

People's Democratic Republic of Algeria
Ministry of Higher Education and Scientific Research
Abdelhamid Ibn Badis University of MOSTAGANEM
Faculty of Foreign Languages
Department of English



MASTER

“ENGLISH LANGUAGE AND LINGUISTICS”

The Influence of Algerian Arabic Intonation on English Intonation Learning: A Case Study of Third Year LMD English Students at Mostaganem University

Presented by:

Taibi Hadjer

Board of Examiners:

Chairperson: Mrs F. Hairech

Supervisor: Ms. R. Benyoucef

Examiner: Mr. Y. Moulai Hacene

2016/2017

Dedication

To my family

I dedicate this work

Acknowledgments

I would like to express my sincere gratitude to all of those people who have contributed in the accomplishment of this research .I am deeply indebted to all my teachers for providing me with enlightenment, support and encouragement. I would like to thank my supervisor, Ms. Benyoucef Radia for her remarkable supervision, brilliant guidance, enthusiasm and invaluable support throughout the research and for her helpful advice, detailed comments, suggestions, and ongoing encouragement. Without her help, this research would have been impossible.

Abstract

The present study investigates one of the major issues that face foreign language students in Algeria and affect their learning of English intonation which is the influence of their mother tongue. It aims at exploring the intonational patterns used by Algerian students at Mostaganem University. We assumed that the intonational patterns of the two English and Algerian Arabic have similarities as well as differences and that these similarities and differences may affect the process of learning the English intonational patterns and influence it. In order to check the validity of these hypotheses, the intonational patterns of Algerian Arabic and English are studied. The method in dealing with this research is both quantitative and qualitative. The intonational patterns of English language were compared with those of Algerian Arabic intonational patterns, and then compared with the intonational patterns of English spoken by Algerian students. Twenty third year students of English at Mostaganem University with Algerian Arabic mother tongue are concerned. For that purpose, different types of sentences in English language were selected including declarative, exclamatory, imperative and interrogative sentences and recorded .The sound files were treated through PRAAT. The final intonational contours were saved in the form of pictures and then were analyzed. The results revealed that the influence was mainly positive due to the similar intonational patterns which Algerian Arabic and English share.

Key words: Intonation, English intonational patterns, Algerian Arabic intonational patterns. PRAAT.

List of Tables

Table-1.1	Ladd's British-Style Pitch Movements and Their Corresponding Tones in Pierrehumbert's Model of Intonation.....	12-13
Table-3.1	Tone type used by participants of the declarative sentence.....	37
Table-3.2	Tone type used by participants of commande sentences.....	38
Table-3.3	Tone type used by participants of thewh-question.....	38
Table-3.4	Tone type used by participants tag questions.....	39
Table-3.5	Tone type used by participants of a request.....	40
Table-3.6	Tone type used by participants of yes/no questions.....	40
Table-3.7	Tone type used by participants of the menace.....	41
Table-3.8	Tone type used by participants of the exclamatory sentence.....	42
Table-3.9	Tone type used by participants of surprise.....	42
Table-3.10	Tone type used by participants of the formal salutation.....	43
Table-3.11	Tone type used by participants of the warning.....	44
Table-3.12	Tone type used by participants of the advice.....	44
Table-3.13	Tone type used by participants of the threat.....	45

List of Figures

Figure-1.1 Fujisaki's Equation of F0 Contour.....	10
Figure-1.2 The Intonational Patterns Used to Produce "Will you mail me the money?" Utterance in English Language on Praat.....	14
Figure-3.1 Intonation contour through PRAAT.....	31
Figure-3.2 Parts of the tone unite "Tomorrow we have an exam.".....	32
Figure-3.3 Parts of the tone unite "Leave the room!".....	32
Figure-3.4 Parts of the tone unite "Where did you go yesterday?".....	33
Figure-3.5 Parts of the tone unite "It is a sunny day, isn't it?".....	33
Figure-3.6 Parts of the tone unite "Would you please pass me the pepper?".....	33
Figure-3.7 Parts of the tone unite "Did you know her?".....	34
Figure-3.8 Parts of the tone unite "Why did you hit him?".....	34
Figure-3.9 Parts of the tone unite "This is great!".....	34
Figure-3.10 Parts of the tone unite "Excuse me.".....	35
Figure-3.11 Parts of the tone unite "Hello everyone.".....	35
Figure-3.12 Parts of the tone unite "If you don't do something about it, this will end up bad.".....	35
Figure-3.13 Parts of the tone unite "If I were you, I would have told him the truth.".....	36
Figure-3.14 Parts of the tone unite "You have to apologize to her or I will punish you.".....	36

Figure-3.15	Intonational contours of the declarative sentence.....	37
Figure-3.16	Intonational contours of command sentences.....	37
Figure-3.17	Intonational contours of the wh-question.....	38
Figure-3.18	Intonational contours of tag questions.....	39
Figure-3.19	Intonational contours of a request.....	40
Figure-3.20	Intonational contours of yes/no questions.....	40
Figure-3.21	Intonational contours of the menace.....	41
Figure-3.22	Intonational contours of the exclamatory sentence.....	41
Figure-3.23	Intonational contours of the surprise.....	42
Figure-3.24	Intonational contours of the formal salutation.....	43
Figure-3.25	Intonational contours of the warning.....	43
Figure-3.26	Intonational contours of the advice.....	44
Figure-3.27	Intonational contours of the threat.....	45

Table of Contents

Dedication.....	I
Acknowledgments.....	II
Abstract.....	III
List of Tables.....	IV
List of Figures.....	V
Table of Contents.....	VII
General Introduction.....	1
Chapter One: Intonation	
1.1 Introduction.....	3
2.1 Definitions.....	3
1.2 Stress and Intonation.....	6
1.3 Functions of Intonation.....	8
1.4 Modelling of Intonation.....	11
1.4.1 Fujisaki's Superpositional Model.....	12
1.4.2 Pierrehumbert Theory of Intonation: ToBI.....	14
1.5 Intonation and L1 Transfer.....	17
1.6 Conclusion.....	19
Chapter Two: Intonation in Algerian Education	
2.1 Introduction.....	20
2.2 Teaching Intonation in Algeria.....	20
2.3 The Difficulties of Teaching Intonation in Algeria.....	21

2.4 Comparison between English and Algerian Arabic Intonation.....	25
2.3.1 English Intonational Patterns.....	25
2.4.1 Algerian Arabic Intonational Patterns.....	27
2.3.3 Contrastive Analysis of Intonation of English and Algerian Arabic.....	29
2.1 Conclusion.....	30
Chapter Three: Data Collection and Data Analysis	
3.1 Introduction.....	31
3.2 The Participants.....	31
3.3 Data Set and Data Collection.....	31
3.4 Data Analysis.....	37
3.5 Results.....	46
Conclusion.....	48
References.....	50

General Introduction

In any verbal conversation, complex processes take place in order for two participants or more to understand each other. Linguistics as a scientific field attempts primarily to shed light and investigate these processes. One of these them is sound production. The subfield of linguistics concerned with the study of this phenomenon is called phonology. David Odden (2013) defines it saying:

Phonology is one of the core fields that compose the discipline of linguistics. Phonology is the study of sound structure in language, which is different from the study of sentence structure (syntax), word structure (morphology), or how languages change over time (historical linguistics). (p.2)

The study of sound structure includes its pronunciation, the way words and sentences are uttered. Stress, rhythm and intonation should all be taken into consideration when describing the way a language is spoken and how this latter differs from one individual to another. In this research focus is on intonation, the patterns of rise and fall (pitch variation) across a stretch of speech such as a sentence are called *intonation* (Mehmet Yavaş 2011, p.21). In all languages, intonation plays a key role in transferring meaning and emotions of the interlocutor and of course in English language too. It carries a semantic, discourse as well a pragmatic functions. Thus, in teaching and learning English as a second or a foreign language intonation should be taken into consideration.

There has been an emphasis in the last years on the teaching and learning of the intonational patterns of English as a second or a foreign language as both learners and teachers are becoming more aware about the great effects it has on communication. However, the constraints may be numerous. One of the issues is language transfer; EFL learners possess already an intonational system of their mother tongue, in this research emphasis is on

Algerian students at Mostaganem University. Therefore one might question: What are the intonational patterns of Algerian Arabic? What are the intonational patterns of English sentences spoken by Algerian students of English at Mostaganem University? Do these patterns influence their learning of the intonational patterns of English? These, then are the types of questions which we need to bear in mind as we try to achieve the objectives of this study. We hypothesise that Algerian students are influenced by their mother tongue when speaking English and this has an effect on producing intonation.

This research aims at studying the intonational patterns of sentences in Algerian Arabic language and how they influence the intonational patterns of sentences in English spoken by Algerian students at Mostaganem University. It also intends to explore the differences/similarities between the intonational patterns of Algerian Arabic and English language. This work was divided into three chapters; the first is an introduction to intonation, it includes its definitions, functions and models. The second is devoted to the difficulties and the approaches used in teaching intonation in Algerian schools and universities as well as a contrastive analysis between Algerian Arabic and English intonational patterns. The last chapter is a practical side to testify and answer the question of this study and it includes data collection and analysis besides the results.

Learning to speak a foreign language appropriately is as important as learning how to read it, write it and listening to it and intonation is only one aspect of speaking a foreign language. This study may shed light on the bigger issue of speaking English correctly by Algerian learners at Mostaganem University through uncovering the problems they are encountered with. It also raises awareness about the differences/similarities of intonation across languages and the impact this have on learning English as a second or a foreign language.

1-1 Introduction

Intonation is a prosodic feature which has not been extensively studied until lately. In this first chapter, we will give the different definitions of intonation by different scholars. In addition to that we will draw a distinction between intonation and stress in order to avoid any confusion also to show the role of stress in shaping intonation. We will highlight its role and functions and what makes it so important to be studied and how these roles pushed linguists to create different models and approached studying it in a more systematic way. At the end of this chapter, we will introduce the issue of language transfer that effect foreign language learning.

1-2 Definitions

Intonation is commonly defined as the rise and the fall of the voice in speaking, it is one of the widely studied features of prosody which pays attention to the supra-segmental features of pitch, duration and stress. Hirst and Di Cristo (1998), proposed the following definition:

The term **intonation** has often been used interchangeably in the literature with that of **prosody**. When a distinction is made between the two words, this is often not explicit. The difference of usage varies considerably from one author to another and can, in our opinion, be traced to a double ambiguity in the use the term **intonation** itself. (p.3)

In the above definition, Hirst and Di Cristo stress that intonation and prosody can mean the same thing and if a distinction should be made between the two it is often ambiguous. However, they carry on saying that intonation can be defined in a broad sense to include factors like word-stress, tone and quantity and here there is no difference between intonation and prosody but when it is defined in a narrow sense with the exclusion of all these factors it is intonation proper distinct from prosody.

In a more detailed way Ladd (1996) claims that

Intonation, as I will use the term, it refers to the use of **suprasegmental** phonetic features to convey ‘postlexical’ or **sentence-level** pragmatic meanings in a **linguistically structured** way.(p.6)

In this definition emphasis is on three key points, the suprasegmental feature, Ladd (1996) explains that intonation is concerned with the fundamental frequency or pitch (f0) – a physical property of the sound—, intensity or stress and duration. Also, he argues that intonation has nothing to do with the segment of the word. In other words it excludes feature of stress, tone...etc, but rather it has to do with its pragmatic meaning. Finally, Ladd (1996) stresses that intonation conveys linguistic as well as paralinguistic information e.g. intimacy.

Dalton and Seidlhofer (1994, p.44) suggest that intonation is “often defined as speech melody, consisting of different *tones*”. In this definition, intonation is a wider concept containing tones and thus can be described in terms of tones or in a more technical term *tone unit*. “A tone unit is the part of a sentence over which an intonation contour extends” (Yavaş.M 2011, p.172). The tone unit is divided by O’connor and Arnold (1973, p.7-28) into four parts:

- 1) The pre-head: all the initial unaccented syllables.
- 2) The head: between the pre-head and the nucleus.
- 3) The nucleus: the main accented syllable.
- 4) The tail: all the syllables after the nucleus.

The nucleus is the main accented and stressed part in the syllabus and it is also called *tonic syllable*, it is the syllable that carries the major pitch change.(Yavaş.M 2011, p.173).

So in a sentence like: Do you think I should apologize to her?

The pre-head is ‘do you’, the head ‘I should’, the nucleus ‘apologize’ and ‘to her’ is the tail.

However, in this stage it is required to mention that languages of the world are divided into two categories according to their intonational patterns. According to the Concise Oxford English dictionary “11th edition” languages such as Chinese are called *tone languages*.

In these languages, the pitch patterns and changes are used to make distinctions in lexical categories (verbs, nouns, adjectives...etc) and in some languages such as English, intonation on a word or a phrase is used for functional meaning (as cited in Beckman M.E & Venditti J.J. 2010, p.1).

McCawley (1978) gives the following example about the word “*ma*” in Mandarin Chinese (as cited in Clark .J et al 2012, p.338):

Ma ¹ (with high level pitch)	‘mother’
Ma ² (with high rising pitch)	‘hemp’
Ma ³ (with low, or falling then rising, pitch)	‘horse’
Ma ⁴ (with falling pitch)	‘scold’

In the English language, however, intonation is used for instance to distinguish between some questions and statements i.e. sentences with a falling pitch are declaratives and some questions (yes/no questions) with a rising pitch.

Speakers of English choose between the rising and the falling tones (Clark.J, Fletcher. J & Yallop C, 2012, p.360). Nevertheless, the notion of the rise and the fall can vary. Skarulis (1998, p.18) distinguishes six more intonational patterns:

Low fall: the voice falls during the word from a medium to a very low pitch.

High fall: the voice falls during the word from a high to a very low pitch.

Rise-fall: the voice first rises from a fairly low to a high pitch and then quickly falls to a very low pitch.

Low rise: the voice rises during the word from a low to a medium pitch or a little above.

High rise: the voice rises during the word from a medium to a high pitch.

Fall-rise: the voice first falls from a fairly high to a rather low pitch, and then, still within the word, rises to a medium pitch.

These are some definitions and characteristics of intonation stated by scholars and linguists. In the next point we will be drawing a distinction between two very closely related phenomena which are stress and intonation.

1-3 Stress and Intonation

Language users produce syllables with different levels of prominence, some being more prominent than the others. In any definition of intonation, mentioning or referring to stress is inevitable. This brings us to the role stress plays in the intonational patterns. Nolan (2006) argues that the interaction of intonation and stress is close in many languages, including English (as cited in Aarts & McMahon 2006, p.433). Yavaş (2011) Defines stress saying:

Stress is a cover term for the prosodic features of duration, intensity, and pitch; thus, the prominence of stressed syllables is generally manifested by their characteristics of being longer, louder, and higher in pitch than unstressed syllables. (p. 156)

From the above definition we can conclude that prominence plays a key role in both intonation and stress. As it is mentioned before intonation is studied in terms of tone groups which are in turn divided into constituents on the basis of stressed and unstressed syllables with the tonic syllable being the main accented and stressed part in the word. So in order to study the intonational patterns, it is important to consider one very important pattern of stress which is that of primary and secondary stress. Hammond (1999) writes:

Some words have more than one stress.....When a word has more than one stress, typically one stress is stronger than the others, this is termed “ primary stress” and the others “ secondary stresses” (p. 149)

The syllabus into which the primary stress falls, then, is what is known as the nucleus, and it is pronounced with more prominence than the others and it carries the pitch change. The connection between pitch and stress is expressed in tone: the pitch change usually falls into the stressed syllable (Gussenhoven 2004, p.47).

We conclude that intonational patterns cannot be defined apart from stress patterns as they are closely related. However, there exist differences between the two phenomena which will be discussed in the next point. According to Oxford Dictionary “11th edition” stress is defined as the “emphasis given to a particular syllable or word in speech, typically through a combination of relatively greater loudness, higher pitch, and longer duration.” whereas, intonation is defined as the rise and the fall of the voice in speaking. From these two definitions we can clearly make a distinction that while intonation focuses on pitch variations during our production of speech, stress pays attention to words and sentences.

Brinton (2000) claims that stress is used to distinguish different parts of speech. For instance, it can distinguish between some verbs and nouns in English. In the following examples, the stress pattern changes changing with it the lexical class of the word:

Noun	Verb
Pr'oduce	Prod'uce
'Import	Imp'ort
'Address	Addr'ess

Nouns in the above mentioned examples are marked with an initial stress while verbs with a final stress. In this respect, intonation and stress have different functions in English. As said earlier, intonation has functional meaning helping us, for instance, distinguishing between a statement and a question. Furthermore, intonational features signal the speakers' feelings and

emotions, also it helps us detect their attitude (Clark.J & Fletcher. J & Yallop C, 2012, p.360). These are the key differences between stress and intonation and it is important to bear in mind that despite the distinction the two are related and one cannot be studied far from the other. Next, we will be talking about some of the fundamental functions of English intonation.

1-4 Functions of Intonation

There have been many researches about the functions of intonation. As there is no two linguists disagree on its importance. Mennen (2006) demonstrates that:

There is no doubt as to the importance of intonation in communication. Intonation not only conveys linguistic information, but also plays a key role in regulating discourse and is an important indicator of speaker identity, reflecting factors such as physical state, age, gender, psychological state and sociolinguistic membership. Intonation is also important for intelligibility.(p.1)

Many scholars investigated the role of intonation in everyday's life. Misunderstanding can be arisen from the wrong choice of the intonational patterns and depending on the context this misunderstanding can be huge or little (Mennen2006, p.1). Some linguists went even further and categorized the functions of intonation. Roach (2009, p.146) cited four different functions which are:

- 1- ***Attitudinal function***: this function enables us to express emotions and attitudes as we speak.
- 2- ***Accentual function***: it helps us to produce the effect of prominence on syllables that need to be perceived as stressed.
- 3- ***Grammatical function***: the intonation reveals information that helps listeners recognize the grammatical and syntactic structure of what is being communicated.

- 4- **Discourse function**: intonation does more than communicating grammatical structures; it also signals to the listener what to be taken as “new” information and what is already “given”, it even helps listeners to know what kind of responses is expected and helps him identifying what the speaker is referring too...etc.

However, Roach (2009) is not the only one speaking about functions of intonation. J.C. Wells (2006, p.11-12) spoke about two more functions *the psychological function* which helps us organize speech into units that are easy to perceive, memorize and perform and *the indexical function* which marks our social and personal identity. “What makes mothers sound like mothers, lovers sound like lovers...etc” (Wells 2006, p11-12)



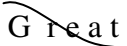
The linguist David Crystal (1997) suggests that intonation has six functions, *emotional, grammatical, information structure, textual, psychological* and *indexical* (as cited in David Nunan 2013 p. 12-13). According to the description of Crystal to these functions, we can associate the emotional function with the attitudinal one, the grammatical, psychological and indexical functions with the already mentioned functions of Wells (2006). However, Crystal divided the discourse function into two *the information structure* one which he describes it as the function that deals with what is new and what is already known in speech and *the textual* one which helps constructing larger stretches of discourse.

Ranalli (2002, p.4) discusses four different functions:

- 1- **Linguistic form-based**: i.e. grammatical (the intonation of *Yes/No* or *Wh-* questions) or lexical (intonation on modifiers like *really* or *absolutely*);
- 2- **Attitudinal or Interpersonal**: e.g. sounding enthusiastic, interested, polite; showing disbelief;
- 3- **Accental**: especially in contrasts, e.g. ‘special stress’, emphasizing, correcting;
- 4- **Conversation management-related**: asking someone to repeat something, disagreeing strongly.

The different pitch contours of intonation are used to express these functions. Wells (2006) associates the fall tone with statements, exclamations, wh-questions and commands; and the rise one with yes-no questions. Asher and Kumari (1997, p.437) argue that statements typically end on a falling tone, tag questions at the end of a statement end with the falling tone. Commands also end with falling pitch. Exclamations with a fall followed by a rise, clauses which are non-final in a sentence end on a level or rising tone.

Intonation, as discussed above, does not only reveal linguistic information but it is much more than that. It also carries information about the emotions and the attitudes of the speaker. Minka.W, Pittermann.A & Pittermann.J (2009, p.110) conclude from the studies of Cauldwell (2000) which are based on observations presented in e.g. Crystal (1969) that the falling tones relate to anger, impatience, irritation, satisfaction, rise-falling tones relate to excitement, pleasure or amusement whereas a levelled constant tone indicates boredom. Celce-Murcia, Donna M.Brinton & Janet M. Goodwin (1996, p.185) claim that when the utterance is pronounced with a rising-falling tone it signals the speaker's certainty, however, when it is pronounced with a rising intonation, it signals uncertainty. They give the example of the word "Great" which may express different emotions and attitudes according to the tone choice:

- 1-  Great (perfunctory)
- 2-  Great (enthusiasm)
- 3-  Great (sarcasm)

In statement 1, the slightly falling intonation means that the speaker's comment is neutral or perfunctory. In statement 2, the movement from high to low signifies that the speaker is enthusiastic, whereas, the flatter intonation of the last statement signifies the speaker's

sarcasm. Because of the role of intonation in conveying these important functions, many linguists attempt to come out with systematic models to study its patterns. In the following point, we will discuss models to the study of intonation suggested by different scholars.

1-5 Modelling of Intonation

Over the decades, many models to intentional phonology have been proposed. Intonation, in brief, is the patterns of pitch in utterances. The fundamental frequency is the phonetic term for pitch (F0) and it is the rate of vibrations of the vocal cords. These vibrations are responsible for the pitch patterns change. Because F0 is the physical and phonetic realization of intonation, it is the one mostly taken into consideration in any model. The pattern of pitch used with an utterance is called *intonation contour*, the last part of it is called the *boundary tone* which can have a rising, falling or level pitch and within intonation contours, we can find a series of prominent pitches or *pitch accents*. Taylor.P (2000) argues that a model of intonation should be:

1. Constrained: the representation should be concentrated and there should be no redundancy.
2. Wide coverage: the representation should be representative and includes the majority of the intonational phenomenon and should be able to make distinctions between them in utterances.
3. Linguistically meaningful: the representation should be interpretable.
4. Automatic synthesis: the model should have an automatic mechanism for generating F0 contours.
5. Automatic analysis: it should be possible to derive the linguistic representation automatically from an utterance's acoustics. (p.3-4)

Ladd (1983) proposed a distinction between two types of intonation models which he called the “*Contour Interaction*” and the “*Tone Sequence*” types. Contour interaction was developed as the result of the observation of word stress and sentence stress. The observation is realized in the fundamental frequency by the technique of analysis by synthesis (Di Cristo & Hirst 1998, p. 12). This model is best represented in the works of: Fujisaki, Garding, Hart and Collier, Möbius, Thoresen and Vaissiér (Botinis 2000, p.19). Ladd (1983, p.40) says that the tone sequence type “insists that the pitch movements associated with accented syllables are themselves what make up sentence intonation” (as cited in Di Cristo & Hirst 1998, p. 12). It is represented by Pierrehumbert and Beckman, Hirst and Di Cristo, Ladd, and Mertens (Botinis 2000, p.19). Many phonologists prefer the “*Tone Sequence*” type because it is more representative. According to Küglar (2007, p.4) this latter, “has the flexibility to represent phonological as well as phonetic aspect of intonation”, furthermore, “this framework is suitable for comparative purposes”. Now we will explore two representative models from each one of the types of intonation models. The first is an interaction contour one and which is Fujisaki’s Superpositional Model.

1-5-1Fujisaki’s Superpositional Model

It is a model presented by Hiroya Fujisaki; it is the one of the models which is known as superpositional models of F0 (Benesty, Sondhi & Yiteng Huang 2008, p.481). These models consider F0 to be a complicated function that can be decomposed into simpler components. It is based on two components i.e. *phrase command* and *accent command*; these two components are superpositioned to create f0 movement. The phrase command is shaped as an initial rise followed by a long fall in an utterance. The accent command stresses certain syllables or words in the utterance, represented by the local peaks (the most sonorous sounds) and valleys (the less sonorous sounds) in the F0 contour (Benesty, Sondhi & Huang 2008,

p.481). The phrase command is modelled by *pulses*, while the accent command is modelled by *step functions*. The F0 contour is represented by the following equation as cited in Taylor's (1992, p.46) thesis:

$$\ln F_0(t) = \ln F_b + \sum_{i=1}^I A_{pi} G_p(t - T_{0i}) + \sum_{j=1}^J A_{aj} [G_a(t - T_{1j}) - G_a(t - T_{2j})].$$

$$G_p(t) = \begin{cases} \alpha^2 t \exp(-\alpha t), & \text{for } t \geq 0, \\ 0, & \text{for } t < 0. \end{cases}$$

$$G_a(t) = \begin{cases} \min [1 - (1 + \beta t) \exp(-\beta t), \gamma], & \text{for } t \geq 0, \\ 0, & \text{for } t < 0. \end{cases}$$

Figure-1.1 Fujisaki's Equation of F0 Contour

Where:

- F_b : baseline value of fundamental frequency,
- G_{pi} : impulse response of the i th phrase control mechanism,
- A_{pi} : magnitude of the i th phrase command,
- T_{0i} : timing of the i th phrase command,
- G_{aj} : step response of the j th accent control mechanism.
- A_{aj} : amplitude of the j th accent command,
- T_{1j} : onset of the j th accent command,
- T_{2j} : end of the j th accent command,
- α_i : is the eigenvalue of the i th phrase control mechanism,
- β_j : is the eigenvalue of the j th accent control mechanism,
- γ_j : is the maximum value of the j th accent component.

A common criticism of this model is that it does not generate all the intonational contours, for instance gradual low rising contour (Taylor 2009, p.250).

1-5-2 Pierrehumbert Theory of Intonation: ToBI

TONE AND BREAK INDICES (Tobi) is a model of American English intonation developed originally by Pierrehumbert (1980). The theory assumed that all pitch movements can be studied at two levels: High (H) and Low (L). Basically pitch movements in this theory can be divided into three types of tones: pitch accent and phrasal tones and boundary tone. Pitch accent is a feature of intonation which carries the pitch change and involves the falling or the rising tones. Phrasal tones are phrase accents which occur near the end of a word with the last pitch accent. A boundary tone occurs at the end of the last syllable and is concerned with movement on the final syllable (Cruttenden, 1997 p. 60).

The characteristics of this tone model are: the diacritic ‘*’ after the L or H symbol indicates that this is the tone related to the stressed syllable. The ‘+’ indicates a composite tone. There are seven different types of pitch accents H*, L*, L+H*, L*+H, H*+L, H+L* and H*+H. Any of the H(igh) pitch accent (i.e. H*, L+H* and L*+H) can be downstepped (lowered because of the influence of a preceding low tone) and it is indicated by placing the diacritic ‘!’ in front of the H tone. The phrase accent is marked with a hyphen ‘-’ and indicates the edge of an intermediate phrase, thus we find H- or L-. Boundary Tones are transcribed with ‘%’ and mark the final contour of an intonational phrase and it allows for the following phrasal tone combinations: H-H%, H-L%, L-H%, and L-L% (Clark, J., Fletcher, J. & Yallop, C., 2012, p. 365-367). Ladd (2008, p.91) associated the British-style intonational patterns with their corresponding tone proposed by Pierrehumbert in his model in the following table:

Pierrehumbert	British-style
H* L L%	Fall
H* L H%	Fall-rise
H* H L%	Stylised high rise
H* H H%	High rise
L* L L%	Low fall
L* L H%	Low rise (narrow pitch range)
L* H L%	Stylised low rise
L* H H%	Low rise
L+H* L L%	Rise-fall
L+H* L H%	Rise-fall-rise
L+H* H L%	Stylised high rise (without low head)
L+H* H H%	High rise (with low head)
L*+H L L%	Rise-fall (emphatic)
L*+H L H%	Rise-fall-rise (emphatic)
L*+H H L%	Stylised low rise
L*+H H H%	Low rise
H+L* L L%	Low fall (with high head)
H+L* L H%	Low fall-rise (with high head)
H+L* H L%	Stylised high rise (low rise?)
H+L* H H%	Low rise (high range)
H*+L H L%	Stylised fall-rise (‘calling contour’)
H*+L H H%	Fall-rise (high range)

Table 1.1 Ladd's British-Style Pitch Movements and Their Corresponding Tones in Pierrehumbert's Model of Intonation

Ladefoged (2006, p.127) gives the following example, “Will you mail me the money?” This *yes-no* question is characterized by a high pitch accent on “mail”, and a low pitch accent on the stressed syllable of “money” which is the key word. The phrase accent and the boundary tone are both high. This shows a high rise at the end of a *yes-no* question. The example shows a ToBI analyzed *yes-no* question (as cited in Crosby 2013, p.7)

Will you mail me the money?

H* L* H-H%

PRAAT is the popular software for labelling ToBi transcriptions. Praat is a free computer software package for scientific analysis of speech in phonetics (Wikipedia, 2017). Paul Boersma and David Weenink designed this software and developed it at the University of Amsterdam. It is a widely used software which does phonetics and prosody by computer.

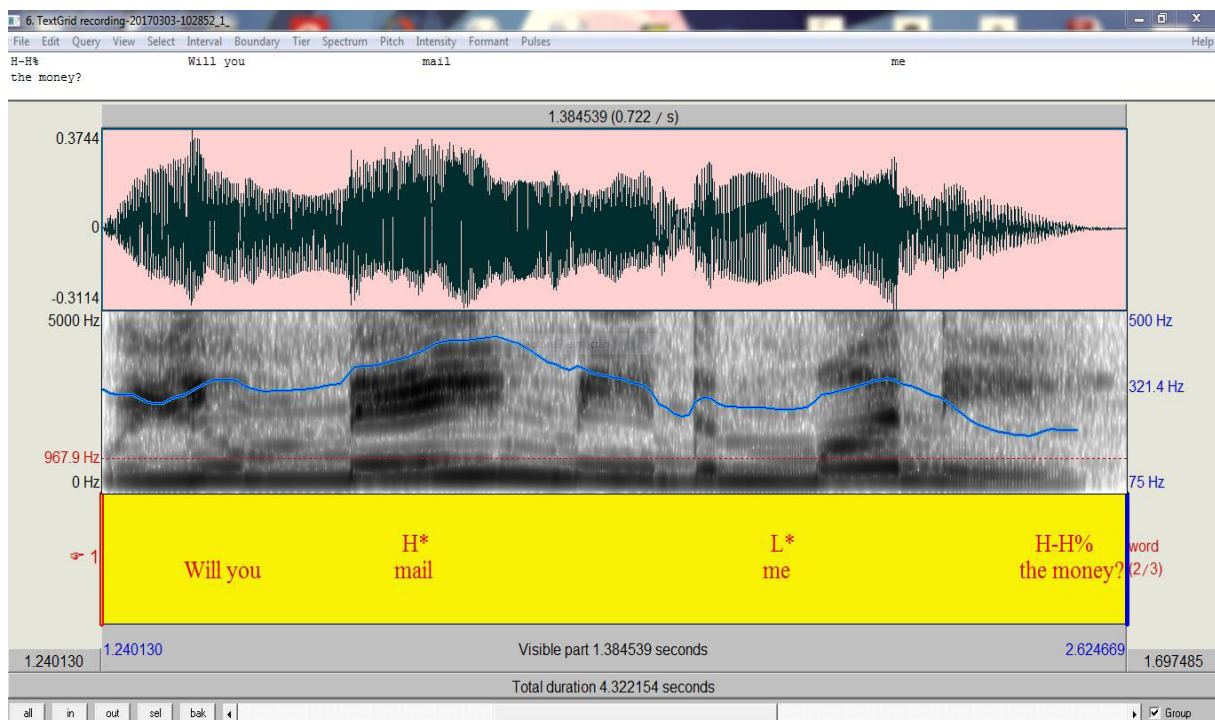


Figure-1.2 The Intonational Patterns Used to Produce "Will you mail me the money?" Utterance in English Language on Praat.

Many other models of intonation were proposed such as : Halliday's model, Brazil's model, Gronuum's model...etc. These models are paved the way for a more scientific and objective study to intonation rather than a study based on introspection. They have helped understand the process of intonation, in order to facilitate teaching it for learners of English as a second or a foreign language.

We already discussed the functions of intonation and the role it plays in communication by conveying both linguistic and paralinguistic information. So in the last point in this chapter we will discuss the phenomenon of language transfer and its effects in learning intonation.

1-6 Intonation and L1 Transfer

We cannot speak about language teaching and learning without referring to one of the fundamental key theories in this field which is *language transfer*. Charles Fries in 1945 published a book entitled "*Teaching and Learning as a Foreign Language*" viewed that the native language is of paramount importance in learning a foreign, or second language, he discovered that:

The unconscious transfer of native language structural and lexical patterns to the second language learning process produce characteristics errors in those areas of the target language where such patterns are either divergent or non-existent. (as cited in Peter H. Fries & Nancy M. Fries, 1985, p. 277).

Many other researchers in the field were attracted by the concept of transfer after it was exploited by Fries and they provided their own interpretations and definitions of the term.

Odlin's (1989) defines it as :

“transfer is the influence resulting from the similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly acquired”.(p27)

This influence could be positive or negative. It is considered positive when the learner's knowledge of L1 augments his ability to understand and produce L2. Negative transfer, on the other hand, means that the learner's knowledge of L1 denigrates his ability to understand and produce L2. Where the two languages share similarities, learning will be easier through positive transfer of the native language pattern, but where they are different, learning difficulties and errors occur resulting from negative transfer (Ellis 1994, p332-333).

Learners of English as a second or a foreign language already speak a mother tongue with a set of intonational patterns. These patterns may be similar or different from the intonational patterns of English. J.C. Wells (2006, p.11) claims that there is in intonation “universal” patterns which are common to all languages those patterns will be applied to English just as they do to other languages. He gives the example of German and Dutch which have tonicity systems that are extremely similar to that of English, so that the German and Dutch learners already know this part of English intonation. French, however, does not use tonicity in the same way, and French learners face difficulties with English tonicity because of their negative transfer of the French system of English (J.C. Wells 2006, p.11). In this respect, language transfer can be a constraint in teaching intonation as Bradford (1992, p. 1) suggests that this difficulty may be resulted from the fact that intonational patterns are deeply subconscious, so even native speakers may be unable to describe and analyze these patterns as they themselves use them unwarily (as cited in Ranalli, 2002, p. 3).

1-7 Conclusion

Indeed, intonation is fundamental in communication, it reveals many facets in vocal communication. Learners of language searching for mastery of the four skills cannot simply deny this important aspect of spoken language. It remains a great work for phonologists to overpass the constraints; however, efforts carried out by linguists in the field are all good sign. One thing that may help establishing a universal approach applicable to all languages to teach and learn intonation is to understand the intonational patterns of different languages existing in the world. The current study is an attempt to understand the intonational patterns of Algerian Arabic. In the next chapter, we will explore how English intonation is taught in Algeria and the intonational patterns of Algerian Arabic compared to English intonation.

2-1 Introduction

Intonation is a part of language that cannot be separated; therefore it is included in second and foreign language learning. So far we have been giving a general overview about intonation. However the main concern of this research is the difficulties and obstacles of teaching and the approaches used in Algerian schools and universities. In this chapter we will talk about teaching English intonation in Algeria and the issues that may encounter teachers and learners such as language transfer. At the end of this chapter we will provide a distinctive analysis between Algerian Arabic and English intonation by introducing their patterns.

2-2 Teaching Intonation in Algeria

English today has reached the status of a global language; it is the lingua franca of modern era. It is the language of media, economy, science, and education. Actually, the majority of English speakers worldwide are non-native speakers (Crystal 2000). These speakers accepted English and felt the need to learn it for different purposes to meet their needs.

In recent years; there is an emphasis on teaching English all over the world. In Algeria, English is considered a foreign language and is taught starting from 1st year in middle school (the child is about 11 years old), after an educational Reform which was announced by The Ministry of Education in 2001. Since then, English has received considerable attention. It is introduced for seven years for all students during their education. The educational Reform is grounded primarily on the Competency Based Approach (CBA). This approach aims at developing the learners' competencies and skills in such a way to help them to become autonomous learners and individuals and successful communicators in real situations.

Alongside other skills of language, EFL learners are taught "speaking". Speaking inevitably includes pronunciation. Learning English pronunciation necessitates a deep

understanding of the prosodic features such as intonation. As mentioned in the previous chapter, intonation is crucial for communication also it is highly unconscious, that's why teaching it may be a problem. In middle and high schools, EFL learners are introduced for the first time to intonation. In textbooks in middle and high schools, patterns of intonation are found within "Listening and Speaking" sequences and they include some tasks concerning intonational patterns e.g. the first year textbook of secondary school includes a task about the rising and falling tones in requests. However, if compared to morphology and syntax, pronunciation and intonation is marginalized as Baker & Murphy (2011) recognize that "an overall neglect of pronunciation teaching has been observed in teacher preparation programs" (p. 30).

In university, there is more emphasis on intonation as students who are specialized in English are introduced to phonological studies. The discussion in the next point will be about the difficulties that both students and teachers are encountered with while teaching and learning intonation.

2-3 The Difficulties of Teaching Intonation in Algeria

Poor pronunciation may cause misunderstanding and make communication really difficult. Teachers today are becoming more aware of this. The issue with intonation especially is that every language has its own intonational system so native speakers of a language face problems in learning L2 intonational patterns due to this non-equivalence (Kipiani & Rusadze, 2008). Some EFL learners aim at achieving the level of proficiency and mastery of the language considering natives their model, others aim only at being understood. However, all of them look up to "intelligibility". For Jenkins (2000) intelligibility is the most important for EFL learners and he notices that in some learning contexts, learners rarely speak to native speakers. So alongside mastering the four skills of language, the teaching process according to Jenkins (2000) should emphasize on the following elements:

1. overall prosody (including stress, rhythm and intonation)
2. phrasing and sense groups
3. intonation
4. word stress
5. rhythm (use of stressed and unstressed syllables)
6. syllable structure
7. segments (sounds)
8. voice quality.

According to Jenkins (2000) all aspects of pronunciation are important for intelligibility, as contrasted, to the traditional view of language teaching which used to emphasize only on the individual sounds of English (as cited in Kipiani & Rusadze ,2008). Intonation as mentioned before is deeply subconscious, because of that it is very difficult to describe or to teach. Roach (1991) says that “of the rules and generalizations that could be made about conveying attitudes through intonation, those which are not actually wrong are likely to be too trivial to be worth learning” (p.168). Brazil (1994, p.6) advocates an intonation pedagogy which highlights tones and intonational patterns, but he argues that these phenomena are difficult even for native speakers to analyze and agree on.

Mennen (2006, p5-14) summarizes three difficulties in teaching and learning intonation as follows:

- 1- Alignment** refers to the time a peak or a valley takes when producing vowels and consonants. Cross-linguistic differences in alignment have not been investigated extensively. Ladd (1996) claims that the accented syllables are characterized by a certain fall, he says that it is a rapid fall to low followed by a gradual fall which continues until the end of the utterance.

He gives the example of English and Italian, where the realization of this fall differs in the two languages. Where the peak in English is late i.e. it occurs at or near the end of the accented syllable. In Italian it is early i.e. it occurs before the end of the accented syllable. The rapid fall that Ladd describes takes place between the stressed and the following unstressed syllable in English, whereas in Italian the fall starts before the stressed syllable.

2- Word stress and nucleus placement L2 learners often have difficulty with the correct placement of word stress, especially in the initial stages of the learning process. Besides difficulties with word stress, L2 learners also experience difficulty with the sentence stress (Backman 1979 & Jenner 1976). Adams and Munro (1978) found a difference in the production of sentence stress between native and non-native speakers of English. Adams and Munro (1978) found that the “real difference between the stress production of the two groups lay not in the mechanisms they used to signal the feature [stress], but rather in their distribution of it...” (p. 153), that is EFL learners produce stress but the problem is in its placement. Also, Fokes and Bond (1989) found that the same is true for word stress.

3- Pitch range Each language has its own ‘vocal image’. This vocal image is said to be a reflection of a person’s socio-cultural status and his social role. Users of language, then choose the right pitch for the vocal image they want to project. Nevertheless, this pitch range differ from one language to another, for instance English and German , while English is believed to have a higher and various realization of pitch, German is the contrary, it is believed that it has a more low ,flat and narrow pitch (Eckert & Laver 1994, p. 145).The differences in the pitch range may result in the differences of how we perceive speakers , for instance speakers of languages with a narrower pitch (e.g. German) may be perceived as more negative by speakers of languages with a

wider pitch range (e.g. English), and vice versa. So, it is important to pay attention to such differences in the use of pitch range between languages, particularly since it influences the way we perceive one another.

Kipiani and Rusadze (2008) claim that the most common mistakes of intonation are that students do not use the rising pitch and they use the wrong pitch, for instance they use the rising pitch in producing statements. In other words, students may face more trouble in imitating the rising than the falling intonation and they may don't use the right pitch to convey the feelings they really want. Algerian students at university make no exception, like other EFL learners they are encountered with the same difficulties.

These difficulties led Ranalli (2003) to question the possibility of teaching intonation and the appropriate ways to do that if we attempt to teach it.

Thompson (1995) identifies three basic approaches in ELT material related to intonation which may approach and facilitate the process of teaching intonation and those are: the benign neglect, the grammatical and the interpersonal approach.

1- The benign neglect approach in this approach, it is believed that learners will learn intonation better if they are encountered with intonation in real life. The theory of language on which this approach is based supposes that learners acquire language automatically from real life if they are exposed to it for a long time.

2- The grammatical approach in this approach, teachers identify the rising and the falling tones of intonation and teach them to learners, it looks at it from a grammatical perspective.

3- The interpersonal approach it was developed by Brazil at the University of Birmingham, in collaboration with Sinclair and Coulthard, Brazil (1997) suggests that the tone groups in speech have nothing to do with grammar rather they are the product

of the need of learners to convey certain messages in certain situations, it depends on the speakers intentions and feelings to produce the intonation he needs.

In Algeria, it is impossible for learners to learn intonation from real life since there is very little possibilities for interaction with native speakers. The approach which is most likely to be used in teaching intonation in Algerian schools and universities is the grammatical approach.

In order to get to a universal model and approach to teach and learn intonation, some scholars suggested comparing between intonational patterns of languages around the world and find universalities between languages in the world and use them to teach intonation. That is, learners will acquire patterns of intonation which are shared by all languages easier since they exist in their mother tongue and then focus on these which do not exist in their mother tongue. However, of particular interest to us is teaching English intonation to Algerian students. We will be comparing next the English intonational patterns with these of Algerian Arabic.

2-4 Comparison between English and Algerian Arabic Intonation

To compare between the Intonational systems of the two languages, we will explore each one of them independently. We will start with English intonation. As a matter of fact, English intonational patterns are the most widely studied patterns among all others in other languages.

This is because most of the researches about intonation are carried out in English or by English native speakers. In our exploration, we will depend on various researches in English intonation to draw on a conclusion of its characteristics and patterns.

2-4-1 English Intonational Patterns

Delongova (2010) summarizes the intonational patterns of English as cited in the works of two known linguists, the first is Gimson (2001). In his book *“An Introduction to the*

Pronunciation of English”, Gimson divided English intonational patterns into four groups as follows:

- a) ***The falling tone/nucleus (high-fall and low-fall)***: it is marked by this symbol [∨] and is placed before the tonic syllable. The falling tone is associated with statements, wh-questions; it expresses an assertive character (the speaker’s opinions, intentions, wishes...etc are expressed through the falling tone), and it implies finality.
- b) ***The rising tone/nucleus (high-rise and low-rise)***: this intonation is marked with this symbol [/], it is put in front of the tonic syllable. Speakers use it for Yes/No questions, to indicate unfinished and continuative utterances, showing overtones of politeness, encouragement, pleading...etc.
- c) ***The fall-rise tone/ falling-rising nucleus***: a fall-rise expresses non-finality, the speaker’s doubt about what he says, and a speaker also uses the fall-rise when he or she “makes a statement but at the same time implies something more” (Wells 2006: 30). This is called implicational fall-rise. A fall-rise is also used for polite corrections. This symbol [V] is used to mark the fall-rise tone.
- d) ***The rise-fall tone/ rising reinforcement of a fall***: it is an infrequent intonation pattern with a limited usage; the speaker using a rise fall to express impression or he may disapprove of something that has been said or done.

The second is Wells (2006) who also explores English intonational patterns and gives the following examples:

a) **Rise**

Yes/No questions

Are you /coming?

Complementary questions

Your /name? Your place of /birth?

Reprise (echo) questions

What was that you just /said?

Am I /coming?

b) Fall

Statements	<i>He's from \Spain.</i>
Commands	<i>Go a\way!</i>
Exclamations (interjections)	<i>\Sure!</i>
	<i>Look \out!</i>
Wh-questions	<i>Who \called?</i>
Alternative questions	<i>Is she coming or \going?</i>

c) Fall-rise

Implicational statement and demand	<i>So you both live in / London?</i>
	<i>\I do (but Mary lives in \York)</i>

The falling and rising tones in intonation also reveal discursive meanings. Brazil (1994) argues that a rise and a fall-rise are “referring” tones, we use them when we possess knowledge about what we are asking about or when we have a prediction what the answer will be, and we only want to make sure; a fall is a “proclaiming” tone, we use it when we are really seeking for information and we have no idea what the answer will be.

Gimson (2001) comments that both the falling and rising tones in tag question mean we are expecting the hearer to agree with us, the fall means we demand the acceptance, and the rise means we are giving the choice to the hearer and he may disagree. He also claims that the use of a rising tone rather than a falling tone in imperatives softens the imperative or that the listener has a right to refuse. These are in brief the English intonational patterns, now we will move to the Algerian Arabic patterns.

2-4-2 Algerian Arabic Intonational Patterns

Noureddine Guella (1984) in his book entitled “On Syllabication, Stress and Intonation in an Urban Arabic Dialect” discusses the Algerian Arabic intonational patterns. His study is

based on a linguistic investigation of the Algerian Arabic dialect of Nédroma a town situated in the north-western part of Algeria, not very far from Tlemcen. The results are as follows:


a) Statements

Statements are characterized by a falling intonation pattern which extends over the syllables of the tone group. E.g.:


(Jamal is helping his mother)

b) 'Yes/no questions

These questions are characterized by a rising intonation. E.g.:


(Did you buy the bread?)


(Did she put lemon on the fish?)

c) Commands and Exclamations

Commands using the imperative and exclamations are characterized by a falling intonation pattern, the commands taking a rather higher fall. E.g.:


(shut your mouth!)


(how good; how nice!)


(how fat he is!)

d) Wh- questions

They are characterized by a falling intonation. E.g.:

$fæ:j^{\wedge}n \ m\check{s}æ?$ (Where did he go?)

$\check{s}ku:n \ \check{z}æ:t?$ (Who came?)

e) Requests

Questions approaching a request are characterized by a rising tone. E.g.:

$i:wæ \ tqulli \ w^{\wedge}llæ \ ^{\wedge}l-læ$ (well, are you going to tell me or not?)

Guella (1984) stresses that falling-rising tones mean that the speaker already knows the answer, he gives the following example:

$Dr^{\wedge}btu?$ (You hit him?)

Which means: admit that you hit him or I know that you hit him.

The rising-falling intonation conveys certainty and even menace. An example of this pattern which conveys menace is bellow:

$\zetaæ:\check{s} \ Dr^{\wedge}btu?$ (Why did you hit him?)

After defining the intonational patterns of the two languages i.e. English and Algerian Arabic, a contrastive analysis between them can be made easily in the following point.

2-4-3 Contrastive Analysis of Intonation of English and Algerian

Arabic

English and Algerian Arabic intonational systems share similarities as well as differences. Exclamations, statements, wh-questions and commands in English are produced with a falling contour; Algerian Arabic shows similar intonational patterns of the mentioned structures. English and Algerian Arabic yes/no questions, requests are characterized with a rising contour. The falling-rising tones express in both Algerian Arabic and English that the speaker has prior knowledge about what he is asking.

However, these tones may serve different functions in the two languages, for instance, the rising falling intonations shows menace while in English shows impression or disapproval of something that the speaker said or done. Also, the falling pitch in Algerian Arabic does not reach a low level as in English (Bengrait & Hamlaoui 2016, p.100)

2-5 Conclusion

The differences between the intonational patterns of Algerian Arabic and English may affect the process of learning English intonation by Algerian students. Because of them, students may be prevented from mastering the English intonational patterns and thus they may cause Algerian students not to be understood by native speakers of English. This hypothesis is going to be checked in the next chapter where third year Algerian students at Mostaganem University will be recorded and then data will be analyzed in order to discover whether or not the differences in the intonational patterns may influence the English intonation learning and if yes, how is that.

3-1 Introduction

After we have been introduced to intonation, its functions, models and patterns, at the end of this work we will give deep insight into the influence of Algerian students' mother tongue on their learning of English intonation. After data were collected, they were analyzed and then we came out with the results and answered this research question of: do Algerian Arabic intonational patterns affect the English intonational patterns? For this purpose, students were recorded and the records were run through PRAAT and the intonational contours were described. This last chapter includes a description of the participants, the sentences selected to be recorded and the process of data analysis.

3-2 Population and Sampling

The participants in this research are native speakers of Algerian Arabic. The population is Algerian students from Mostaganem University. These students of 3rd year LMD system were thought intonation in their 2nd year. However, in the Algerian context they only use the English language for academic purposes and rarely use it outside of college and when they do they often use it informally.

3-3 Data Set and Data Collection

For the purpose of this research thirteen sentences were selected in the English language. All types of sentences were used including; declaratives, interrogatives, exclamatory and imperatives. The thirteen sentences are:

- Tomorrow we have an exam.
- Leave the room!
- Where did you go yesterday?

- It is a sunny day, isn't it?
- Would you please pass me the pepper?
- Did you know her?
- Why did you hit him?
- This is great!
- Excuse me.
- Hello everyone.
- If you don't do something about it, this will end up bad.
- If I were you, I would have told him the truth.
- You have to apologize to her or I will punish you.

Students were asked to utter the sentences to be recorded by a Hi-Q MP3 recorder then the recordings were analyzed through PRAAT. The software gives a ready-made intonational contour which after is required only to describe it. An example of an intonational pattern after PRAAT analysis is below:

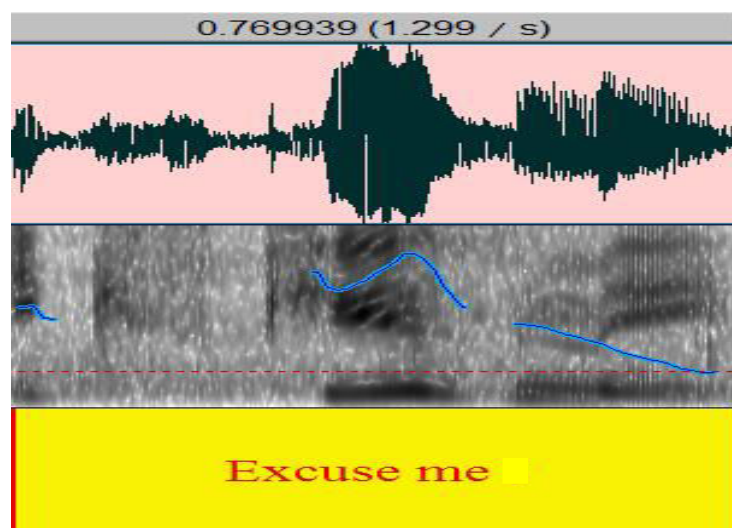


Figure-3.1 Intonation contour through PRAAT

The four parts of the tone units of the selected sentences are as follows:

- Tomorrow / we have an / exam.
The pre-head / The head / The nucleus

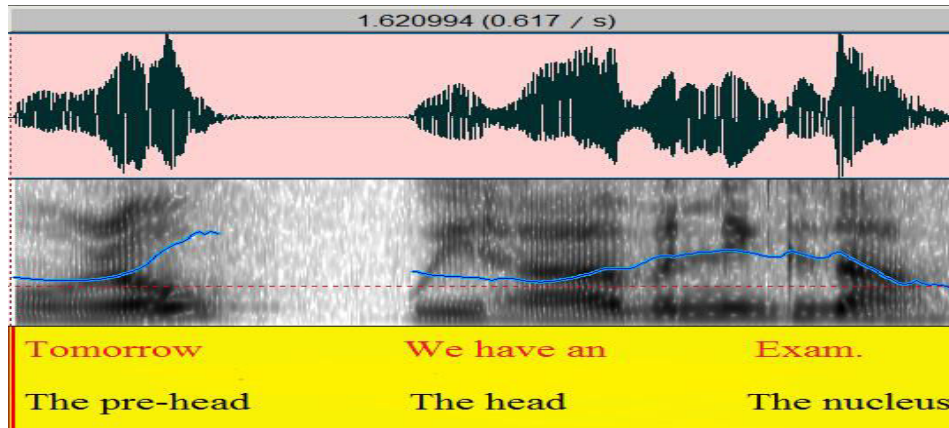


Figure-3.2 Parts of the tone unit "Tomorrow we have an exam."

- Leave / the room!
The pre-head / The nucleus

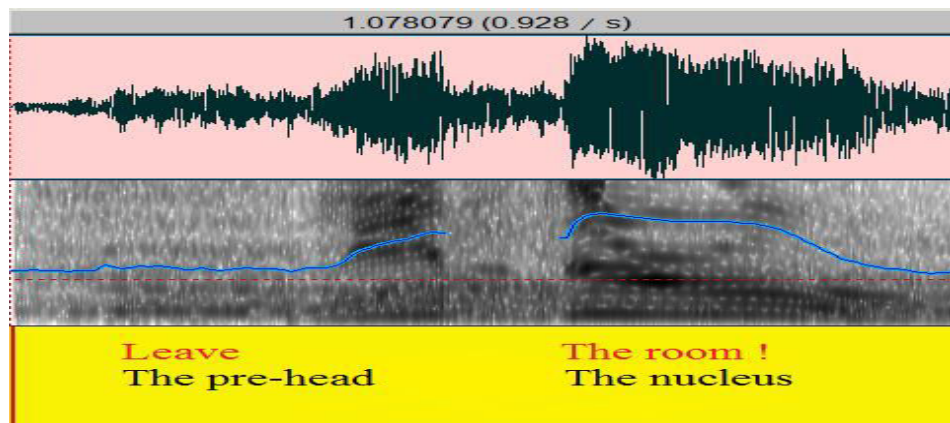


Figure-3.3 Parts of the tone unit "Leave the room!"

- Where /did you /go yesterday?
The pre-head /The head /The nucleus

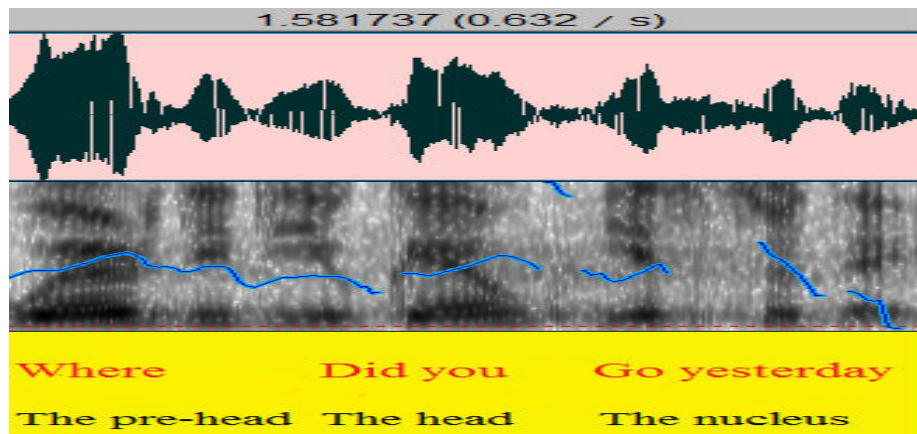


Figure-3.4 Parts of the tone unit "Where did you go yesterday?"

- It is a /sunny day, /isn't it?
The pre-head/ The head /The nucleus

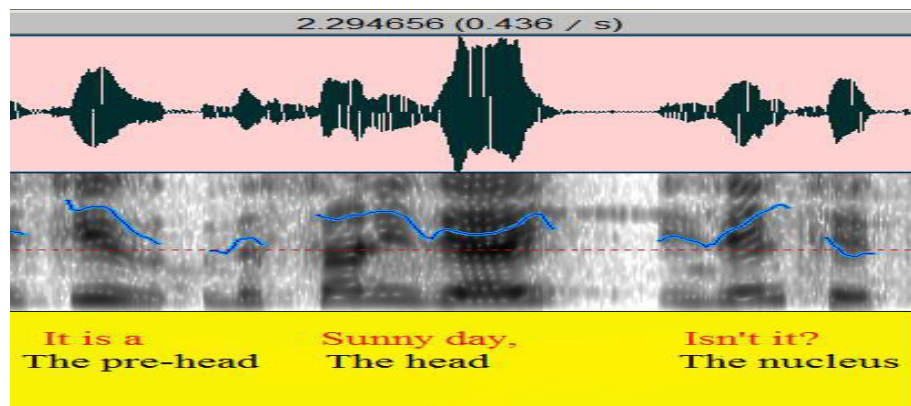


Figure-3.5 Parts of the tone unit "It is a sunny day, isn't it?"

- Would you /please pass me the /pepper?
The pre-head/ The head / The nucleus

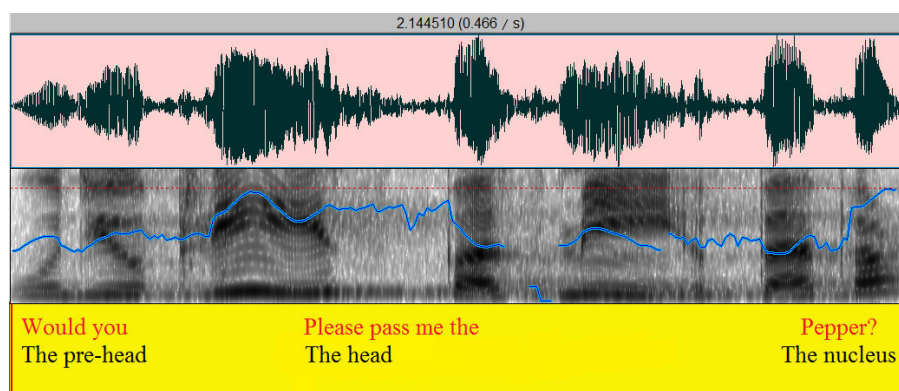


Figure-3.6 Parts of the tone unit "Would you please pass me the pepper?"

- Did / you / know her?
The pre-head/ The head / The nucleus

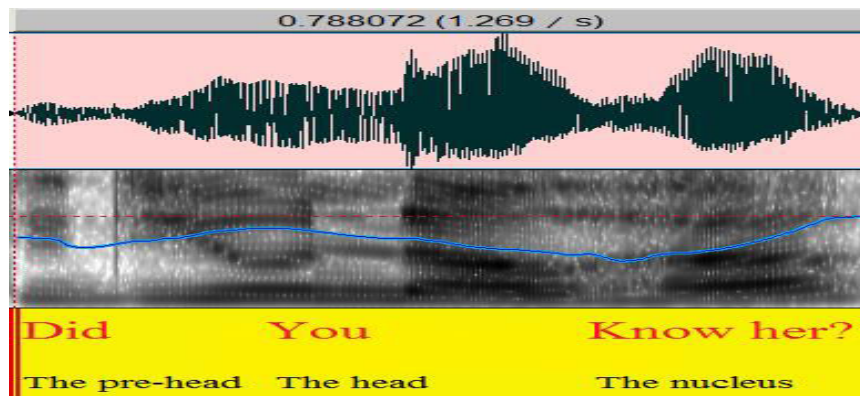


Figure-3.7 Parts of the tone unit "Did you know her?"

- Why /did you / hit him?
The pre-head/ The head / The nucleus

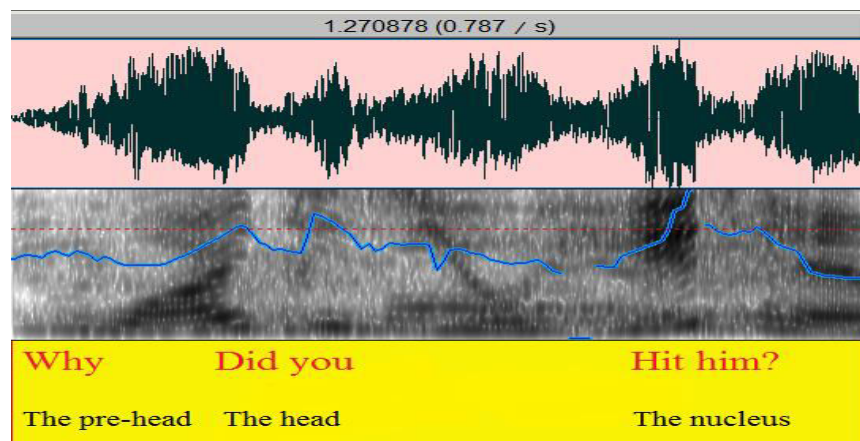


Figure-3.8 Parts of the tone unit "Why did you hit him?"

- This /is / great!
The pre-head / The head / The nucleus

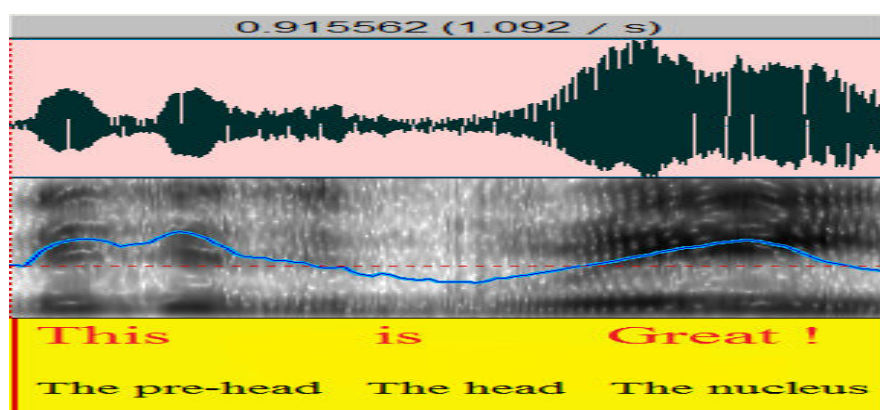


Figure-3.9 Parts of the tone unit "This is great!"

- Ex /cuse /me!
The pre-head / The head / The nucleus

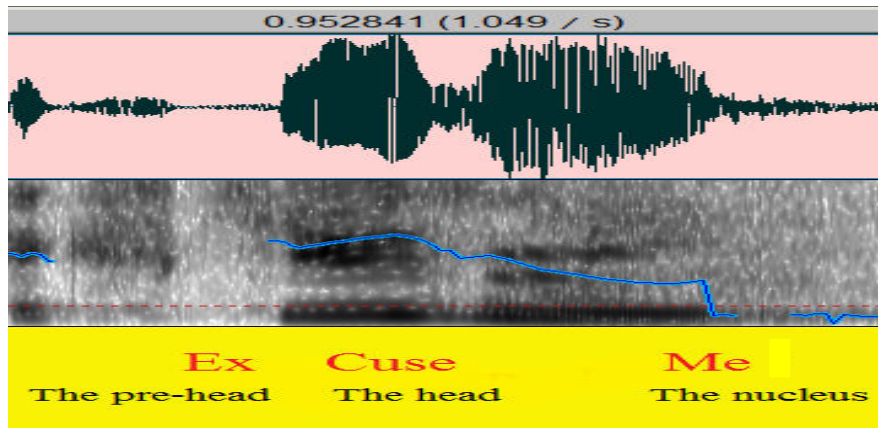


Figure-3.10 Parts of the tone unit “Excuse me.”

- He /llo / everyone.
The pre-head/ The nucleus/ The tail

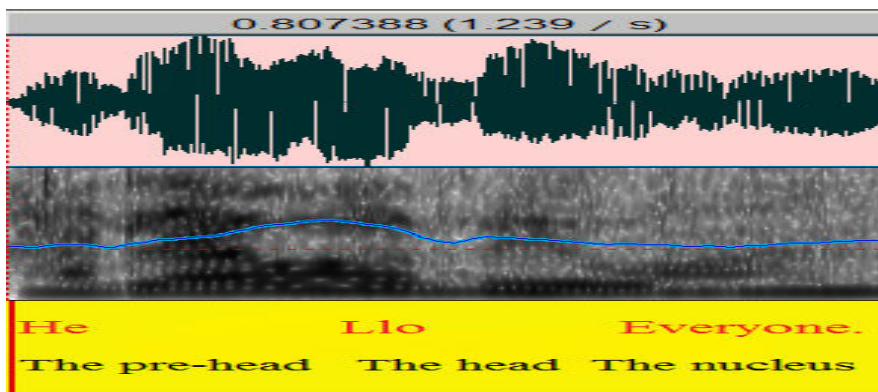


Figure-3.11 Parts of the tone unit “Hello everyone.”

- If you /don't do something /about it, / this will end up bad.
The pre-head/ The head / The nucleus /The tail

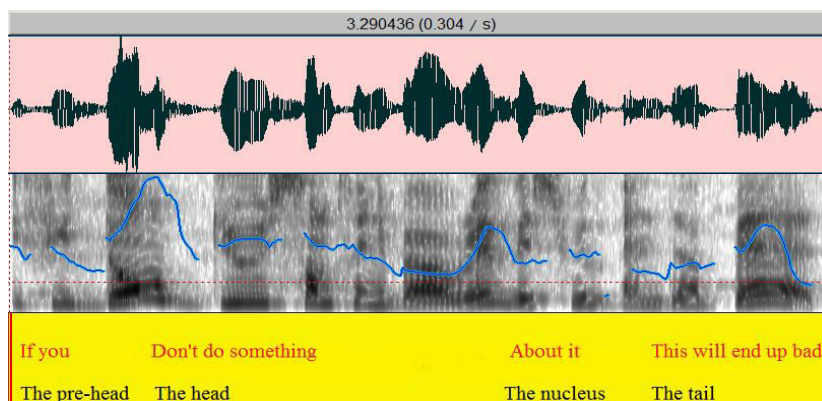


Figure-3.12 Parts of the tone unit “If you don’t do something about it, this will end up bad.”

- If I were /you, I would have /told /him the truth.
The pre-head/ The head / The nucleus /The tail

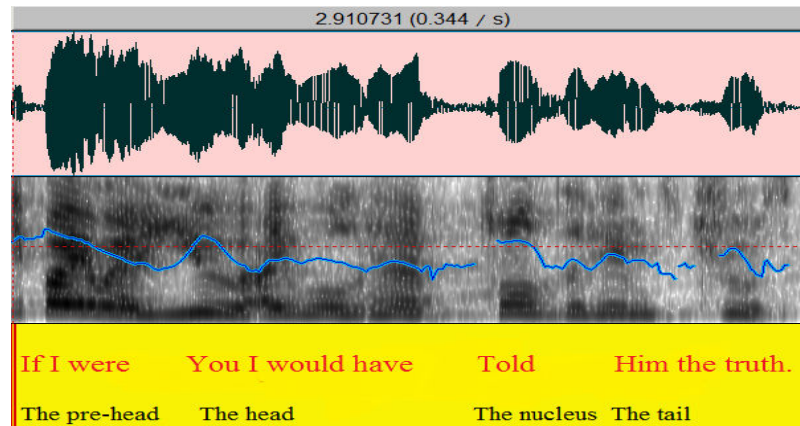


Figure-3.13 Parts of the tone unite “If I were you, I would have told him the truth.”

- You have to / apologize to her or I will /punish /you.
The pre-head/ The head / The nucleus /The tail

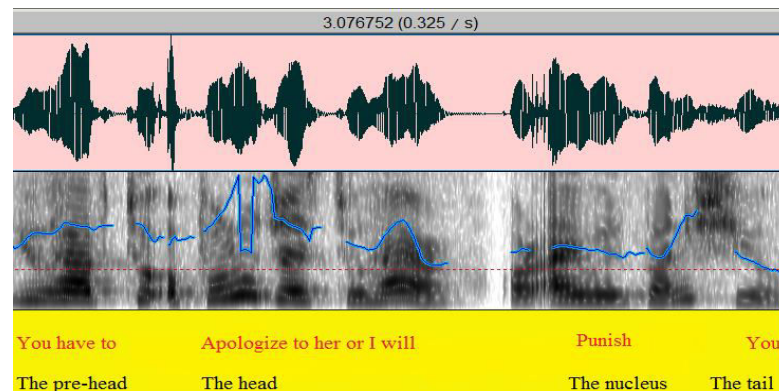


Figure-3.14 Parts of the tone unite “You have to apologize to her or I will punish you.”

3-4 Data Analysis

After data was collected, it was analyzed by the software:

- Tomorrow we have an exam.

The sentence is a declarative sentence which is produced with a fall.

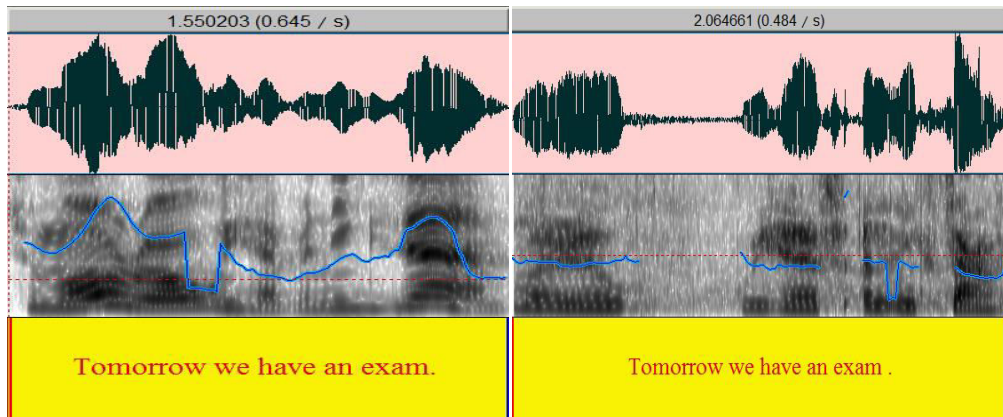


Figure-3.15 Intonational contours of the declarative sentence

Intonational contour	Falling	Rising	Falling-rising	Rising-falling
Percentage	95 %	5%	0%	0%

Table-3.1 Tone type used by participants of the declarative sentence.

The vast majority of students pronounced the correct tone type which is falling and which is similar to that of Algerian Arabic.

- Leave the room!

The sentence is a command which is produced with a fall.

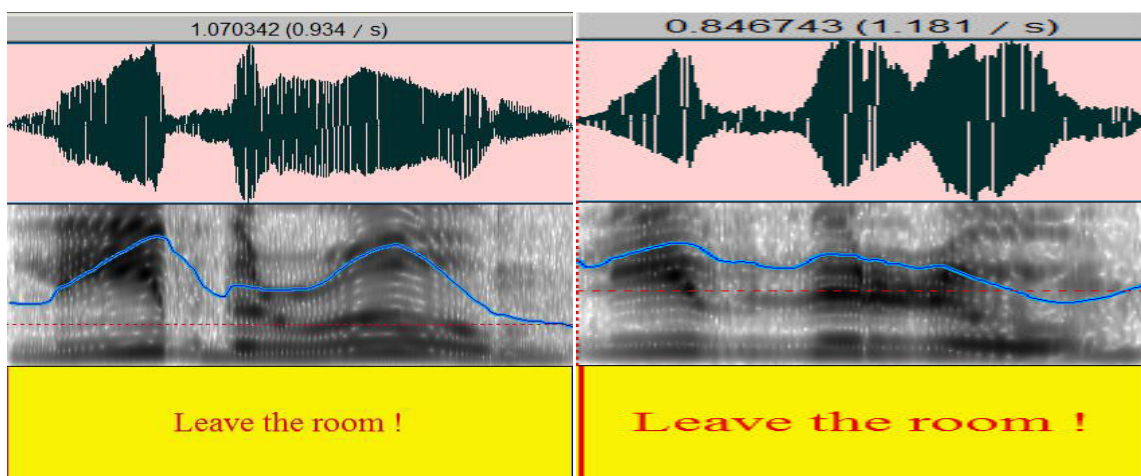


Figure-3.16 Intonational contours of command sentences

Intonational contour	Falling	Rising	Falling-rising	Rising-falling
Percentage	95 %	5%	0%	0%

Table-3.2 Tone type used by participants of commande sentences.

Just like with the declarative, the majority of students chose the correct tone type for the command which is the fall tone in both Algerian Arabic and English.

- Where did you go yesterday?

This sentence is a wh-question which is produced with a falling tone.

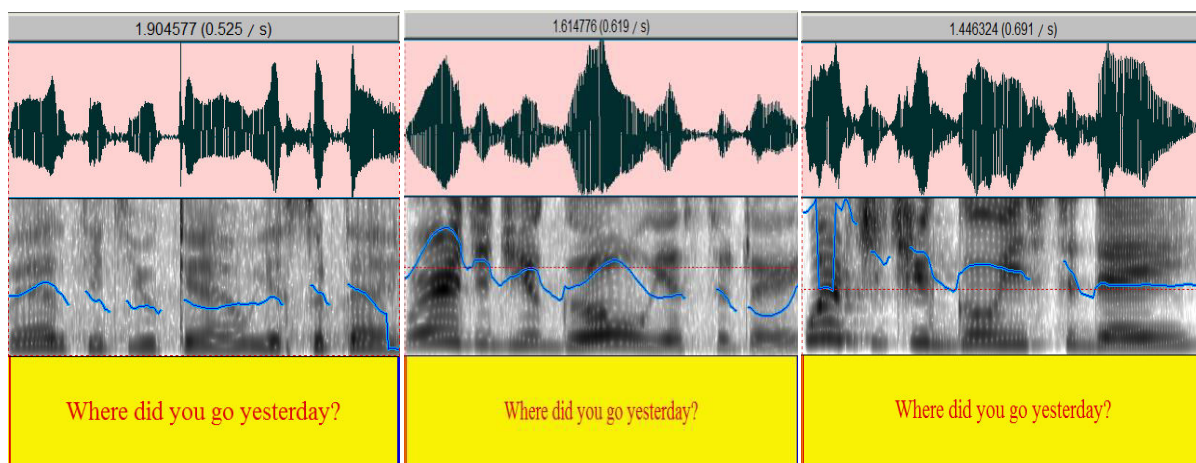


Figure-3.17 Intonational contours of the wh-question

Intonational contour	Falling	Rising	Falling-rising	Rising-falling
Percentage	70 %	5%	0%	0%

Table-3.3 Tone type used by participants of thewh-question.

More than half of students chose the right tone type for the wh-question however, 25% of students used a mid-level tone, one which is neither rising nor falling. An example of this intonational contour is given above.

- It is a sunny day, isn't it?

This sentence ends with a tag question which is characterized with a falling tone. However the sentence carries a pragmatic meaning when put in a relevant context, it reveals that the speaker already possesses a prior knowledge about the weather and is only asking to start a conversation maybe. These sentences in which the speaker has knowledge about what he is asking for are typically ended with a rise or fall-rise tone. We explained this to students before recording them and the results are as follow:

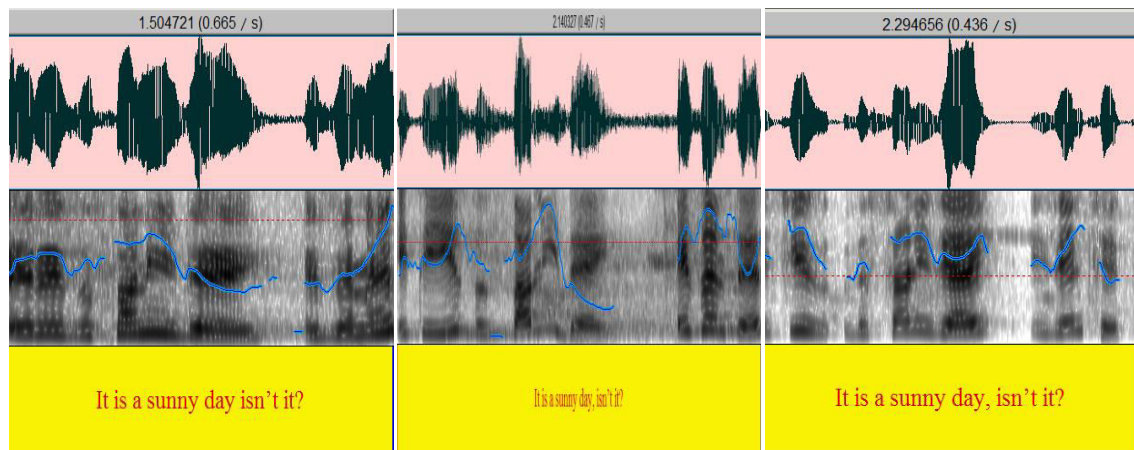


Figure-3.18 Intonational contours of tag questions

Intonational contour	Falling	Rising	Falling-rising	Rising-falling
Percentage	60 %	30%	10%	0%

Table-3.4 Tone type used by participants tag questions.

Most students pronounced this sentence with a falling tone which characterizes tag questions but 40% used a rising or a falling- rising tone which carries the meaning of the possession of a prior knowledge about the subject which means these students put the sentence in a relevant context.

- Would you please pass me the pepper?

This sentence is a yes/no question which expresses a request. The typical tone for this sentence in English is the rising tone.

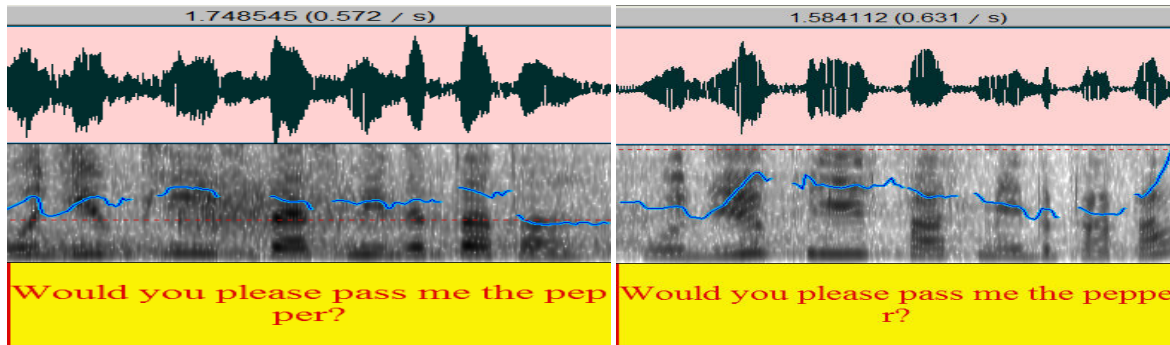


Figure-3.19 Intonational contours of a request

Intonational contour	Falling	Rising	Falling-rising	Rising-falling
Percentage	20 %	80%	0%	0%

Table-3.5 Tone type used by participants of a request.

The majority of students chose the rising tone which is the tone for requests in both Algerian Arabic and English

- Did you know her?

This sentence is a yes/ no question which is produced with a rising tone.

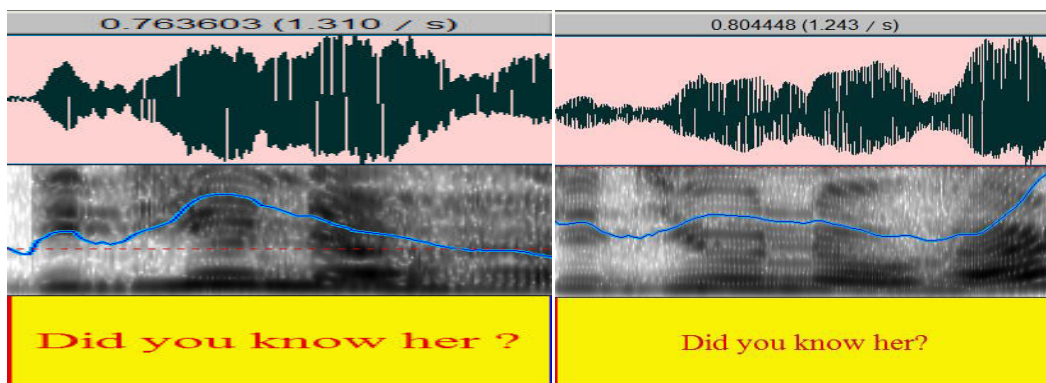


Figure-3.20 Intonational contours of yes/no questions

Intonational contour	Falling	Rising	Falling-rising	Rising-falling
Percentage	25 %	75%	0%	0%

Table-3.6 Tone type used by participants of yes/no questions.

Three quarter of students pronounced this yes/no question with a rising tone which is the right tone in both Algerian Arabic and English.

- Why did you hit him?

This wh-question is normally produced with a falling tone, however we asked students to utter the question to express menace the results were as follow:

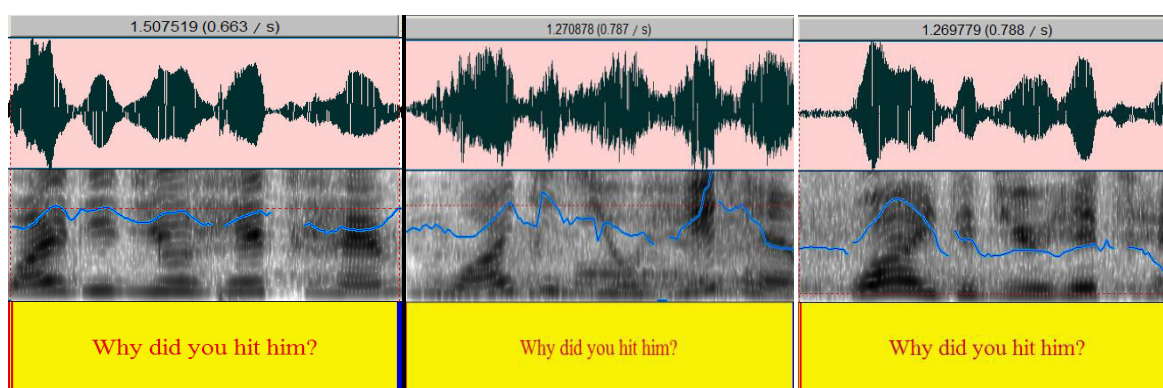


Figure-3.21 Intonational contours of the menace

Intonational contour	Falling	Rising	Falling-rising	Rising-falling
Percentage	65 %	10%	0%	25%

Table-3.7 Tone type used by participants of the menace.

25 % of students were influenced by their mother tongue and produced this sentence with a rising-falling tone which characterizes the “menace” in Algerian Arabic.

- This is great!

This is an exclamatory sentence which expresses impression; it is produced with a fall or a rise-fall tone.

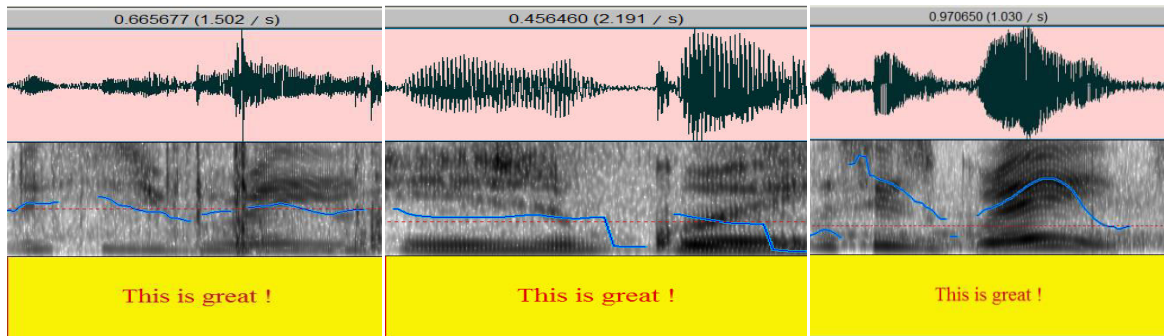


Figure-3.22 Intonational contours of the exclamatory sentence

Intonational contour	Falling	Rising	Falling-rising	Rising-falling
Percentage	20 %	0%	5%	75%

Table-3.8 Tone type used by participants of the exclamatory sentence.

The majority of students chose the right tone type for the impression.

- Excuse me.

This declarative sentence which may express a surprise is produced with a falling tone.

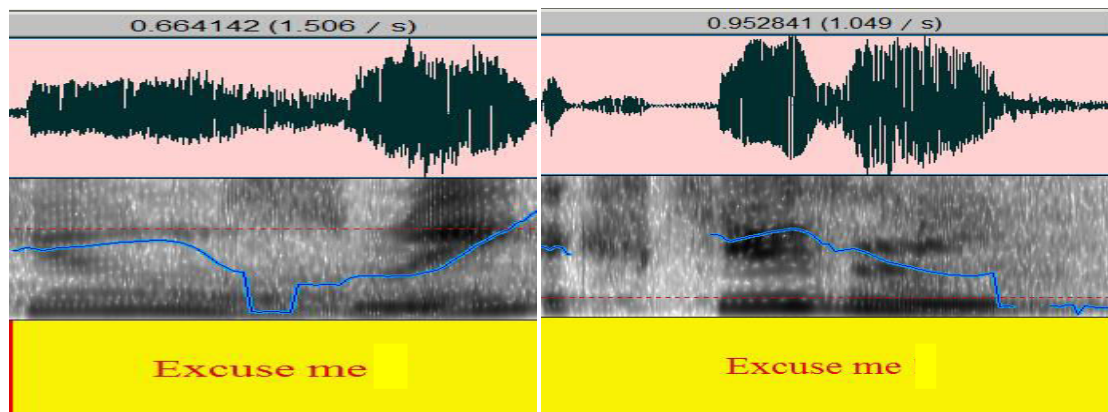


Figure-3.23 Intonational contours of the surprise

Intonational contour	Falling	Rising	Falling-rising	Rising-falling
Percentage	35 %	10%	10%	45%

Table-3.9 Tone type used by participants of surprise.

The results varied noticeably, almost half of students pronounced this sentence with a rising-falling tone which expresses menace in Algerian Arabic.

- Hello everyone.

This is a declarative clause that serves as a formal salutation

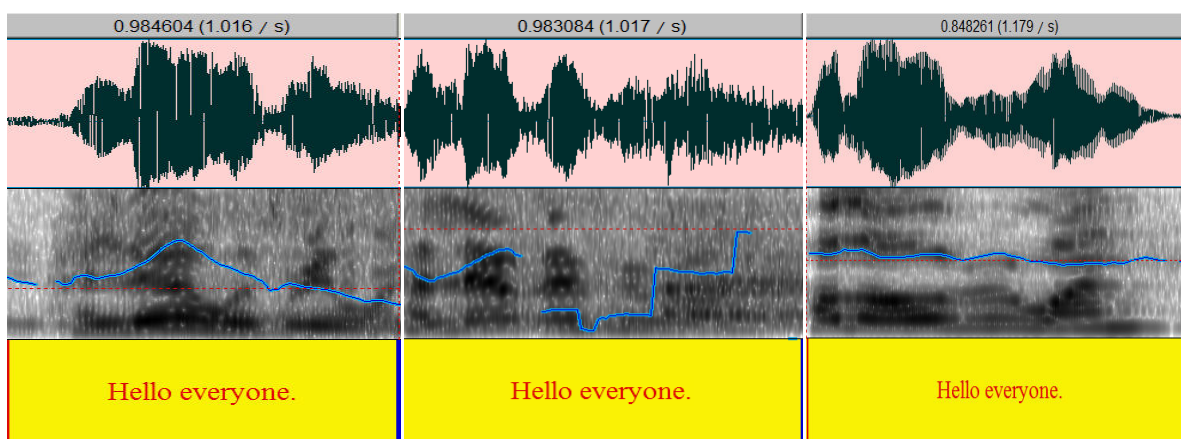


Figure-3.24 Intonational contours of the formal salutation

Intonational contour	Falling	Rising	Falling-rising	Rising-falling
Percentage	60 %	0%	20%	00%

Table-3.10 Tone type used by participants of the formal salutation.

More than half students chose the right falling tone type. The remaining 20 % uttered the sentence with a mid-level intonation as shown above.

- If you don't do something about it, this will end up bad.

This is a declarative sentence which starts with the conjunction “if” and functions as a warning.

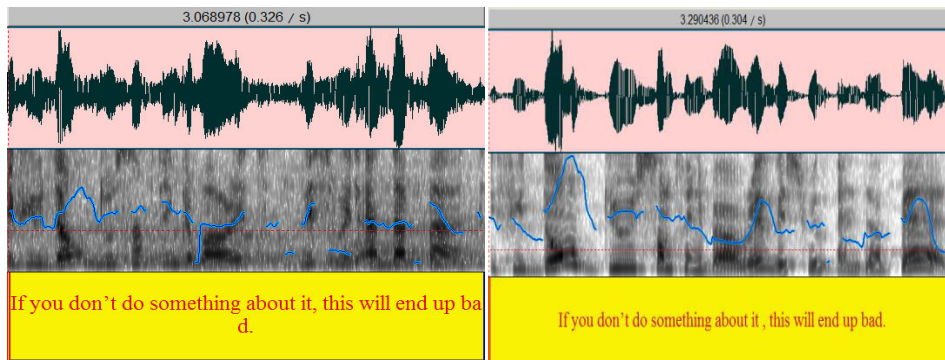


Figure-3.25 Intonational contours of the warning.

Intonational contour	Falling	Rising	Falling-rising	Rising-falling
Percentage	60 %	5%	5%	30%

Table-3.11 Tone type used by participants of the warning.

30 % of students were influenced by their mother tongue in the pronunciation of this warning and choosed the tone type of the “menace”.

- If I were you, I would have told him the truth.

This is an “if” statement that functions as an advice.

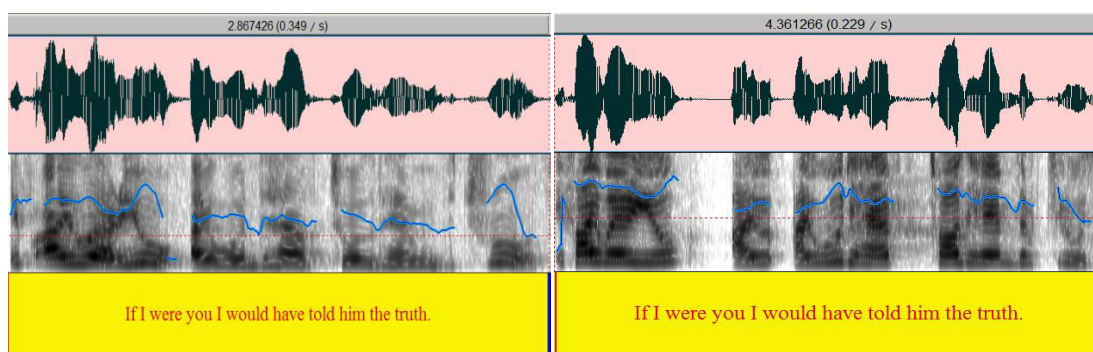


Figure-3.26 Intonational contours of the advice

Intonational contour	Falling	Rising	Falling-rising	Rising-falling
Percentage	60 %	5%	5%	30%

Table-3.12 Tone type used by participants of the advice.

Most students pronounced this sentence with a falling tone which the tone type of declaratives.

- You have to apologize to her or I will punish you.

This is a declarative sentence which functions as a threat.

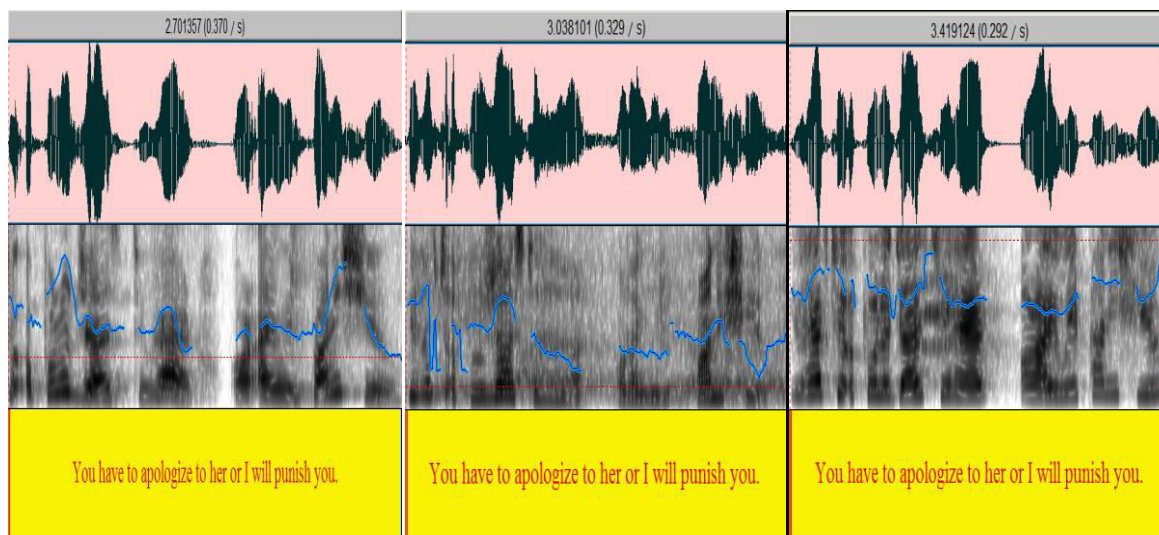


Figure-3.27 Intonational contours of the threat

Intonational contour	Falling	Rising	Falling-rising	Rising-falling
Percentage	60 %	5%	10%	25%

Table-3.13 Tone type used by participants of the threat.

Quarter of students pronounced this threat with a rising-falling tone which is a tone type for these kinds of sentences in their mother tongue Algerian Arabic.

3-5 Results

The results of this study offer a very helpful insight to how the intonational patterns of Algerian Arabic influence those of English. For requests, yes/no questions, declaratives, and commands, most students produced them with the right intonation, the tone in both languages is the same for this kind of sentences therefore the influence maybe positive as learners transferred intonation from their mother tongue to the English language. More than half of students pronounced the wh-question with the correct tone which is falling. However, 30% mis-produced it although the similarity of the falling contour of wh-questions in both languages. This may be due to over self-correction. 25 % of students were influenced by their mother tongue in producing an utterance which expresses menace. While menace and anger in English are characterized by a falling intonation, Algerian students produced it with a rising-falling intonation. The vast majority of students also produced the utterance expressing impression with the right intonation. What was apparent in the exclamatory, the results of the utterance “excuse me.” was very diverse, only 35 % pronounced it with the right intonation, 45% pronounced it with a rising-falling intonation which expresses as mentioned above a menace, which means, students has put the utterance in different contexts resulting in different realizations. As for the utterances expressing threat, warning and advice most students used a falling intonation since all of them are declaratives. 28 % of students used the rising-falling intonation-the intonation which expresses a menace in Algerian Arabic-to express threats and warnings. 15 % of students were mistaken in choosing the right intonational pattern for the utterances. A very interesting point to highlight here is that the grammatical approach to intonation teaching used in Algerian schools and universities helped students to identify the right grammatical intonation to use, however, intonation reveals more

than that, it is a pragmatic tool to express different meanings and attitudes of speakers and this was reflected in the diversity of the results of Algerian students at Mostaganem university.

All in all, despite some errors, the influence was mainly positive, and the similarities between the two languages helped students to produce the right intonation in most cases.

3-6 Conclusion

After analysing data that were collected from students of third year LMD system at Mostaganem University, the results showed that most students choosed the right tone type. However, in some situations they didn't. The pragmatic facet of intonation might affect their choice as they were influenced by their mother tongue. At the end of this research the answer to its problematic is: the influence of the Algerian Arabic intonational patterns is mainly positive due to the similarities between the two languages

General Conclusion

Language teaching today is increasingly becoming a need in a globalized world. In the last two decades English became a lingua franca with so many non-native speakers. Many researches, approaches and methods emerged to make this process easy for learners. Alongside teaching vocabulary, lexis and grammar, learners need to know about the pronunciation including of course all aspects of it but learners of a second or a foreign language possess already a mother tongue, this latter may influence their learning process in a phenomenon known as language transfer. In this research an attempt was made to encounter one of the most important aspects of pronunciation which is intonation. J.C. Wells (2006) says:

Native speakers of English exploit intonation patterns in many subtle ways that are not obvious at first sight. If you speak English as a second or foreign language, uses of intonation may have no parallel in your first language. This can lead to a breakdown in communication when a native speaker is interacting with a non-native speaker. (p.11).

Therefore, learning the intonational patterns of English as a second or a foreign language is not one that is unrequired.

Intonation is the criteria by which we distinguish between a declarative and a question, a request and a threat and much more in a verbal conversation. Therefore, its importance is identical in learning a foreign language. Many attempts of studying it systematically and scientifically were made by great scholars; these attempts resulted in the emergence of many models and approaches to teaching it. In Algeria the approach most likely used is the grammatical approach. Learners study intonation starting from middle school and continue through high school, in college learners of English Language and Literature advance more in

studying intonation but does their mother tongue affect this learning? This was the question for which this study was carried out. At Mostaganem University we recorded twenty students of Third year LMD system to answer this question. The results of this study have shown that the effect is often positive.

The similarities between the intonational systems of English and Algerian Arabic helped students to produce in most cases the right intonational pattern. English language today is present in the learners' daily life. Despite learners in Algeria do not have the chance to interact with native speakers but English songs and movies are available for all of them. Intonation can be easily learnt through listening to native speakers speaking English. However, many students mis-produced the right tone and the reasons may be many such as over self-correction or they got confused in the presence of a recorder.

Intonation is often neglected in English language teaching, this research will raise both teachers' and learners' awareness to the importance of intonation. It can open the gate for further studies such as studying the process of intonation acquisition by foreign learners or conducting a comparative study to the best approaches to intonation teaching. Therefore, this thesis may be the foundation for many other interesting research and findings.

References

- Aarts.B & McMahon.A (2006). *The Handbook of Linguistics*, Oxford: Blackwell Publishing, p.433
- Asher.R.E. & Kumari.T.C. (1997), *Malayalam*. New York: Routledge, p.437
- Backman.M.E & Vendetti J.J (2010). *Tone and intonation*, p.1
- Banzigar. T & Scherer K.R (2005). *The Role of Intonation in Emotional Expression Speech Communiaction*. University of Geneva: Department of Psychology, FAPSE.
- Benesty.J, Huang.Y & Sondhi.M (2008). *Handbook of Speech Processing*. University of Quebec : Springer, p.481
- Bengrait.N & Hamlaoui.N(2016). *Using Better Accent Tutor and Praat for Learning English Intonation*. Arab World English Journal (AWEJ) Special Issue on CALL No.3 July 2016. Algeria. p. 99-112
- Botinis.A (2000). *Intonation Analysis: Modelling and Technology*. New York: Springer Sciences and Business Media, p.19
- Brinton.L.J (2000). *The Structure of Modern English: A Linguistic Introduction, Volume I*. Amsterdam: John Benjamin Publishing Company, p.58-59
- Brinton.D.B , Goodwin J.M & Marianne.C.M (1996). *Teaching Pronunciation: A Reference for Teachers of English to Speakers of Other Languages*. Cambridge: Cambridge University Press, p.185.
- Clark.J, Fletcher.J & Yallop.C (2012). *An Introduction to Phonetics and Phonology, 3rd Edition*. Oxford: Blackwell Publishing,
- Crosby.F (2013). *L1 Influence on L2 Intonation in Russian Speakers of English*. Portland State University A Thesis submitted in Partial Fulfillment of the Requirement for the

- Degree of Master of Arts, Teaching English to Speakers of Other languages. p.7
- Cruttenden.A (1997). *Intonation, 2nd Edition*. Cambridge: Cambridge University Press.
- Dalton.C & Seidlhofer.B (1994) . *Pronunciation*. Oxford: Oxford University Press,.44
- Delegova.M (2010). *English Intonation Patterns Expressing Politeness and their Cross-language Perception*.p.13-16
- Di Cristo.A & Hirst.D (1998). *Intonation System: A Survey of Twenty Languages*. Cambridge: Cambridge University Press, p.12-13
- Doughty.C &Williams.J (1998). *Focus on Form in Classroom Second Language Acquisition, 2nd Edition*. Cambridge: Cambridge University Press
- Ellis.R (1994). *The Study of Second Language Acquisition 1st Edition*. Oxford: Oxford University Press. P.332-333
- Fries.P.M & Fries.N.M (1985). *Toward an understanding of Language: Charles Corpenner Fries in Perspective*. Amsterdam: John Benjamin Publishing Company, p.277
- Hammond.M (1999). *The Phonology of English: A Prosodic Optimality, Theoretic Approach*. Oxford: Oxford University Press, p.149
- Guella.N (1984). *On Syllabication, Stressand Intonation in an Urban Arabic Dialect*. Associate Professor, Department of European Languages and Translation, College of Languages and Translation (C.O.L.T.), King Saud University, Riyadh, Saudi Arabia.
- Gussenhavor.C (2004). *The Phonology of Tone and Intonation*. Cambridge: Cambridge University Press, p.47
- Kipiani.S & Rusadze.I (2008). *Intonation Difficulties in Non-Native Languages*.
- Krishma's Communication Lab (English) for BE:B.Tech: B.Arch (2010). *Students of 2nd Semester of All Engineering College Affiliated to U.P Technical University Lucknov, 3rd Edition*. Krishma Prakashan Media (P) ltd, India

- Küglar.F (2007). *The Intonational Phonology of Swabian and Upper Saxon*. Germany: Franz Steiner Verlag, p.4
- Ladd. R. (2008). *Intonational Phonology, 2nd Edition*. Cambridge: Cambridge University Press.
- Mennen.I (2006). *Phonetic and Phonological Influences in Non-Native Intonation: An Overview for Language Teaching*. Edinburg: QMUC Speech Science Research Centre Working Paper WP9 (2006) Series Editors: James M Scobbie, Ineke Mennen, Jocelyne Watson
- Minka.W ,Pittermann.J, & Pittermann.A (2009). *Handling Emotion in Human Computer Dialogue*. Germany: Springer, p.110
- Nunan.D (2013). *What is this Thing Called Language? 2nd Edition*. China: Palgrave Macmillon, p.29-30
- Odden.D (2013). *Introducing phonology, 2nd Edition*. Cambridge: Cambridge University Press, p.2.
- Odlin.T (1989). *Language Transfer: Cross-Linguistic Influence in Language Learning 1st Edition*.Cambridge: Cambridge University Press p.27
- Ouafeu.Y.T.S (2010). *Emotional Meaning in Cameroon English Discourse: A Sociolinguistic Perspective*.Cambridge: Cambridge Scholars Publishing, p.11
- Raman.M (2004). *English Language Teaching*.India: Atlantic Publishing Distribution, p.41
- Ranalli.J.M (2002). *Discourse Intonation: To Teach or not to Teach*. University of Birmingham.
- Roach.P (2009). *English Phonetics and phonology: A Practical Course, 4th Edition*. Cambridge: Cambridge University Press, p.146
- Skarulis .J(1998). *A Phonetic Aid for Students of English*. Vilnius: Lithuanian Publishers

Association ,p.18

Taylor.P (1992). *A Phonetic Model of English Intonation..* University of Edinburgh : A

Thesis Submitted for the Degree of Doctor of Philosophy, p.46

Taylor.P (2000). *Analysis and Synthesis of Intonation Using the Tilt Model.* University of

Edinburgh Centre for Speech Technology Research, p.3-4

Taylor.P (2009). *Text-to-Speech Synthesis.* Cambridge: Cambridge University Press, p.250

Thompson, S. (1995). *Teaching Intonation on Questions.* ELT Journal Volume 49/3 July 1995© Oxford University Press 1995, p.235-243

Wells J.C. (2006). *English Intonation: An in Introduction.* Cambridge:Cambridge University

Press.

Yavaş.M (2011). *Applied English Phonology, Second edition.* Oxford: Blackwell Publishing,

Sites

www.wikipedia.com

www.oxforddictionaries.com