stress in English plays an important role in the language as has been mentioned earlier. For example, the word “*contest*” is a noun if the stress falls on the first syllable, and it is a verb if it falls on the second one. In Arabic, according to Chentir et al, (2008), Arabic grammarians have not paid attention to the study of stress for several reasons;

1. There are many different Arabic dialects. There is no standard dialect, so which one of these should be considered the standard?
2. Stress in Arabic is not as important as it is in the English language. It does not change the meaning of the word. “Stress in Arabic exists but has no linguistic function and its

importance is much less, as compared with English or German.... In Arabic, a shift of stress from one syllable to another changes neither the meaning of the word nor its grammatical function, even if such a movement can deform its correct pronunciation.” (Ghalib, 1984, cited in Chentir et al, (2008).

2.7 Previous studies

There are many studies that have been done in the field of pronunciation, but most of them concern teaching segmental aspects that involve phonemes (vowels and consonants) as well as the syllables of the English language. At the suprasegmental level, teaching them is often neglected (Gong, 2002, p. 26). Suprasegmental features have figured in much fewer studies, mostly contrastive studies between two languages. In the field of rhythm, a few studies have been made. Some of these studies concentrate on comparing the rhythm of two languages, other studies investigate the production of rhythm, and yet others investigate the influence of rhythm of the mother tongue language (L1) on the acquisition of English language (L2) rhythm.

Bunta and Ingram (2007) conducted a study to investigate the acquisition of speech rhythm by bilingual Spanish and English speaking 4- and 5-year -old children. They included 30 children (10 monolingual English speakers, 10 monolingual Spanish speakers and 10 bilingual speakers), and 18 adults (6 monolingual English speakers, 6 monolingual Spanish speakers and 6 bilingual speakers) in their study. 26 declarative simple English and Spanish sentences were given to the subjects to utter (pictures were presented for 4-years-old children). They found that bilingual children displayed a distinct speech rhythm that deviated from their monolingual English-speaking peers. The bilingual adults show separation of their languages and performed similarly to their monolingual peers.

Bull (1994) conducted a study in which he investigated the production and perceptual aspects of isochrony among native English speakers. In the first experiment, he investigated the production of rhythm. In the second, he investigated the perceptual aspects. For the production, three native speakers were asked to read aloud a series of limericks into a microphone. There were five groups of limericks. Each group consisted of a limerick and variations of it. Each subject was told to read each limerick three times to induce certain monotony into the reading process and to allow for any disfluencies or speech errors. Each limerick was altered by changing one word in the second line of the limerick. For example,

A fisher man`s wife from Penarth

Invented a X way to laugh

The X in the limerick represents the variable word which might be “*great*”, “*new*”, “*strange*” or “*good*”. Bull investigated the speakers’ behavior when asked to produce highly rhythmic speech; would they adhere to the regularity if the utterances were varied slightly in their temporal structure? He found that small temporal changes are not sufficient to cause any consistent compensation effect in the production of rhythm.

In his second experiment, Bull investigated the perception of isochrony. Ten subjects were presented with five exchanges. The original versions of the exchanges were retained. Then three other versions of each exchange were made of different durations; one of half the duration of the original, another with one and a half times the length of the original, and another with double the duration of the original exchange. Then he randomly arranged the exchange with a five second

pause. The subjects were instructed to listen to each exchange and decide whether the exchange sounded to them to be of natural length, too long or too short. They were told that the exchanges had been altered. The results suggested that the subjects were able to distinguish between long exchanges and short exchanges. But there was a tendency to choose "normal" for many exchanges even when it was not accurate. In other words, the subjects were able to differentiate between short, long and normal exchanges in most cases.

Chen et al (1996) studied the effect of the mother tongue on the acquisition of the second language. They explored the features of English rhythm that make it difficult for Chinese speakers to produce. They suggested some techniques to help Chinese speakers to speak with proper English rhythm. They stated that many Chinese students ignore stress patterns of English words and often give each syllable the same strength, length and pitch which leads to poor pronunciation. The information they used was obtained during a workshop. The Chinese speakers tend to apply the rhythm of the Chinese language, which is syllable-timed, when speaking English. They also tend to ignore stress patterns of English words because they do not know the importance of stress in English. The students put the stress on any syllable in the word randomly which may lead to change in meaning.

Gong (2002) investigated teaching English rhythm to Chinese students by a Chinese teacher. The study also explored the effective techniques for teaching English rhythm in China. She investigated the students' reactions to changes in teaching method, and she clarified some points of the students' resistance and difficulties. The study contributes to the professional understanding of teaching rhythm. She found that it is necessary to teach rhythm in the

classrooms to help students to become more competent speakers of English. She also focused on the difficulties and challenges that teachers and students face in teaching and learning rhythm. She concluded that although some techniques have been adopted to help learners improve their rhythm, the practice in teaching rhythm is still far from enough.

In the Arabic language, there are a few studies conducted to investigate the rhythm of the Arabic dialects, and how each differs from the others.

Ghazali et al, (2002) investigated the variation of speech rhythm in six Arabic dialects; (Moroccan, Algerian, Tunisian, Egyptian, Syrian and Jordanian). The subjects were 4 Moroccans, 2 Algerians and 2 Tunisians speakers, representing the Western Arabic dialects, and 2 Jordanians, 3 Syrians and 1 Egyptian, representing the Middle East Arabic dialects (Eastern dialects). All the subjects were native speakers of their dialects. The subjects listened to the story "The North Wind and the Sun" in French. Then they translated it into their dialects. 140 sentences were recorded. Having analysed the sentences, the researchers showed that the main factors responsible for the differences between the Western and Middle East (Eastern) dialects were the complex syllable and the reduced vowels in Western dialects, and longer vowels in the Eastern dialects.

Another study was carried out by Biadisy and Hirschberg (2009) in which they used prosody and phonotactics to identify Arabic dialects. They used telephone conversations from four different Arab countries. Out of 965 speakers from the Gulf area they took 150 speakers for testing. From Iraq they chose 150 speakers out of 475. From Levantine they took 150 out of 1258, and from Egypt they singled out 150 speakers from 398. They used the first two minutes of speech from

each speaker. They found that the prosodic features such as pitch and duration differ significantly across the four Arabic dialects. The Gulf and Iraqi dialects tend to have more complex syllabic structure. Egyptian and Levantine dialects tend to have more variation in their vocalic intervals which correlates with the existence of vowel reduction. They also noted that the Egyptian speakers are the fastest followed by the Gulf speakers, the Iraqi and Levantine being the slowest.

Jong and Zawaydeh (1999) investigated the expression of word level prosody in Jordanian Arabic. The study focused on the durational, spectral and fundamental frequency correlates of stress and word final juncture. Four female native Ammani-Jordanian speakers were asked to speak a corpus consisting of 10 types of words spoken in different prosodic conditions; (isolation, statement/ the target is phrase final, question/ the target is phrase final, statement/ the target is not phrase final and question/ the target phrase is not final). Each word was spoken in a block consisting of five repetitions. The results show that the speakers exhibit extensive final lengthening effects and a smaller effect of stress and penultimate lengthening.

In conclusion, it is obvious from the previous studies that the rhythm of the English language causes some difficulties for EFL learners. However, by excessive practise of the English language, EFL learners tend to approximate or master the English rhythm. It has also been noticed that the production of English rhythm has not been investigated by researchers in the Arab World. Therefore, this study will investigate the use of English rhythm among UOB English major students, and what are the possible causes behind not using it when they speak English.

CHAPTER 3: RESEARCH METHODOLOGY

The main objectives of this study are to investigate to what extent Bahraini EFL students adhere to the rhythm of English while using the language or not, and if not, the researcher tries to find out the causes behind that. To achieve these main objectives, the researcher uses three different sources of data collection methods; read aloud, free speech and a questionnaire.

In this chapter, the research design is presented in detail. First, a description of the subjects who participated in the study is presented. Second, the nature of the data used to answer the research questions, followed by the procedure that has been used in collecting the data and the analysis are discussed. Finally, the instruments of data collection are described.

3.1 The subjects

Ten undergraduate English majors from the University of Bahrain (UoB) were randomly selected from both sexes (see Appendix 3). All the subjects were native speakers of the Arabic language. Their ages range between 20 to 25 years old. Nine of them were female and one was a male student as the majority of the students majoring in English were female students. All the subjects studied in Bahrain's government schools. The participants had started learning English in the 4th primary grade because the government used to teach English from the 4th grade. The university accepts the students who got an average of 70% and above in their secondary school certificate. The subjects were chosen from different levels at the university; one student was in his second year of studying, two were from the third year, five students were from the fourth year and one was from the fifth year. The numbers of the speakers from each academic year were not equal

because the recordings were made during the final exams at UOB, and as a result, many students were reluctant to participate in this study.

Usually, the students spend four years to finish their study. Seven students completed the phonetics and phonology course (ENGL 345) offered by the university, while the other three did not. It is worth mentioning that the total number of students that attended the recording was twelve. But two of the subjects were excluded from the study for the following reasons; the study was conducted to investigate the use of English rhythm among Bahraini EFL students. One of the subjects completed the first seven years of her study outside Bahrain (speaker 6), and the other student was excluded from the study because her mother tongue was English (speaker 2).

The subjects were selected by using probability sampling, the stratified sample. This process was described as “a mixture of random selection and selecting on the basis of specific identity or purpose” Denscombe (2003, p. 13). The researcher has chosen the sample randomly, but two important points were taken into consideration: 1) the level of the students, they have to be from different levels; and 2) some of them must have taken the phonology course (ENGL 345) offered by the UOB English department.

3.2 Data collection methods

As the research is concerned with the production of rhythm among Bahraini EFL students, the data under analysis were taken from three different tasks:

The first task was a text (birdsong) taken from the following site (http://science-education.nih.gov/supplements/nih3/hearing/guide/nih_hear_masters.pdf) (see appendix 1) to be read aloud by using a microphone. It was used as an example of stories of language development. The text was chosen on the basis of its suitability for the intermediate EFL learners. Its level according to the Common European Framework is (B1), which is equivalent to the intermediate level at UOB. The text contains both simple words that consist of up to five syllables and compound words. The text is intended to be used to check if the subjects know where to place stress on these words, and to see if they are able to produce English rhythm. According to Celce-Murcia et al, (1996, cited in Leánez and Waasaf, 2008) reading aloud alone does not provide the most natural evidence of the speaker's pronunciation, so it is important to obtain a more spontaneous sample of spoken language. Therefore, the second task was a free speech. The subjects were asked to deliver a free speech about a general topic related to their study at UOB with four points to ensure that they speak for a quite enough time (See Appendix 2).

The third task was a questionnaire (See Appendix 3). It consists seven questions or variables; age, sex, year of study, educational sector (government or private school), phonology course, place of study (Bahrain or other countries), and mother tongue language. The aim of this task was to know what other factors could affect the production of the English rhythm.

3.3 Procedure

The subjects were given the text to be read aloud. Their readings were at Zain e-Learning Centre at UOB. In the centre, there is an advanced recording system that ensures the high quality of the

recording material and eliminates any external effects on the speakers that could distract them. The text was distributed to the students a few days before the recording so that they were familiar with it, and they could practise reading it. Each student did his/her reading alone without any interruption. In fact, only the technician could communicate with them, if needed, through a microphone. In the second task, the subjects were given a topic about their study at UoB, and that was half an hour before the recording to prepare what they wanted to say. This was done so that the subjects would not be surprised by the topic. At the same time, it was given early to reduce the hesitation and the silent periods.

The subjects were instructed to do the read aloud text first, and then to have a short time to prepare themselves for the free speech delivery task. All the subjects were allowed to have some time to adjust their readings and speaking while they were in the recording room in order to get familiar with the environment around them and in order to reduce the anxiety level that might affect their recordings. After delivering the speech, the subjects were given a questionnaire to fill in. It was distributed to the subjects after they finished the first two tasks.

Each student made two recordings (a) for the reading aloud, and (b) for the free speech. Thus, the recordings of speaker 1 were entered as 1a and 1b. The same procedure was followed with all the rest of the subjects. The samples were collected and analysed by using a recording programme called "Virtual DJ". This programme allowed the researcher to slow the voice without affecting its clarity.

3.4 Data analysis

As the researcher is not an English language native speaker, the recordings were judged to be rhythmic or not by a native language speaker, who holds a PhD degree, and his field of specialisation is in phonology. He has been teaching different English courses, among which are phonetics and phonology, at UOB for 12 years. He divided the read aloud text into rhythmic units so that the researcher could judge whether the pauses of the subjects were suitable or not (See Appendix 4).

The read aloud recordings were analysed for the main components of rhythm that have been mentioned earlier; weak forms, intrusive and linking sounds, assimilation and elision. There are 14 places in which weak forms can be applied, 5 places for assimilation, 10 for elision, and 6 for intrusive or linking sounds. Each student was put in a chart in which the researcher mentioned the frequency of times and the percentage of each time the students applied weak forms, linking and intrusive sounds, elision, and assimilation. Next, the researcher used the judgments that he had obtained from the native speaker to analyse the results. After that, the percentages and the number of times all the speakers used the components of English rhythm were put in one table to investigate the number of times the speakers used the rhythm components.

The researcher used the rhythm units, which were divided according to the English native speaker's analysis (Appendix 4 as mentioned earlier), and investigated in which places the students paused. Then, the pauses were classified as suitable (proper) or unsuitable (improper). However, according to Chen et al, (1996, p: 12)), the pauses within the text may differ from one person to another as it is a personal choice. They added that "the most important thing is that the

speaker's pausing must be able to guide the listener to follow his meaning or thought" (p: 12). If two native speakers read the same text, they may pause in different places yet their speech would be rhythmic. For this reason, the pausings were investigated another time to check whether they are suitable or not.

The last component of the English rhythm analysed was stress. As the reading aloud text has a few multisyllabic words, both the reading aloud text and the free speech were used to investigate the stress placement in the student's speech. The researcher then used the judgments about the free speech delivery to make sure whether the results were compatible to the read aloud task or not. Then, the mispronounced words were listed under the proper and improper pronunciation.

Furthermore, the questionnaire was included to find out whether adhering to English rhythm might be affected by the variables mentioned in the questionnaire.

CHAPTER 4: DATA ANALYSIS AND DISCUSSION

In this chapter, the researcher seeks the answer to the main research questions, namely, do the Bahraini EFL students adhere to the rhythm of the English language when speaking? If not, what are the factors that could cause such problems? Firstly, the speakers' level of performance in using the English rhythm is measured on a scale from 1 to 10. Secondly, the data were analysed on the basis of each single student through using the frequencies and percentages in which the student applied the components of the English rhythm. Next, the pausings of the students were investigated for proper and improper pauses. Finally, both the recordings of the read aloud text and the free speech were used to investigate the placement of stress among the students' speech.

4.1 Analysis of the speakers' performance in the English rhythm

According to this analysis, when the grade gets closer to number 1, the speaker immensely departs from the level of a native speaker's use of the English rhythm, and when the grade gets closer to 10, the speaker tends to approximate the level of a native speaker's production of the English rhythm.

Table2. Speakers' grades in English rhythm

Speakers	Grades out of 10
Speaker 1	4
Speaker 2	4
Speaker 3	4
Speaker 4	8
Speaker 5	7
Speaker 6	2
Speaker 7	1
Speaker 8	1
Speaker 9	2
Speaker 10	1

It is evident from Table2 that 8 (80 %) out of the total number of the speakers in this study failed in using the English rhythm, while only 2 speakers (20 %) were found to approximate the level of English native speakers.

4.2 Analysis of the read aloud and the free speech tasks

Table3. The frequencies and percentages of the rhythmic components applied by speaker 1

Speaker 1	Number of times used	Total number	Percentage (%)
Reduced forms	4	14	28.6%
Linking and intrusive sounds	6	6	100%
Assimilation	0	5	0%
Elision	2	10	20%

Table 3 shows the frequencies and percentages of applying the English rhythmic components by speaker 1. It is noticed that speaker 1 used the reduced form in 4 places out of the 14 possible ones which represents (28.6%). The speaker applied the linking and intrusive sounds in all the six places which represent (100%). Out of the 10 places in which elision can be applied, the speaker adhered to only 2 places (20%). The speaker did not apply assimilation in the 5 places (0%).

The first speaker had the following improper pausings; *after “is necessary”, the young bird”, and “one week”*.

While reading aloud and the free speech delivery, the speaker displayed some words' stress mistakes especially in multisyllabic words. In the reading aloud speech, the speaker had too

much hesitation and stumbling which affect the rhythm of the language. The mistakes that are made in both the reading aloud and the free speech tasks are;

Proper stress	Improper stress
con'sistently	'consistently
characte'ristics	'characteristics
to'wards	'towards
fa'cilities	'facilities
transpor'tation	'transportation

Table4. The frequencies and percentages of the rhythmic components applied by speaker 2

Speaker 2	Number of times used	Total number	Percentage (%)
Reduced forms	8	14	57%
Linking and intrusive sounds	3	6	50%
Assimilation	0	5	0%
Elision	1	10	10%

Similarly, table 4 demonstrates the frequencies and percentages of the rhythmic components applied by speaker 2. It can be clearly noticed that the speaker applied the reduced forms in 8 places (57%). The speaker used the linking and intrusive sounds in 3 places (50%). The student did not use assimilation at all while reading, but used elision in one place (10%).

Speaker 2 paused after the following words improperly; “*and marking*”, “*one week*”, and “*that is its*”.

The speaker showed misplacements of stress in the following words in the two tasks;

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Proper stress	Improper stress
con'sistently	'consistently
su'fficient	'sufficient

Table5. The frequencies and percentages of the rhythmic components applied by speaker 3

Speaker 3	Number of times used	Total number	Percentage (%)
Reduced forms	4	14	28.6%
Linking and intrusive sounds	6	6	100%
Assimilation	0	5	0%
Elision	2	10	20%

Table 5 displays the frequencies and percentages of the use of rhythmic components by the third speaker. The speaker applied the reduced forms in 4 places (28.6%), the linking and intrusive sounds in 6 places (100%), but the speaker did not use assimilation at all (0%), whereas the speaker used elision in 2 places (20%).

Speaker 3 had the following improper pausings, after the words “*that is*”, and after “*both*”.

The speaker made the following stress mistakes in the reading aloud and the free speech tasks;

Proper stress	Improper stress
'necessary	nece'ssary
su'fficient	'sufficient

Table6. The frequencies and percentages of the rhythmic components applied by speaker 4

Speaker 4	Number of times used	Total number	Percentage (%)
Reduced forms	12	14	85.7%
Linking and intrusive sounds	4	6	75%
Assimilation	1	5	20%
Elision	5	10	50%

According to table 6, speaker 4 used the reduced forms in 12 places (85.7%). The student also used the linking and intrusive sounds 4 times (75%). The speaker applied the assimilation rules in 1 place (20%), and 5 times in elision (50%).

The fourth speaker paused improperly after the words “*both*” and “*to use*”.

The student did not make any stress mistakes during the read aloud task; however, the speaker was stumbling and hesitating while speaking. The student misstressed the following words in the tasks;

Proper stress	Improper stress
bene'ficial	'beneficial
pre'requisite	'prerequisite

Table7. The frequencies and percentages of the rhythmic components applied by speaker 5

Speaker 5	Number of times used	Total number	Percentage (%)
Reduced forms	11	14	78.6%
Linking and intrusive sounds	0	6	0%
Assimilation	1	5	20%
Elision	4	10	40%

Table 7 represents the percentages and frequencies of the fifth speaker’s usage of the components of rhythm. The speaker applied the weak forms in 11 places (78.6%). The speaker did not apply the linking and intrusive sounds (0%). The student used assimilation in one place (20%) and elision in 4 (40%).

Speaker 5 had the following improper pausings after the words “*the young bird must*”, “*an adult*”, “*consistently*”, “*two months*”, “*that is*” and “*to learn*”.

The speaker did not show any stress misplacement in both the reading aloud and the free speech delivery.

Table8. The frequencies and percentages of the rhythmic components applied by speaker 6

Speaker 6	Number of times used	Total number	Percentage (%)
Reduced forms	9	14	64.3%
Linking and intrusive sounds	6	6	100%
Assimilation	3	5	60%
Elision	9	10	90%

According to table 8, the student used the reduced forms in 9 places (64.3%). The speaker used the linking and intrusive sounds in all the places (100%). The student applied assimilation in 3 places (60%) and elision in 9 (90%).

The sixth speaker paused improperly after the word “sparrow”.

While speaking, the speaker had the following multisyllabic words misstressed in the two tasks.

Proper stress	Improper stress
'necessary	nece'ssary
'territory	terri'tory

Table9. The frequencies and percentages of the rhythmic components applied by speaker 7

Speaker 7	Number of times used	Total number	Percentage (%)
Reduced forms	13	14	92.9%
Linking and intrusive sounds	6	6	100%
Assimilation	1	5	20%
Elision	4	10	40%

Table 9 illustrates that speaker 7 used the weak forms 13 times (92.9%), and the linking and intrusive sounds in the 6 places (100%). The student used assimilation once (20%) and elision 4 times (40%).

Speaker 7 had improper pausings at the following places; after the words “ *sparrow*”, two months”, “*that is its*”, “*critical*”, “*period*”, “*both*”, “*to use*”, and “*characteristic*”.

The student had the following words misstressed in the both tasks;

Proper stress	Improper stress
'territory	terri'tory
characte'ristics	'characteristics
su'fficient	'sufficient

Table10. The frequencies and percentages of the rhythmic components applied by speaker 8

Speaker 8	Number of times used	Total number	Percentage (%)
Reduced forms	2	14	14.2%
Linking and intrusive sounds	6	6	100%
Assimilation	0	5	0%
Elision	2	10	20%

According to table 10, the speaker used the reduced forms two times (14.2%). The student also used the linking and intrusive sounds in all the places (100%). The speaker did not apply the assimilation rules (0%), and the speaker applied elision in two places (20%).

Speaker 8 paused improperly after the words “*begins*” and “*marking its*”.

The speaker had the following words misstressed in the tasks;

Proper stress	Improper stress
characte'ristics	'characteristics
de'velop	'develop
a'bilities	'abilities

Table 11. The frequencies and percentages of the rhythmic components applied by speaker 9

Speaker 9	Number of times used	Total number	Percentage (%)
Reduced forms	10	14	71.4%
Linking and intrusive sounds	6	6	100%
Assimilation	0	5	0%
Elision	1	10	10%

It is very clear from table 11 that the speaker used the reduced forms in 10 places (71.4%), and the student used the linking and intrusive sounds 6 times (100%). The speaker did not use the assimilation at all (0%), but the elision was used once (10%).

Speaker 9 improperly paused after the word “sparrow”.

The speaker had many stress mistakes in the two tasks. These mistakes are as follows:

Proper stress	Improper stress
'hundred	hun'dred
'necessary	nece'ssary
'territory	terri'tory
'critical	criti'cal
se'mester	'semester
trans'lation	'translation
lin'guistic	'linguistic
pro'fessor	'professor

Table 12. The frequencies and percentages of the rhythmic components applied by speaker 10

Speaker 10	Number of times used	Total number	Percentage (%)
Reduced forms	10	14	71.4%
Linking and intrusive sounds	6	6	100%
Assimilation	0	5	0%
Elision	2	10	20%

Table 12 demonstrates that the reduced forms were used 10 times (71.4%). The linking and intrusive sounds were used 6 times (100%). The assimilation was not applied at all (0%) and the elision was used 2 times (20%) by speaker 10.

The tenth speaker had the following improper pausings; after the words “*one hundred*”, “*one week*”, and “*that is*”.

The speaker had the following multisyllabic words’ stress misplacements in both the read aloud and the free speech delivery;

Proper stress
characte'ristics

cu'rriculum

Improper stress
'characteristics

'curriculum

Table13. The frequencies and percentages of the rhythmic components applied by all the speakers

	Reduced forms frequencies	Reduced forms (%)	Linking and intrusive sounds frequencies	Linking and intrusive sounds (%)	Assimilation frequencies	Assimilation (%)	Elision frequencies	Elision (%)
Speaker 1	4	28.6%	6	100%	0	0%	2	20%
Speaker 2	8	57%	3	50%	0	0%	1	10%
Speaker 3	4	28.7%	6	100%	0	0%	1	10%
Speaker 4	12	85.7%	4	75%	1	20%	5	50%
Speaker 5	11	78.6%	0	0%	1	20%	4	40%
Speaker 6	9	64.3%	6	100%	3	60%	9	90%
Speaker 7	13	92.9%	6	100%	1	10%	4	40%
Speaker 8	2	14.2%	6	100%	0	0%	2	20%
Speaker 9	10	71.4%	6	100%	0	0%	1	10%
Speaker 10	10	71.4%	6	100%	0	0%	2	20%
Total /Mean	83	59.2%	49	81.6%	6	12%	32	32%

Table 13 demonstrates the frequencies and percentages of using the reduced forms, linking and intrusive sounds, assimilation, and elision in all the subjects' speaking. It is clearly seen that the least rhythmic component used by the students was assimilation which represents 12% of the total places in which assimilation could have been applied. Elision was the second least used by the students, and this forms 32% of the total places. Applying the reduced forms was 59.2% among the students. The largest component that was used by the student was the linking and intrusive sounds at 81.6% of the total places.

4.3 Discussion

Having analysed the tasks that were given to the students, the researcher found that the majority of EFL students at UOB (80%) do not adhere to the rhythm of the English language due to a number of reasons. These reasons can be related to the following categories; lack or poor use of weak forms while using the English language, lack or poor application of assimilation and elision in their speech, improper pauses and inaccuracies in word stress.

To begin with, it is worth mentioning that applying one or more of the components of English rhythm does not necessarily lead to adhering to rhythmic structure of English. In fact, more than one factor was found in the students' speech while reading aloud and/or delivering the free speech. The discussion below will be based on the problems the students face. Each student who does not adhere to the rhythm of the English language will be discussed in detail, and the possible causes behind not adhering to the rhythm of English will be listed. Examples will be taken from the students' speeches.

Speaker 1

The speaker was judged by the native speaker to have a somewhat syllable-timed rhythm. He got grade 4 on the scale. The reasons behind not adhering to the rhythm of the English language were as follows;

- 1) Poor of use of the weak forms. He used the forms about (28.6%)
- 2) Not using assimilation while speaking (0%)
- 3) Lack of using elision (20%)

- 4) Improper pausings at times while reading aloud. In the free speech, there was too much hesitation and stumbling.
- 5) Stress misplacement in multisyllabic words.

Speaker 2

Speaker 2 got grade 4 on the scale and was judged to have a tendency for syllable-timed rhythm for the following reasons:

- 1) Moderate use of assimilation (50%)
- 2) Not using assimilation (0%)
- 3) Poor use of elision (10%)
- 4) Improper pausing at different places
- 5) In the free speech task, the speaker showed lack of using weak forms unlike the read aloud task in which he used (57%) of the total places
- 6) Some mistakes in word stress.

Speaker 3

Speaker 3 was judged to have stress-rhythm but it was affected by lack of using weak forms. He got grade 4 on the scale. He used the weak forms in (28.6%) of the total places. He also did not use assimilation at all (0%) while he applied elision in (20%) of the places. The speaker showed a lack of applying the weak forms in the free speech task; however, he used the weak forms in multisyllabic content words. He also displayed accurate stress in the multisyllabic words.

Speaker 4

The fourth speaker was judged to have a native like rhythmic structure in the read aloud task. However, there was too much hesitation and stumbling in the free speech task although he became more fluent in the latter stages. He got grade 8 on the scale. The speaker had the following features;

- 1) The weak forms were applied in 12 (85.7%)
- 2) Linking and intrusive sounds were used 4 times (75%)
- 3) Assimilation was applied in one place (20%)
- 4) Elision was applied in 5 places (50%)
- 5) The speaker paused improperly after the words “both” and “to use”

Speaker 5

The speaker was judged to have a tendency to syllable-timing in phrasal chunks. He got grade 7 on the scale. He had the following features that might affect the rhythm;

- 1) No use of linking and intrusive sounds (0%)
- 2) Lack of use of assimilation as it was used once (20%)
- 3) Poor use of elision. It was used 4 times (40%)
- 4) The speaker paused improperly in many places

Speaker 6

The speaker was judged to have very heavy syllable-timing, despite the fact that weak forms were used for 9 times which forms 64.3% of the total places. Linking and intrusive sounds were used 6 times (100%), assimilation 3 times (60%), and elision was used 9 times (90%) of the total times. The speaker improperly paused after the word "sparrow". The student misstressed some multisyllabic words. He got grade 2 on the scale.

Speaker 7

The speaker was judged to be arrhythmic ("rhythmically horrible"). He got grade 1 on the scale. The reasons behind this judgment are;

- 1) Inaccuracies in both word and phrasing stress
- 2) Lack of use of assimilation (10%)
- 3) Moderate use of elision (40%)
- 4) Improper pausings in many places

Speaker 8

The eighth speaker was judged to have a very heavy syllable-timed speech. He got grade 1 on the scale. The causes for not producing the English rhythm were;

- 1) Lack of use of reduced forms (20%)
- 2) No use of assimilation (0%)
- 3) Lack use of elision (20%)

4) Improper pausings

5) Improper stress placement

Speaker 9

Speaker 9 was judged to have a tendency for syllable-stressed. He got grade 2 on the scale. The following reasons were the causes;

1) Inaccuracies of stress at both the words and phrases levels

2) Lack use of elision (10%)

3) Occasional improper pausings

4) No use of assimilation (0%)

5) Lack use of elision (10%)

Speaker 10

The speaker was judged to produce syllable-timed rhythm. He got grade 1 on the scale .The reasons behind this were;

1) No use of assimilation (0%)

2) Lack use of elision (20%)

3) Inaccuracies of word stress

4.3.1 Discussion of the reasons

Having analyzed the results and stating the causes behind not adhering to the rhythm of the English language by each student, the following discussion will be about the results in general. It was found that the majority of the subjects do not adhere to the rhythm of the English language due to many factors. To start with, more than one reason was found behind each student's failure to do so. A summary of the factors that affect the students' production of English rhythm will be presented in the discussion below:

First, producing the rhythm of the English language by the students was affected by the poor use of assimilation. While speaking, assimilation was the least of the components of rhythm that were used by the students. It was used by four students only. One of them used it 3 times which represents 60% of the total times, and it was used once (20%) by Speakers 4, 5 and 7. The second factor that affected the rhythm was the poor use of elision. Elision was used once (10%) by Speakers 2, 3 and 9. It was also used twice (20%) by Speakers 1, 8 and 10. It was used 4 times (40%) by Speakers 5 and 7, five times (50%) by Speaker 4, and 9 times (90%) by Speaker 6. Generally, elision was used less than 50% by 8 Speakers. The linking and intrusive sounds were the ones most used by the Speakers. They were used 6 times (100%) by Speakers 1, 3, 6, 7, 8, 9 and 10, 4 times (75%) by Speaker 4, 3 times (50%) by Speaker 2, but it was not used at all (0%) by Speaker 5. While discussing the linking and intrusive sounds, the researcher needs to mention two points; one of them is that in the reading aloud text, there are no intrusive sounds. All the sounds are linking sounds. The other point comes from my experience as an English teacher. The students are used to pronouncing the words in their lexical representations. So they do not use the linking sounds /r/ and /g/ at the end of the words "singing", "song", "mating", "marking", "learning", and

“before”, but rather they pronounce them because they are parts of the words. This point also explains the poor use of both elision and assimilation. The Speakers do not apply them in their speaking because they read the lexical, not the phonological, representation of the words.

The use of reduced forms while speaking often plays an important role in producing the English rhythm. For example, Speaker 4, whose speech was judged to be native like, used the reduced forms in 12 places (85.7%). In addition, Speaker 3 was judged to have a stress-timed rhythm, but it was affected by lack of using weak forms. He used the weak forms in 4 places (28.7%). On the other hand, Speakers 2, 5, 6 and 7 used the weak forms in their speech 57%, 78.6%, 64.3% and 92.9% respectively, but they are all judged to have a syllable-timed rhythm. This supports the idea that applying one component or even more does not necessarily lead to producing English rhythm.

Stress is one of the most important factors that affect the rhythm of the language. Stressed syllables should be produced at regular intervals in order to maintain a stress-timed language. During the reading aloud and the free speech tasks, it was noticed that when the students make few or no mistakes in word stress placement, they tend to produce a stress-timed rhythm. For example, Speaker 3 showed very few stress misplacements and was judged to have a stress-timed rhythm but affected by another factor (the weak forms). Speaker 4, who produced a native-like rhythm, had no stress placement problems. Speaker 5 did not make any stress mistakes in the free speech delivery and was judged to have a good fluent speech.

The last factor, in our study, that had an effect on the English rhythm is pausing. Improper pausings can lead to rhythm breakdown. It will also be difficult to judge the speaker rhythmically. Speakers 1 and 4 were difficult to be judged because they had too much hesitation.

By analysing the questionnaire, it was found that age, sex, year of study, and taking a phonological course do not affect the correct production of rhythm of the English language. Seven out of the ten Speakers took the phonology course (ENGL 345). One of them only was judged to adhere to the English rhythm, but was affected by lack of weak forms. For instance, Speaker 7, who was judged to be rhythmically horrible, is 24 years in the fifth year, and has taken ENGL 345. On the other hand, Speaker 5, who is 21 years old in the 3rd year of study, produced a good fluent delivery although the Speaker has not yet taken the phonology course.

To sum up, English rhythm is a complex process that does not occur as a result of applying one or even more of its components. One has to apply all the components at the right time in order to get accurate English rhythm. For example, Speaker 1 was judged to produce a syllable-timed language due to lack of use of weak forms. This may make the weak syllable strong, in consequence; they will be stressed, which leads to producing a syllable-timed stress. In addition, Speaker 8, who was judged to have a syllable-timed stress, used the weak forms twice (14.2%) in the read aloud task. On the other hand, Speakers 6, 9 and 10 used the weak forms 64.3%, 71.4%, and 71.4% respectively and they were judged to produce a syllable-timed rhythm. The reason behind this was stress misplacement.

CHAPTER 5: CONCLUSION AND RECOMMENDATION

5.1 Conclusion

This study has explored some problems that EFL learners have in producing the rhythm of the English language. The rationale behind this study was to investigate whether the students at UOB adhere to the rhythm of the English language. If not, to explore the causes for not doing so. In order to do this, the researcher used three tasks: a read aloud text, a free speech delivery and a questionnaire. The results obtained from the read aloud text and the free speech revealed that the majority of UOB students do not adhere to English rhythm while using the language. It was found that more than one cause affect the rhythm of the English language. The most important causes were; stress misplacement in multisyllabic words as well as in phrasal chunks, lack or no use of weak forms, and improper pauses which were also caused sometimes by hesitation. It was also found that, the students are used to reading and speaking by pronouncing the words in their lexical representations. This explains the high use of the liking and intrusive sounds and the low use of assimilation and elision in the students' speech. Assimilation, elision and the linking sounds help the speakers to produce the rhythm of the language. Based on the results obtained from analysing the questionnaire, it was found that age, sex, year of study, and taking the phonological course did not affect the students' results.

Finally, we believe that much work has to be done in this field to overcome this problem, not only for students, but also for teachers of the English language.

5.2 Recommendations of the study

Based on the findings of the study, it can be said that adhering to the rhythm of the English language is a complex process. It comes out as the result of many factors that work together. Therefore, there are some recommendations for teachers and for the Ministry of Education whose main aim is to help the students master the English language, and help them understand and be understood while using the English language.

- 1) The Ministry should provide the schools with English language labs which are as important as the scientific labs. In these labs, students can practise listening and speaking tasks.
- 2) While speaking with English language teachers about the rhythm of the English language, it was noticed that most of them do not have enough information about rhythm. For this reason, EFL teachers should be familiar with the importance of English rhythm and how it is the key factor for understanding and being understood by native and other competent users of the language.
- 3) It is noticed that when students say a word out loud, they tend to lengthen the last syllable of the word regardless of the position of stress in the word. So while introducing a new word, teachers should emphasize that the students must learn the new word with its correct stress placement.
- 4) While teaching students English pronunciation, teachers should cover both the segmental and suprasegmental levels.

- 5) Teachers should help the students in practising the rhythm by using the various teaching methods. (will be mentioned below)
- 6) Teachers should encourage the students while reading aloud to pause at the correct places to convey a clear message to the hearer.
- 7) Teachers should supply the students with various authentic listening activities to ensure correct pronunciation at both word and sentence levels. They also should involve the students in repeating the words they hear (oral drills).

5.3 Practical suggestions

5.3.1 Ways to introduce English rhythm

Rhythm is a natural process that comes naturally when people learn a language. However, by training the students from an early age and allowing them to listen to native speakers help them to overcome this problem and produce a native like rhythm, or at least to achieve intelligibility. The following sections are devoted for English teachers to acquaint them with some ways to introduce the rhythm of the English language to their students.

It has been mentioned earlier that English rhythm is one of the most difficult areas in English language teaching. However, teachers should not ignore teaching it because of its difficulty. According to Hodges (2006, p. 5) many experts in the field of pronunciation teaching emphasize suprasegmental teaching before teaching segments (consonants and vowels). They prefer the

following order in teaching pronunciation; word level stress, sentence level stress, intonation, consonants, vowels and finally linking.

It is very clear that the English rhythm is very important in the English language. Here are some ways to introduce the English rhythm at both word and sentence level:

5.3.1.1 Introducing rhythm at the word level

There are many sources offering helpful ways of introducing word rhythm. Here are some of the ways (The following examples cited in Tuan and An (2010), and Chen et al, (1996)):

- Using visual aids

Examples: terRIfic terrific ter 'rific terri^ofic ter/r^Afic ^{•••}terrific terrific

- Practice varying stress to alter meaning.

Is it elementary? / ɪz ɪt elɪ'mentri / No, it is advanced.

Is it a lemon tree? / ɪz ɪt ə 'lemən tri / No, an orange tree.

Is that Europe? / ɪz ðæt 'jʊərəp / No, it's China.

Is that your rope? / ɪz ðæt jə 'rəʊp / No, it's hers.

They grow flowers in the 'greenhouse.

There are many flowers in the green 'house

- Using sounds such as tapping on the desk, clapping hands, using the foot, or playing an instrument.

Get the students to do one of the above movements to produce a sound at the same time when they hear or say a stressed word.

- Using a rubber band

Get the students to pull the rubber band when they hear the stressed syllable.

5.3.1.2 Introducing rhythm at the sentence level

Knowing word stress is not enough to produce good rhythm. Students have to know not only the stressed and unstressed syllables, but they have to know how to group syllables into rhythm units as well. It is important to decide which words go together in a rhythmic unit. According to O'Connor (1980, pp. 99-100), within the word group, or rhythmic unit, there is one stressed syllable which may be preceded and/or followed by unstressed syllables. He sets up the following rules for the rhythmic units.

- I. Any unstressed syllables at the beginning of a word group must go together with the following stress group.

I was in London. / aɪ wəz ɪn 'lʌndən /

- II. If the unstressed syllable is part of the same word as the stressed syllable, they belong to the same rhythm group.

Cheaper fares / 'tʃi:pə 'feəz / Cheap affairs / 'tʃi:p ə'feəz /

- III. If the unstressed syllable is closely connected grammatically to the stressed word, although not part of the word, they belong to the same rhythm unit.

Take them for a walk. / 'teɪkðəm fə'rə'wɒk /

- IV. Whenever you are in doubt as to which rhythm unit unstressed syllables belong to, put them after a stress rather than before it.

He was older than me. / hiwəz'əʊldə ðən 'mi /

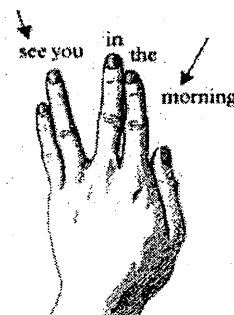
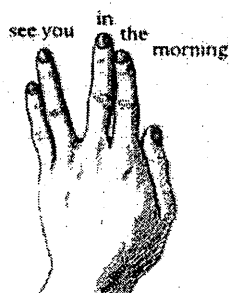
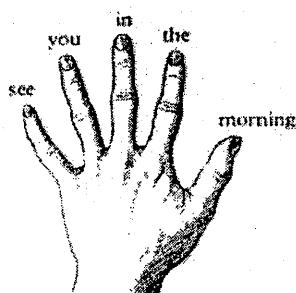
In this example, if you are in doubt about “than” put it with “older” rather than with “me”.

Here are some of the ways to introduce sentence rhythm: (the following discussion based on Chen et al, 1996)

- Get students to listen to English sentences which are written in front of them, and ask them to circle or underline the stressed words in the sentences.
- Get the students to clap their hands, tap on the desks, or play an instrument when they hear the stressed words in the sentences.
- Finger correction technique which was introduced by Underhill (1998, cited in Tuan and An, 2010). This method is divided into two complementary functions:
 - Function 1. The fingers are used to slow down the speech into the components of the sentences, i. e. from connected speech to individual words (from level three to level two), or from individual words to individual sounds (level two to level one).
 - Function 2. The fingers are used to shape what is there, to add something, to remove something and to induce self correction.

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	Level 2	Level 3
Function 1	Fingers are used to break words down into their component sounds and to build the sounds back into words.	Fingers are used to break connected speech down into its component words and to build the words back into connected speech.
Function 2	Fingers are used to shape and correct words and the individual sounds they contain.	Fingers are used to shape and correct connected speech.



This figure is taken from Tuan and An 2010

- Using visual aids (the following aids are taken from Tuan and An, 2010)

- Capital letters

I LEFT my Office/ in a RUSH/ this afterNOON

- A short vertical line above or before the stressed syllable.

/ / / /
I left my office in a rush this afternoon.

- Italicization

I left my office in a rush this afternoon.

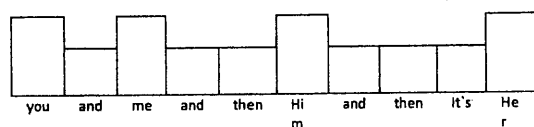
- Underlining

I left my office in a rush this afternoon.

- Circles, dots, or boxes above the stressed syllables.

○ ○ ○ ○
I left my office in a rush this afternoon.

- Cuisenaire rods



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Appendix 1

BIRDSONG

A male **white-crowned sparrow** usually begins singing its full song between 100 and 200 days of age. Having the proper song is **necessary** for mating and marking its **territory**. However, to learn its song, the young bird must be **exposed** to an adult bird's song **consistently** and **frequently** between one week and two months after hatching. That is its **critical** period for learning its song. Both before and after this **critical** period, the male **sparrow** is unable to use any adult sounds to learn its **characteristic** song.

Broad Transcription

/ ə meɪl waɪt kraʊnd 'sparəʊ 'ju:ʒəlɪ brɪ'ɡɪnz 'sɪŋɪŋ its fʊl sɒŋ
brɪ'twi:n wʌn 'hʌndrəd ænd tu: 'hʌndrəd deɪz ɒv eɪdʒ

'hævɪŋ ðə 'prɒpə sɒŋ ɪz 'nesə'seri fɔ 'meɪtɪŋ ænd 'mæɪkɪŋ its
'terɪ'tɔ:ri

ˌhaʊ'evə tu lɜ:n its sɒŋ ðə ʤʌŋ bɜ:d mʌst bi: ɪk'spəʊzd tu ən
'ædʌlt [ə'dʌlt] bɜ:dz sɒŋ ˌkɒn'sɪstəntli ænd 'fri:kwəntli brɪ'twi:n
wʌn wi:k ænd tu: mʌnθs 'aftə hætfɪŋ

ðæt ɪz its 'krɪtɪkəl 'pɪrɪəd fɔ: lɜ:nɪŋ its sɒŋ

bəʊθ brɪ'fɔ ænd 'aftə ðɪs 'krɪtɪkəl 'pɪrɪəd ðə meɪl 'sparəʊ ɪz
ʌn'eɪbəl tu ju:z 'eni 'ædʌlt [ə'dʌlt] saʊndz tu lɜ:n its ˌkærɪktə'rɪstɪk
sɒŋ /

Narrow Transcription

/ ə meɪl wɪk kraʊnd 'spərəʊ 'juːʒəlɪ brɪ'ɡɪnz 'sɪŋɡɪŋ ɪts fʊl sɒŋ
brɪ'twɪn wʌn 'hʌndrəd ən tu 'hʌndrəd deɪz əv eɪdʒ

'hævɪŋ ðə 'prɒpə sɒŋ ɪz 'nesə'seri fə 'meɪtɪŋ ən 'mækiŋg its
'teri'tɔːri

ˌhaʊ'evə tə lɜːn its sɒŋ ðə jʌm bɜːd mʌst bi ɪk'spəʊzd tu ən
'ædʌlp [ə'dʌlp] bɜːdz sɒŋ ˌkən'sɪstəntli ən 'friːkwəntli brɪ'twɪn
wʌn wiːk ən tu mʌnθs 'aftə hætfɪŋ

ðæt ɪz ɪts 'krɪtɪkəl 'pɪrɪəd fə lɜːnɪŋg ɪts sɒŋ

bəʊθ brɪ'fɔːr ən 'aftə ðɪs 'krɪtɪkəl 'pɪrɪəd ðə meɪl 'spərəʊ ɪz
ʌn'eɪbl tə juːz 'eni 'ædʌlt [ə'dʌlt] saʊndz tə lɜːn ɪts ˌkærɪktə'rɪstɪk
sɒŋ /

red = assimilation (5 places)

blue = elision (10 places)

green = reduced form (14 places)

purple = intrusive or linking sound (6 places)

Appendix 2

University of Bahrain

Department of English Language and Literature

Please, answer this question to the best of your knowledge.

What do you think of studying at the University of Bahrain in terms of?

- a) Curriculum;
- b) Instructors;
- c) Facilities;
- d) Tuition fees;

Thank you for your cooperation

Appendix3

Questionnaire

1. Age

2. Sex

- Male
- Female

3. The year of study

1st 2nd 3rd 4th 5th

4. Where did you study?

- Private school
- Government school

5. Have you taken the phonological course?

- Yes
- No

6. Where did you study?

- Bahrain
- Other countries. Specify_____.

7. Mother tongue language (s)

- Arabic
- English
- Others specify_____.

Appendix 4

A male **white-crowned sparrow**
usually begins singing its full song
between 100 and 200 days of age.

Having the proper song
is **necessary** for mating
and marking its territory.

However,
to learn its song,
the young bird must be exposed
to an adult bird's song
consistently and frequently
between one week and two months
after hatching.

That is its critical period
for learning its song.

Both before and after
this critical period,
the male sparrow
is unable

to use any adult sounds
to learn its characteristic song